

JPMORGAN CHASE & CO  
 Form 10-K  
 February 20, 2014

UNITED STATES  
 SECURITIES AND EXCHANGE COMMISSION  
 WASHINGTON, D.C. 20549  
 FORM 10-K

Annual report pursuant to Section 13 or 15(d) of  
 The Securities Exchange Act of 1934

For the fiscal year ended  
 December 31, 2013

Commission file  
 number 1-5805

JPMorgan Chase & Co.  
 (Exact name of registrant as specified in its charter)

Delaware  
 (State or other jurisdiction of  
 incorporation or organization)

13-2624428  
 (I.R.S. employer  
 identification no.)

270 Park Avenue, New York, New York  
 (Address of principal executive offices)

10017  
 (Zip code)

Registrant's telephone number, including area code: (212) 270-6000  
 Securities registered pursuant to Section 12(b) of the Act:

Title of each class

Name of each exchange on which  
 registered

Common stock

The New York Stock Exchange  
 The London Stock Exchange  
 The Tokyo Stock Exchange  
 The New York Stock Exchange

Warrants, each to purchase one share of Common Stock  
 Depository Shares, each representing a one-four hundredth interest in a share  
 of 5.50% Non-Cumulative Preferred Stock, Series O

The New York Stock Exchange

Depository Shares, each representing a one-four hundredth interest in a share  
 of 5.45% Non-Cumulative Preferred Stock, Series P

The New York Stock Exchange

Guarantee of 6.70% Capital Securities, Series CC, of JPMorgan Chase  
 Capital XXIX

The New York Stock Exchange

Alerian MLP Index ETNs due May 24, 2024

NYSE Arca, Inc.

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.  
 Yes  No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the  
 Act.  Yes  No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the  
 Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was  
 required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.  Yes  No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any,  
 every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of  
 this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and  
 post such files).  Yes  No

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Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.  Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definitions of "large accelerated filer," "accelerated filer," and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer     Accelerated filer     Non-accelerated filer  
 Smaller reporting company  
(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).  Yes  No

The aggregate market value of JPMorgan Chase & Co. common stock held by non-affiliates as of June 30, 2013: \$197,931,024,385

Number of shares of common stock outstanding as of January 31, 2014: 3,786,825,346

Documents incorporated by reference: Portions of the registrant's Proxy Statement for the annual meeting of stockholders to be held on May 20, 2014, are incorporated by reference in this Form 10-K in response to Items 10, 11, 12, 13 and 14 of Part III.

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## Part I

## ITEM 1: BUSINESS

## Overview

JPMorgan Chase & Co. (“JPMorgan Chase” or the “Firm”), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America (“U.S.” or “United States”), with operations worldwide; the Firm had \$2.4 trillion in assets and \$211.2 billion in stockholders’ equity as of December 31, 2013. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing, asset management and private equity. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world’s most prominent corporate, institutional and government clients.

JPMorgan Chase’s principal bank subsidiaries are JPMorgan Chase Bank, National Association (“JPMorgan Chase Bank, N.A.”), a national bank with U.S. branches in 23 states, and Chase Bank USA, National Association (“Chase Bank USA, N.A.”), a national bank that is the Firm’s credit card-issuing bank. JPMorgan Chase’s principal nonbank subsidiary is J.P. Morgan Securities LLC (“JPMorgan Securities”), the Firm’s U.S. investment banking firm. The bank and nonbank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. One of the Firm’s principal operating subsidiaries in the United Kingdom (“U.K.”) is J.P. Morgan Securities plc (formerly J.P. Morgan Securities Ltd.), a wholly owned subsidiary of JPMorgan Chase Bank, N.A.

The Firm’s website is [www.jpmorganchase.com](http://www.jpmorganchase.com). JPMorgan Chase makes available free of charge, through its website, annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports filed or furnished pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934, as soon as reasonably practicable after it electronically files such material with, or furnishes such material to, the U.S. Securities and Exchange Commission (the “SEC”). The Firm has adopted, and posted on its website, a Code of Ethics for its Chairman and Chief Executive Officer, Chief Financial Officer, Chief Accounting Officer and other finance professionals of the Firm.

## Business segments

JPMorgan Chase’s activities are organized, for management reporting purposes, into four major reportable business segments, as well as a Corporate/Private Equity segment. The Firm’s consumer business is the Consumer & Community Banking segment. The Corporate & Investment Bank, Commercial Banking, and Asset Management segments comprise the Firm’s wholesale businesses.

A description of the Firm’s business segments and the products and services they provide to their respective client bases is provided in the “Business segment results” section of Management’s discussion and analysis of financial condition and results of operations (“MD&A”), beginning on page 64 and in Note 33 on pages 334–337.

## Competition

JPMorgan Chase and its subsidiaries and affiliates operate in a highly competitive environment. Competitors include other banks, brokerage firms, investment banking companies, merchant banks, hedge funds, commodity trading companies, private equity firms, insurance companies, mutual fund companies, investment managers, credit card companies, mortgage banking companies, trust companies, securities processing companies, automobile financing companies, leasing companies, e-commerce and other Internet-based companies, and a variety of other financial services and advisory companies. JPMorgan Chase’s businesses generally compete on the basis of the quality and range of their products and services, transaction execution, innovation and price. Competition also varies based on the types of clients, customers, industries and geographies served. With respect to some of its geographies and products, JPMorgan Chase competes globally; with respect to others, the Firm competes on a regional basis. The Firm’s ability to compete also depends on its ability to attract and retain professional and other personnel, and on its reputation. The financial services industry has experienced consolidation and convergence in recent years, as financial institutions involved in a broad range of financial products and services have merged and, in some cases, failed. This is expected to continue. Consolidation could result in competitors of JPMorgan Chase gaining greater capital and other resources, such as a broader range of products and services and geographic diversity. It is likely that competition will become

even more intense as the Firm's businesses continue to compete with other financial institutions that may have a stronger local presence in certain geographies or that operate under different rules and regulatory regimes than the Firm.

Supervision and regulation

The Firm is subject to regulation under state and federal laws in the United States, as well as the applicable laws of each of the various jurisdictions outside the United States in which the Firm does business.

Regulatory reform: On July 21, 2010, President Obama signed into law the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"), which is intended to make significant structural reforms to the financial services industry. The Dodd-Frank Act instructs U.S. federal banking and other regulatory agencies to conduct approximately 285 rule-makings and 130 studies and reports. These regulatory agencies include the Commodity Futures Trading Commission (the "CFTC"); the Securities and Exchange Commission (the "SEC"); the Board of Governors of the Federal Reserve System (the "Federal

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Reserve”); the Office of the Comptroller of the Currency (the “OCC”); the Federal Deposit Insurance Corporation (the “FDIC”); the Bureau of Consumer Financial Protection (the “CFPB”); and the Financial Stability Oversight Council (the “FSOC”). As a result of the Dodd-Frank Act rule-making and other regulatory reforms, the Firm is currently experiencing a period of unprecedented change in regulation and such changes could have a significant impact on how the Firm conducts business. The Firm continues to work diligently in assessing and understanding the implications of the regulatory changes it is facing, and is devoting substantial resources to implementing all the new regulations, while, at the same time, best meeting the needs and expectations of its clients. Given the current status of the regulatory developments, the Firm cannot currently quantify the possible effects on its business and operations of all of the significant changes that are currently underway. For more information, see “Risk Factors” on pages 9–18. Certain of these changes include the following:

**Comprehensive Capital Analysis and Review (“CCAR”) and stress testing.** In December 2011, the Federal Reserve issued final rules regarding the submission of capital plans by bank holding companies with total assets of \$50 billion or more. Pursuant to these rules, the Federal Reserve requires the Firm to submit a capital plan on an annual basis. In October 2012, the Federal Reserve and the OCC issued rules requiring the Firm and certain of its bank subsidiaries to perform stress tests under one stress scenario created by the Firm as well as three scenarios (baseline, adverse and severely adverse) mandated by the Federal Reserve. The Firm will be unable to make any capital distributions unless approved by the Federal Reserve if the Federal Reserve objects to the Firm’s capital plan. For more information, see “CCAR and stress testing” on pages 5–6.

**Resolution plan.** In September 2011, the FDIC and the Federal Reserve issued, pursuant to the Dodd-Frank Act, a final rule that requires bank holding companies with assets of \$50 billion or more and companies designated as systemically important by the FSOC to submit periodically to the Federal Reserve and the FDIC a plan for resolution under the Bankruptcy Code in the event of material distress or failure (a “resolution plan”). In January 2012, the FDIC also issued a final rule that requires insured depository institutions with assets of \$50 billion or more to submit periodically to the FDIC a plan for resolution under the Federal Deposit Insurance Act (the “FDIA”) in the event of failure. The Firm’s initial resolution plan submissions were filed by July 1, 2012; annual updates to these resolution plan submissions are due by July 1 each year (although the 2013 plans were permitted to be filed in October 2013).

**Derivatives.** Under the Dodd-Frank Act, the Firm is subject to comprehensive regulation of its derivatives business (including capital and margin requirements,

central clearing of standardized over-the-counter derivatives and the requirement that they be traded on regulated trading platforms) and heightened supervision. Further, some of the rules for derivatives apply extraterritorially to U.S. firms doing business with clients outside of the United States. In addition, commencing July 2015, certain derivatives transactions now executed by JPMorgan Chase Bank, N.A., will be required to be executed through subsidiaries or affiliates of JPMorgan Chase Bank, N.A. The effect of these rules issued under the Dodd-Frank Act will necessitate banking entities, such as the Firm, to significantly restructure their derivatives businesses, including by changing the legal entities through which their derivatives activities are conducted. In the European Union (the “EU”), the implementation of the European Market Infrastructure Regulation (“EMIR”) and the revision of the Markets in Financial Instruments Directive (“MiFID II”) will result in comparable, but not identical, changes to the European regulatory regime for derivatives. The combined effect of the U.S. and EU requirements, and the conflicts between them, present challenges and risks to the structure and operating model of the Firm’s derivatives businesses.

**Volcker Rule.** The Firm will also be affected by the requirements of Section 619 of the Dodd-Frank Act, and specifically the provisions prohibiting proprietary trading and restricting the activities involving private equity and hedge funds (the “Volcker Rule”). On December 10, 2013, regulators adopted final regulations to implement the Volcker Rule. Under the final rules, “proprietary trading” is defined as the trading of securities, derivatives, or futures (or options on any of the foregoing) as principal, where such trading is principally for the purpose of short-term resale, benefiting from actual or expected short-term price movements and realizing short-term arbitrage profits or hedges of such positions. In order to distinguish permissible from impermissible principal risk taking, the final rules require the establishment of a complex compliance regime that includes the measurement and monitoring of seven metrics. The final rules specifically allow market-making-related activity, certain government-issued securities

trading and certain risk management activities. The Firm has ceased all prohibited proprietary trading activities. The Firm must conform its remaining activities and investments to the Volcker Rule by July 21, 2015.

Money Market Fund Reform. In November 2012, the FSOC and the Financial Stability Board (the “FSB”) issued separate proposals regarding money market fund reform. Pursuant to Section 120 of the Dodd-Frank Act, the FSOC published proposed recommendations that the SEC proceed with structural reforms of money market funds, including, among other possibilities, requiring that money market funds adopt a floating net asset value, mandating a capital buffer and requiring a hold-back on redemptions for

certain shareholders. On June 5, 2013, the SEC approved the publication of proposed structural reforms of money market funds. The proposal considered two reform alternatives that could be adopted either alone or in combination: (i) requiring prime and tax-exempt institutional money market funds to “float” their net asset values or (ii) requiring all non-governmental money market funds to impose liquidity fees of up to 2% and to have the option to temporarily suspend redemptions (or “gate” the money market fund) upon the occurrence of specified events indicating that the fund may be under stress. It is currently anticipated that the SEC will adopt final structural reforms in 2014. The Financial Stability Board (the “FSB”) has endorsed and published for public consultation 15 policy recommendations proposed by the International Organization of Securities Commissions, including requiring money market funds to adopt a floating net asset value. In addition, in September 2013 the European Commission (the “EC”) released a proposal for a new regulation on money market funds in the EU. The EC proposed two options for stable net asset value money market funds: either (i) maintain a capital buffer of at least three percent of assets under management or (ii) float the net asset value of the money market fund. The EC proposal is currently being reviewed by the European Parliament and the Council of Member States as co-legislators, and is expected to be approved in 2014. For further information on international regulatory initiatives, see “Significant international regulatory initiatives” on pages 8–9.

Capital. In October 2013, U.S. federal banking agencies published the interim final rules implementing Basel III in the U.S. Under these rules the treatment of trust preferred securities as Tier 1 capital for regulatory capital purposes will be phased out from inclusion as Tier 1 capital, but included as Tier 2 capital, beginning in 2014 through the end of 2015 and phased out from inclusion as Tier 2 capital beginning in 2016 through the end of 2021. In addition, in June 2011, the Basel Committee and the FSB announced that certain global systemically important banks (“GSIBs”) would be required to maintain additional capital, above the Basel III Tier 1 common equity minimum, in amounts ranging from 1% to 2.5%, depending upon the bank’s systemic importance. In June 2012, the Federal Reserve, the OCC and the FDIC issued final rules for implementing ratings alternatives for the computation of risk-based capital for market risk exposures, which will result in significantly higher capital requirements for many securitization exposures. For more information, see “Capital requirements” on pages 4-5.

FDIC Deposit Insurance Fund Assessments. Effective April 1, 2011, the method for calculating the deposit insurance assessment rate changed. This resulted in a substantial increase in the assessments that the Firm’s

bank subsidiaries pay annually to the FDIC. For more information, see “Deposit insurance” on page 6.

Consumer Financial Protection Bureau. The Dodd-Frank Act established the CFPB as a new regulatory agency. The CFPB has authority to regulate providers of credit, payment and other consumer financial products and services. The CFPB has examination authority over large banks, such as JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., with respect to the banks’ consumer financial products and services. The CFPB issued final regulations regarding mortgages, which became effective on January 10, 2014. For more information, see “CFPB and other consumer regulations” on page 7.

Debit interchange. On October 1, 2011, the Federal Reserve adopted final rules implementing the “Durbin Amendment” provisions of the Dodd-Frank Act, which limit the amount the Firm can charge for each debit card transaction it processes. In July 2013, the U.S. District Court for the District of Columbia ruled that the Federal Reserve exceeded its authority in the manner it set a cap on debit card transaction interchange fees and established network exclusivity prohibitions in its regulation implementing the Durbin Amendment. The Federal Reserve announced in August 2013 that it was appealing the decision, and argument was heard in January 2014. On January 17, 2014, the Court of Appeals for the District of Columbia Circuit heard an appeal by the Federal Reserve of the District Court’s decision. The Federal Reserve’s regulations remain in effect until the appeal is decided.

Systemically important financial institutions: The Dodd-Frank Act creates a structure to regulate systemically important financial institutions, and subjects them to heightened prudential standards, including heightened capital, leverage, liquidity, risk management, resolution plan, single-counterparty credit limits and early remediation requirements. JPMorgan Chase is considered a systemically important financial institution. On December 20, 2011, the Federal Reserve issued proposed rules to implement certain of the heightened prudential standards.

Permissible business activities: JPMorgan Chase elected to become a financial holding company as of March 13, 2000, pursuant to the provisions of the Gramm-Leach-Bliley Act. If a financial holding company or any depository institution controlled by a financial holding company ceases to meet certain capital or management standards, the

Federal Reserve may, pursuant to its bank supervisory authority, impose corrective capital and/or managerial requirements on the financial holding company and place limitations on its ability to conduct the broader financial activities permissible for financial holding companies. In addition, the Federal Reserve may require divestiture of the holding company's depository institutions if the deficiencies persist. Federal regulations also provide that if any depository institution controlled by a financial holding company fails to maintain a satisfactory rating under the Community

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Reinvestment Act (the “CRA”), the Federal Reserve must prohibit the financial holding company and its subsidiaries from engaging in any additional activities other than those permissible for bank holding companies that are not financial holding companies.

The Federal Reserve has proposed rules under which the Federal Reserve could impose restrictions on systemically important financial institutions that are experiencing financial weakness, which restrictions could include limits on acquisitions, among other things. For more information on the restrictions, see “Prompt corrective action and early remediation” on page 6.

Financial holding companies and bank holding companies are required to obtain the approval of the Federal Reserve before they may acquire more than 5% of the voting shares of an unaffiliated bank. Pursuant to the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 (the “Riegle-Neal Act”), the Federal Reserve may approve an application for such an acquisition without regard to whether the transaction is prohibited under the law of any state, provided that the acquiring bank holding company, before or after the acquisition, does not control more than 10% of the total amount of deposits of insured depository institutions in the United States or more than 30% (or such greater or lesser amounts as permitted under state law) of the total deposits of insured depository institutions in the state in which the acquired bank has its home office or a branch. In addition, the Dodd-Frank Act restricts acquisitions by financial companies if, as a result of the acquisition, the total liabilities of the financial company would exceed 10% of the total liabilities of all financial companies. For non-U.S. financial companies, liabilities are calculated using only the risk-weighted assets of their U.S. operations. U.S. financial companies must include all of their risk-weighted assets (including assets held overseas). This could have the effect of allowing a non-U.S. financial company to grow to hold significantly more than 10% of the U.S. market without exceeding the concentration limit. Under the Dodd-Frank Act, the Firm must provide written notice to the Federal Reserve prior to acquiring direct or indirect ownership or control of any voting shares of any company with over \$10 billion in assets that is engaged in “financial in nature” activities.

Dividend restrictions: Federal law imposes limitations on the payment of dividends by national banks. Dividends payable by JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., as national bank subsidiaries of JPMorgan Chase, are limited to the lesser of the amounts calculated under a “recent earnings” test and an “undivided profits” test. Under the recent earnings test, a dividend may not be paid if the total of all dividends declared by a bank in any calendar year is in excess of the current year’s net income combined with the retained net income of the two preceding years, unless the national bank obtains the approval of the OCC. Under the undivided profits test, a dividend may not be paid in excess of a bank’s “undivided profits.” See Note 27 on page 316 for the amount of

dividends that the Firm’s principal bank subsidiaries could pay, at January 1, 2014, to their respective bank holding companies without the approval of their banking regulators.

In addition to the dividend restrictions described above, the OCC, the Federal Reserve and the FDIC have authority to prohibit or limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its bank and bank holding company subsidiaries, if, in the banking regulator’s opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization. Under proposed rules issued by the Federal Reserve, dividends are restricted once any one of three risk-based capital ratios (tier 1 common, tier 1 capital, or total capital) falls below their respective minimum capital ratio requirement (inclusive of the GSIB surcharge) plus 2.5%.

Moreover, the Federal Reserve has issued rules requiring bank holding companies, such as JPMorgan Chase, to submit to the Federal Reserve a capital plan on an annual basis and receive a notice of non-objection from the Federal Reserve before taking capital actions, such as paying dividends, implementing common equity repurchase programs or redeeming or repurchasing capital instruments. For more information, see “CCAR and stress testing” on pages 5–6. Capital requirements: Federal banking regulators have adopted risk-based capital and leverage guidelines that require the Firm’s capital-to-assets ratios to meet certain minimum standards.

The risk-based capital ratio is determined by allocating assets and specified off-balance sheet financial instruments into risk-weighted categories, with higher levels of capital being required for the categories perceived as representing greater risk. Under the guidelines, capital is divided into two tiers: Tier 1 capital and Tier 2 capital. The amount of

Tier 2 capital may not exceed the amount of Tier 1 capital. Total capital is the sum of Tier 1 capital and Tier 2 capital. Under the guidelines, banking organizations are required to maintain a total capital ratio (total capital to risk-weighted assets) of 8% and a Tier 1 capital ratio of 4%.

The federal banking regulators also have established minimum leverage ratio guidelines. The leverage ratio is defined as Tier 1 capital divided by adjusted average total assets. The minimum leverage ratio is 4% for bank holding companies. Bank holding companies may be expected to maintain ratios well above the minimum levels, depending upon their particular condition, risk profile and growth plans. The minimum risk-based capital requirements adopted by the federal banking agencies follow the Capital Accord of the Basel Committee on Banking Supervision ("Basel I"). In 2004, the Basel Committee published a revision to the Accord ("Basel II"). The goal of the Basel II Framework is to provide more risk-sensitive regulatory capital calculations and promote enhanced risk management practices among large, internationally active banking operations. In December 2010, the Basel Committee finalized further revisions to the Accord ("Basel

III”) which narrowed the definition of capital, increased capital requirements for specific exposures, introduced short-term liquidity coverage and term funding standards, and established an international leverage ratio. In June 2011, the U.S. federal banking agencies issued rules to establish a permanent Basel I floor under Basel II/Basel III calculations.

In October 2013, U.S. federal banking agencies published the interim final rules implementing Basel III in the U.S. The interim final rules narrowed the definition of capital, increased capital requirements for certain exposures, set higher capital ratio requirements and minimum floors with respect to the capital ratio requirements and included a supplementary leverage ratio. U.S. banking regulators and the Basel Committee have, in addition, proposed changes to the leverage ratios applicable to the Firm and its bank subsidiaries.

In connection with the U.S. Government’s Supervisory Capital Assessment Program in 2009, U.S. banking regulators developed an additional measure of capital, Tier 1 common, which is defined as Tier 1 capital less elements of Tier 1 capital not in the form of common equity – such as perpetual preferred stock, non-controlling interests in subsidiaries and trust preferred capital debt securities. Tier 1 common, a non-GAAP financial measure, is used by banking regulators, investors and analysts to assess and compare the quality and composition of the Firm’s capital with the capital of other financial services companies. The Firm uses Tier 1 common along with the other capital measures to assess and monitor its capital position. In June 2012, the U.S. banking regulators revised, effective January 1, 2013, certain capital requirements for trading positions and securitizations (“Basel 2.5”).

GSIBs will be required to maintain additional capital, above the Basel III Tier 1 common equity minimum, in amounts ranging from 1% to 2.5%, depending upon the bank’s systemic importance. In November 2012, the FSB indicated that the Firm would be in the category subject to a 2.5% capital surcharge. Furthermore, in order to provide a disincentive for banks facing the highest required level of Tier 1 common equity to “increase materially their global systemic importance in the future,” an additional 1% charge could be applied. Currently, no GSIB is required to hold more than the additional 2.5% of Tier 1 common. The Federal Reserve has issued a proposed rule-making that incorporates the concept of a capital surcharge for GSIBs.

The Basel III revisions governing the capital requirements are subject to prolonged observation and transition periods. The phase-in period for banks to meet the revised Tier 1 common equity requirement begins in 2015, with implementation on January 1, 2019. The additional capital requirements for GSIBs will be phased-in starting January 1, 2016, with full implementation on January 1, 2019.

The Basel III rule also includes a requirement for advanced approach banking organizations, including the Firm, to calculate a supplementary leverage ratio (“SLR”). The SLR, a non-GAAP measure, is Tier 1 capital under Basel III

divided by the Firm’s total leverage exposure. Total leverage exposure is calculated by taking the Firm’s total average on-balance sheet assets, less amounts permitted to be deducted for Tier 1 capital, and adding certain off-balance sheet exposures, such as undrawn commitments and derivatives future exposure.

Following approval of the final Basel III rules, the U.S. banking agencies issued proposed rulemaking relating to SLR that would require U.S. bank holding companies, including the Firm, to have a minimum SLR of at least 5%. Insured depository institutions, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., are required to have a minimum SLR of at least 6%. In addition, the Basel Committee has proposed further refinements to the computation of the SLR.

In addition to capital requirements, the Basel Committee has also proposed two new measures of liquidity risk: the “liquidity coverage ratio” and the “net stable funding ratio,” which are intended to measure, over different time spans, the liquidity of the Firm. The observation periods for both these standards began in 2011, with implementation commencing in 2015 and 2018, respectively. On October 24, 2013, the U.S. banking regulators released a proposal to implement a quantitative liquidity requirement consistent with, but more conservative than, the Basel III liquidity coverage ratio (“LCR”) for large banks. It also provides for an accelerated transition period compared to what is currently required under the Basel III LCR rules. The Firm believes that it was in compliance with this new U.S. proposal related to LCR at December 31, 2013.

The Dodd-Frank Act prohibits the use of external credit ratings in federal regulations. In June 2012, the Federal Reserve, OCC and FDIC issued final rules implementing ratings alternatives for the computation of risk-based capital for market risk exposures, which will result in significantly higher capital requirements for many securitization

exposures.

For additional information regarding the Firm's regulatory capital, see Regulatory capital on pages 161–165.

Risk reporting: In January 2013, the Basel Committee issued new regulations relating to risk aggregation and reporting. Under these regulations, the bank's risk governance framework must encompass risk-data aggregation and reporting, and data aggregation must be highly automated and allow for minimal manual intervention. The regulations also impose higher standards for the accuracy, comprehensiveness, granularity and timely distribution of data reporting, and call for regular supervisory review of bank risk aggregation and reporting. GSIBs will be required to comply with these new standards by January 1, 2016.

CCAR and stress testing: In December 2011, the Federal Reserve issued final rules regarding the submission of capital plans by bank holding companies with total assets of \$50 billion or more. Pursuant to these rules, the Federal Reserve requires the Firm to submit a capital plan on an

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annual basis. In October 2012, the Federal Reserve issued rules requiring bank holding companies with over \$50 billion in total assets to perform an annual stress test and report the results to the Federal Reserve in January. The results of the annual stress test will also be publicly disclosed, and will be used as a factor in determining whether the Federal Reserve will or will not object to the bank holding company's capital plan. On January 6, 2014, the Firm submitted its capital plan to the Federal Reserve under the Federal Reserve's 2014 CCAR process. The Firm expects to receive the Federal Reserve's final response to its plan no later than March 14, 2014. In reviewing the capital plan, the Federal Reserve will consider both quantitative and qualitative factors. Qualitative assessments will include, among other things, the comprehensiveness of the plan, the assumptions and analyses underlying the Firm's capital plan, and any relevant supervisory information. If the Federal Reserve objects to the Firm's capital plan, the Firm will be unable to make any capital distributions unless approved by the Federal Reserve. Bank holding companies must perform an additional stress test in the middle of the year and publicly disclose those results as well. The OCC issued similar regulations that require national banks with over \$10 billion in total assets to perform annual stress tests. Accordingly, the Firm submits separate stress tests to the OCC for its national bank subsidiaries that exceed that threshold.

**Heightened Expectations:** In January 2014, the OCC issued proposed rules and guidelines establishing heightened standards for large banks. The proposed guidelines set forth standards for the design and implementation of the bank's risk governance framework, and minimum standards for oversight of that framework by the board of directors. The proposed guidelines are an extension of the OCC's "heightened expectations" for large banks developed after the financial crisis. The heightened standards are intended to protect the safety and soundness of the bank. The bank may use certain components of the parent company's risk governance framework, but the framework must ensure the bank's risk profile is easily distinguished and separate from parent for risk management purposes. Under the proposed guidelines, the board is required to have two members who are independent of the bank and parent company management. The board is responsible for ensuring the risk governance framework meets the standards in the OCC's guidelines, providing active oversight and credible challenge to management's recommendations and decisions, and ensuring that the parent company decisions do not jeopardize the safety and soundness of the bank.

**Prompt corrective action and early remediation:** The Federal Deposit Insurance Corporation Improvement Act of 1991 requires the relevant federal banking regulator to take "prompt corrective action" with respect to a depository institution if that institution does not meet certain capital adequacy standards. While these regulations apply only to banks, such as JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., the Federal Reserve is authorized to take

appropriate action against the parent bank holding company, such as JPMorgan Chase & Co., based on the undercapitalized status of any bank subsidiary. In certain instances, the bank holding company would be required to guarantee the performance of the capital restoration plan for its undercapitalized subsidiary.

In addition, in December 2011, the Federal Reserve issued proposed rules which provide for early remediation of systemically important financial companies that experience financial weakness. These proposed restrictions could include limits on capital distributions, acquisitions, and requirements to raise additional capital.

**Deposit Insurance:** The FDIC deposit insurance fund provides insurance coverage for certain deposits, which is funded through assessments on banks, such as JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. Higher levels of bank failures during the financial crisis dramatically increased resolution costs of the FDIC. In addition, the amount of FDIC insurance coverage for insured deposits has been increased from \$100,000 per depositor to \$250,000 per depositor. In light of the increased stress on the deposit insurance fund caused by these developments, and in order to maintain a strong funding position and restore the reserve ratios of the deposit insurance fund, the FDIC has increased assessment rates of insured institutions generally. As required by the Dodd-Frank Act, the FDIC issued a final rule in February 2011 that changes the assessment base from insured deposits to average consolidated total assets less average tangible equity, and changes the assessment rate calculation. These changes became effective on April 1, 2011, and resulted in a substantial increase in the assessments that the Firm's bank subsidiaries pay annually to the FDIC.

**Powers of the FDIC upon insolvency of the Firm or its insured depository institution subsidiaries:** Upon the insolvency of an insured depository institution, such as JPMorgan Chase Bank, N.A., the FDIC may be appointed the conservator or receiver under the FDIA. Under the Dodd-Frank Act, where a systemically important financial

institution, such as JPMorgan Chase & Co., is in default or danger of default, the FDIC may be appointed receiver in order to conduct an orderly liquidation. In both cases, the FDIC has broad powers to transfer any assets and liabilities without the approval of the institution's creditors.

Depositor preference: Under federal law, the claims of a receiver of an insured depository institution for administrative expense and the claims of holders of U.S. deposit liabilities (including the FDIC) have priority over the claims of other unsecured creditors of the institution, including public noteholders and depositors in non-U.S. offices. As a result, such persons could receive substantially less than the depositors in U.S. offices of the depository institution. The U.K. Prudential Regulation Authority (the "PRA") has issued a proposal that may require the Firm to either obtain equal treatment for U.K. depositors or "subsidiarize" in the U.K. In September 2013, the FDIC issued a final rule, which clarifies that foreign deposits are

considered deposits under the FDIA only if they are also payable in the United States.

**Cross-guarantee:** An FDIC-insured depository institution can be held liable for any loss incurred or expected to be incurred by the FDIC in connection with another FDIC-insured institution under common control with such institution being “in default” or “in danger of default” (commonly referred to as “cross-guarantee” liability). An FDIC cross-guarantee claim against a depository institution is generally superior in right of payment to claims of the holding company and its affiliates against such depository institution.

**The Bank Secrecy Act:** The Bank Secrecy Act (“BSA”) requires all financial institutions, including banks and securities broker-dealers, to, among other things, establish a risk-based system of internal controls reasonably designed to prevent money laundering and the financing of terrorism. The BSA includes a variety of record-keeping and reporting requirements (such as cash and suspicious activity reporting), as well as due diligence/know-your-customer documentation requirements. The Firm has established a global anti-money laundering program in order to comply with BSA requirements.

**Regulation by Federal Reserve:** The Federal Reserve acts as an “umbrella regulator” and certain of JPMorgan Chase’s subsidiaries are regulated directly by additional authorities based on the particular activities of those subsidiaries. For example, JPMorgan Chase Bank, N.A., and Chase Bank USA, N.A., are regulated by the OCC. See “Other supervision and regulation” on pages 7–8 for a further description of the regulatory supervision to which the Firm’s subsidiaries are subject.

**Holding company as source of strength for bank subsidiaries:** JPMorgan Chase & Co. is required to serve as a source of financial strength for its depository institution subsidiaries and to commit resources to support those subsidiaries.

**Restrictions on transactions with affiliates:** The bank subsidiaries of JPMorgan Chase are subject to certain restrictions imposed by federal law on extensions of credit to, and certain other transactions with, the Firm and certain other affiliates, and on investments in stock or securities of JPMorgan Chase and those affiliates. These restrictions prevent JPMorgan Chase and other affiliates from borrowing from a bank subsidiary unless the loans are secured in specified amounts and are subject to certain other limits. For more information, see Note 27 on page 316. Effective in 2012, the Dodd-Frank Act extended such restrictions to derivatives and securities lending transactions. In addition, the Dodd-Frank Act’s Volcker Rule imposes similar restrictions on transactions between banking entities, such as JPMorgan Chase and its subsidiaries, and hedge funds or private equity funds for which the banking entity serves as the investment manager, investment advisor or sponsor.

**CFPB and other consumer regulations:** The activities of JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A. as consumer lenders also are subject to regulation under various U.S. federal laws, including the Truth-in-Lending, Equal Credit Opportunity, Fair Credit Reporting, Fair Debt Collection Practice, Electronic Funds Transfer and CARD acts, as well as various state laws. These statutes impose requirements on consumer loan origination and collection practices.

The CFPB issued final regulations regarding mortgages, which became effective January 10, 2014, and which will prohibit mortgage servicers from beginning foreclosure proceedings until a mortgage loan is 120 days delinquent. During this period, the borrower may apply for a loan modification or other option and the servicer cannot begin foreclosure until the application has been addressed. The CFPB issued another final regulation which became effective January 10, 2014, imposing an “ability to repay” requirement for residential mortgage loans. A creditor (or its assignee) will be liable to the borrower for damages if the creditor fails to make a “good faith and reasonable determination of a borrower’s reasonable ability to repay as of consummation.” Borrowers can sue the creditor or assignee for up to three years after closing, and can raise an ability to repay claim against the servicer as a set off at any point during the loan’s life if in foreclosure. A “Qualified Mortgage” as defined in the regulation is generally protected from such suits.

On April 22, 2013, the OCC issued guidance regarding the obligation of servicers to track loans scheduled for foreclosure sale within 60 days and to confirm certain information prior to proceeding with the scheduled sale. The Firm has adopted procedures designed to effect compliance with this guidance.

On March 21, 2013, the CFPB issued a bulletin regarding “Indirect Auto Lending and Compliance with the Equal Credit Opportunity Act,” in which it declared that a purchaser of automobile loans (“indirect lender”) from automobile dealers may be liable for Equal Credit Opportunity Act violations based on dealer specific and portfolio wide

disparities, on a prohibited basis, that result from allowing dealers to mark up the interest rate offered to consumers by indirect lenders and allowing the dealers a share of the increased revenue. The bulletin imposes significant dealer education and monitoring requirements on these indirect lenders if they continue allowing discretionary dealer mark-ups. Alternatively, the bulletin indicates that a flat fee arrangement would be acceptable. The Firm has adopted a dealer education and monitoring program to address the concerns raised in the bulletin.

Other supervision and regulation: The Firm's banks and certain of its nonbank subsidiaries are subject to direct supervision and regulation by various other federal and state authorities (some of which are considered "functional regulators" under the Gramm-Leach-Bliley Act). JPMorgan Chase's national bank subsidiaries, such as JPMorgan Chase Bank, N.A., and Chase Bank USA, N.A., are subject to

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supervision and regulation by the OCC and, in certain matters, by the Federal Reserve and the FDIC. Supervision and regulation by the responsible regulatory agency generally includes comprehensive annual reviews of all major aspects of the relevant bank's business and condition, stress tests of banks and imposition of periodic reporting requirements and limitations on investments, among other powers.

The Firm conducts securities underwriting, dealing and brokerage activities in the United States through J.P. Morgan Securities LLC and other broker-dealer subsidiaries, all of which are subject to regulations of the SEC, the Financial Industry Regulatory Authority and the New York Stock Exchange, among others. The Firm conducts similar securities activities outside the United States subject to local regulatory requirements. In the United Kingdom, those activities are conducted by J.P. Morgan Securities plc, which is regulated by the PRA (a subsidiary of the Bank of England which has responsibility for prudential regulation of banks and other systemically important institutions) and the Financial Conduct Authority (which regulates prudential matters for other firms and conduct matters for all participants). JPMorgan Chase mutual funds also are subject to regulation by the SEC. The Firm has subsidiaries that are members of futures exchanges in the United States and abroad and are registered accordingly.

In the United States, two subsidiaries are registered as futures commission merchants, and other subsidiaries are either registered with the CFTC as commodity pool operators and commodity trading advisors or exempt from such registration. These CFTC-registered subsidiaries are also members of the National Futures Association. The Firm's U.S. energy business is subject to regulation by the Federal Energy Regulatory Commission. It is also subject to other extensive and evolving energy, commodities, environmental and other governmental regulation both in the United States and other jurisdictions globally.

Under the Dodd-Frank Act, the CFTC and SEC are the regulators of the Firm's derivatives businesses. JPMorgan Chase Bank, N.A., J.P. Morgan Securities LLC, J.P. Morgan Securities plc and J.P. Morgan Ventures Energy Corporation have registered with the CFTC as swap dealers. The Firm expects that JPMorgan Chase Bank, N.A., J.P. Morgan Securities LLC and J.P. Morgan Securities plc may also need to register with the SEC as security-based swap dealers.

The types of activities in which the non-U.S. branches of JPMorgan Chase Bank, N.A. and the international subsidiaries of JPMorgan Chase may engage are subject to various restrictions imposed by the Federal Reserve. Those non-U.S. branches and international subsidiaries also are subject to the laws and regulatory authorities of the countries in which they operate.

Under the requirements imposed by the Gramm-Leach-Bliley Act, JPMorgan Chase and its subsidiaries are required periodically to disclose to their retail customers the Firm's policies and practices with respect to the sharing of nonpublic customer information with JPMorgan Chase

affiliates and others, and the confidentiality and security of that information. Under the Gramm-Leach-Bliley Act, retail customers also must be given the opportunity to "opt out" of information-sharing arrangements with non-affiliates, subject to certain exceptions set forth in the Gramm-Leach-Bliley Act.

Significant international regulatory initiatives: The EU has created a European Systemic Risk Board which monitors financial stability, together with a framework of European Supervisory Agencies which oversees the regulation of financial institutions. In addition, the Group of Twenty Finance Ministers and Central Bank Governors ("G-20") formed the FSB. At both G-20 and EU levels, various proposals are under consideration to address risks associated with global financial institutions. Some of the initiatives adopted include increased capital requirements for certain trading instruments or exposures and compensation limits on certain employees located in affected countries.

In the EU, there is an extensive and complex program of proposed regulatory enhancement which reflects, in part, the EU's commitments to policies of the G-20 together with other plans specific to the EU. This program includes EMIR, which will require, among other things, the central clearing of standardized derivatives and which will be phased in by 2015; and MiFID II, which gives effect to the G-20 commitment to on-venue trading of derivatives and also includes requirements for pre- and post-trade transparency and a significant reconfiguration of the regulatory supervision of execution venues.

The EU is also currently considering or executing upon significant revisions to laws covering: depositary activities; credit rating activities; resolution of banks, investment firms and market infrastructures; anti-money-laundering

controls; data security and privacy; and corporate governance in financial firms, together with implementation in the EU of the Basel III capital standards.

Following the issuance of the Report of the High Level Expert Group on Reforming the Structure of the EU Banking Sector (the “Liikanen Group”), the EU has proposed legislation providing for a proprietary trading ban and mandatory separation of other trading activities within certain banks, while various EU Member States have separately enacted similar measures. In the U.K., the Independent Commission on Banking (the “Vickers Commission”) proposed certain provisions, which have now been enacted by Parliament and upon which detailed implementing requirements are expected during 2014, that mandate the separation (or “ring-fencing”) of deposit-taking activities from securities trading and other analogous activities within banks, subject to certain exemptions. The legislation includes the supplemental recommendation of the Parliamentary Commission on Banking Standards (the “Tyrie Commission”) that such ring-fences should be “electrified” by the imposition of mandatory forced separation on banking institutions that are deemed to test the limits of the safeguards. Parallel but distinct provisions

have been enacted by the French and German governments, and others are under consideration in other countries. Further, the EU is in the process of developing a “Banking Union” institutional and legislative framework, comprising central supervision of systemic institutions by the European Central Bank, and a Single Resolution Mechanism for resolving failing banks alongside the recently-agreed Bank Recovery and Resolution Directive. These measures may separately or taken together have significant implications for the Firm's organizational structure in Europe, as well as its permitted activities and capital deployment in the EU.

#### Item 1A: RISK FACTORS

The following discussion sets forth the material risk factors that could affect JPMorgan Chase's financial condition and operations. Readers should not consider any descriptions of such factors to be a complete set of all potential risks that could affect the Firm.

##### Regulatory Risk

JPMorgan Chase operates within a highly regulated industry, and the Firm's businesses and results are significantly affected by the laws and regulations to which it is subject.

As a global financial services firm, JPMorgan Chase is subject to extensive and comprehensive regulation under federal and state laws in the United States and the laws of the various jurisdictions outside the United States in which the Firm does business. These laws and regulations significantly affect the way that the Firm does business, and can restrict the scope of the Firm's existing businesses and limit the Firm's ability to expand its product offerings or to pursue acquisitions, or can make its products and services more expensive for clients and customers.

The Firm is currently experiencing an unprecedented increase in regulations and supervision, and such changes could have a significant impact on how the Firm conducts business. Significant and comprehensive new legislation and regulations affecting the financial services industry have been adopted or proposed in recent years, both in the United States and globally, most notably the Dodd-Frank Act in the United States. Certain key regulations such as the Volcker Rule and the U.S. implementation of the Basel III capital standards have now been adopted, and the Firm continues to make appropriate adjustments to its business and operations, legal entity structure and capital and liquidity management policies, procedures and controls to comply with these and other new laws and regulations. However, U.S. and other regulators continue to develop, propose and adopt rules and propose new regulatory initiatives, so the cumulative effect of all of the new legislation and regulations on the Firm's business and operations remains uncertain. In addition, there can be significant differences in the ways that similar regulatory initiatives affecting the financial services industry are implemented in different countries and regions in which JPMorgan Chase does business. Non-U.S. regulations and

initiatives may be inconsistent or may conflict with current or proposed regulations in the United States, which could create increased compliance and other costs for the Firm and adversely affect its business, operations or profitability. These recent legislative and regulatory developments, as well as future legislative or regulatory actions in the United States and in the other countries in which the Firm operates, could result in a significant loss of revenue for the Firm, impose additional costs on the Firm or otherwise reduce the Firm's profitability, limit the Firm's ability to pursue business opportunities in which it might otherwise consider engaging, require the Firm to dispose of or curtail certain businesses, affect the value of assets that the Firm holds, require the Firm to increase its prices and therefore reduce demand for its products, or otherwise adversely affect the Firm's businesses.

Expanded regulatory oversight of JPMorgan Chase's businesses will increase the Firm's compliance costs and risks and may reduce the profitability of those businesses.

In recent years the Firm has entered into several Consent Orders with its banking regulators and settlements with various governmental agencies, including the Consent Orders entered into in April 2011 relating to the Firm's residential mortgage servicing, foreclosure and loss mitigation activities; the February 2012 global settlement with federal and state government agencies relating to the servicing and origination of mortgages; the Consent Orders entered into in January 2013 relating to the Firm's Bank Secrecy Act/Anti-Money Laundering policies, procedures and controls and to Chief Investment Office risk management and control functions as well as trading activities; the Consent Orders entered into September 2013 concerning oversight of third parties, operational processes and control functions related to credit card collections litigation practices and to billing practices for credit monitoring products formerly offered by the Firm; the settlements in November 2013 of certain repurchase representation and warranty

claims by a group of institutional investors and with the U.S. Department of Justice, several other federal agencies and several State Attorneys General relating to certain residential mortgage-backed securitization activities of the Firm, Bear Stearns and Washington Mutual; the Deferred Prosecution Agreement entered into in January 2014 with the U.S. Department of Justice and related agreements with the OCC and the Financial Crimes Enforcement Network ("FinCEN") relating to Bernard L. Madoff Investment Securities LLC and the Firm's AML compliance program; and the February 2014 settlement entered into with several federal government agencies relating to the Firm's participation in certain federal mortgage insurance programs. These Consent Orders and settlements require the Firm, among other things, to remediate specified deficiencies in certain controls and operational processes; in some cases, to engage internal or external personnel to review past transactions or to monitor the extent to which cited lapses

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have been addressed; and to furnish its regulators with periodic reports concerning the Firm's progress in meeting the requirements of the orders and settlements. The Firm has also paid significant fines and penalties or provided monetary and other relief in connection with many of these actions and settlements.

The Firm is devoting substantial resources to satisfying the requirements of these Consent Orders and settlements, including comprehensive enhancements to its procedures and controls, the expansion of risk and control functions within each line of business, investments in technology and the hiring of significant numbers of additional risk, control and compliance personnel, all of which has increased the Firm's operational and compliance costs. In addition to these enforcement actions, the Firm is experiencing heightened regulatory oversight of its compliance with applicable laws and regulations, particularly with respect to its consumer businesses. The Firm expects that such regulatory scrutiny will continue, and that regulators will continue to take formal enforcement action, rather than taking informal supervisory actions, more frequently than they have done historically.

If the Firm fails to successfully address the requirements of the Consent Orders, the Deferred Prosecution Agreement and the other regulatory settlements and enforcement actions to which it is subject, or more generally, to effectively enhance its risk and control procedures and processes to meet heightened expectations by its regulators, it may continue to face a greater number or wider scope of investigations, enforcement actions and litigation, thereby increasing its costs associated with responding to or defending such actions, and it could be required to enter into further orders and settlements, pay additional fines, penalties or judgments, or accept material regulatory restrictions on its businesses, which could adversely affect the Firm's operations and, in turn, its financial results. In addition, further regulatory inquiries, investigations and actions, as well as any additional legislative or regulatory developments affecting the Firm's businesses, and any required changes to the Firm's business operations resulting from these developments, could result in significant loss of revenue, limit the products or services the Firm offers, require the Firm to increase its prices and therefore reduce demand for its products, impose additional compliance costs on the Firm, cause harm to the Firm's reputation or otherwise adversely affect the Firm's businesses.

Under the Firm's resolution plan required to be submitted by the Dodd-Frank Act resolution provisions, holders of the Firm's debt obligations are at clear risk of loss in any resolution proceedings.

In October 2013, JPMorgan Chase submitted to the Federal Reserve and the FDIC its annual update to its plan for resolution of the Firm. The Firm's resolution plan includes strategies to resolve the Firm under the Bankruptcy Code, and also recommends to the FDIC and the Federal Reserve

the Firm's proposed optimal strategy to resolve the Firm under the special resolution procedure provided in Title II of the Dodd-Frank Act ("Title II").

The Firm's recommendation for its optimal Title II strategy would involve a "single point of entry" recapitalization model in which the FDIC would use its power to create a "bridge entity" for JPMorgan Chase, transfer the systemically important and viable parts of the Firm's business, principally the stock of JPMorgan Chase & Co.'s main operating subsidiaries and any intercompany claims against such subsidiaries, to the bridge entity, recapitalize those businesses by contributing some or all of such intercompany claims to the capital of such subsidiaries, and by exchanging debt claims against JPMorgan Chase & Co. for equity in the bridge entity. If the Firm were to be resolved under this strategy, no assurance can be given that the value of the stock of the bridge entity distributed to the holders of debt obligations of JPMorgan Chase & Co. would be sufficient to repay or satisfy all or part of the principal amount of, and interest on, the debt obligations for which such stock was exchanged.

#### Market Risk

JPMorgan Chase's results of operations have been, and may continue to be, adversely affected by U.S. and international financial market and economic conditions.

JPMorgan Chase's businesses are materially affected by economic and market conditions, including the liquidity of the global financial markets; the level and volatility of debt and equity prices, interest rates and currency and commodities prices; investor sentiment; events that reduce confidence in the financial markets; inflation and unemployment; the availability and cost of capital and credit; the economic effects of natural disasters, several weather conditions, acts of war or terrorism; monetary policies and actions taken by the Federal Reserve and other central banks and the health of U.S. or international economies.

In the Firm's wholesale businesses, the above-mentioned factors can affect transactions involving the Firm's underwriting and advisory businesses; the realization of cash returns from its private equity business; the volume of transactions that the Firm executes for its customers and, therefore, the revenue that the Firm receives from commissions and spreads; and the willingness of financial sponsors or other investors to participate in loan syndications or underwritings managed by the Firm.

The Firm generally maintains extensive market-making positions in the fixed income, currency, commodities and equity markets to facilitate client demand and provide liquidity to clients. The Firm may have market-making positions that lack pricing transparency or liquidity. The revenue derived from these positions is affected by many factors, including the Firm's success in effectively hedging its market and other risks, volatility in interest rates and equity, debt and commodities markets, credit spreads, and

availability of liquidity in the capital markets, all of which are affected by economic and market conditions. The Firm anticipates that revenue relating to its market-making and private equity businesses will continue to experience volatility, which will affect pricing or the ability to realize returns from such activities, and that this could materially adversely affect the Firm's earnings.

The fees that the Firm earns for managing third-party assets are also dependent upon general economic conditions. For example, a higher level of U.S. or non-U.S. interest rates or a downturn in securities markets could affect the valuations of the third-party assets that the Firm manages or holds in custody, which, in turn, could affect the Firm's revenue. Macroeconomic or market concerns may also prompt outflows from the Firm's funds or accounts.

Changes in interest rates will affect the level of assets and liabilities held on the Firm's balance sheet and the revenue that the Firm earns from net interest income. A low interest rate environment or a flat or inverted yield curve may adversely affect certain of the Firm's businesses by compressing net interest margins, reducing the amounts that the Firm earns on its investment securities portfolio, or reducing the value of its mortgage servicing rights ("MSR") asset, thereby reducing the Firm's net interest income and other revenues.

The Firm's consumer businesses are particularly affected by domestic economic conditions, including U.S. interest rates; the rate of unemployment; housing prices; the level of consumer confidence; changes in consumer spending; and the number of personal bankruptcies. If the current positive trends in the U.S. economy are not sustained, this could diminish demand for the products and services of the Firm's consumer businesses, or increase the cost to provide such products and services. In addition, adverse economic conditions, such as declines in home prices or persistent high levels of unemployment, could lead to an increase in mortgage, credit card and other loan delinquencies and higher net charge-offs, which can reduce the Firm's earnings.

Widening of credit spreads makes it more expensive for the Firm to borrow on both a secured and unsecured basis. Credit spreads widen or narrow not only in response to Firm-specific events and circumstances, but also as a result of general economic and geopolitical events and conditions. Changes in the Firm's credit spreads will impact, positively or negatively, the Firm's earnings on liabilities that are recorded at fair value.

Finally, adverse economic and financial market conditions in specific countries or regions can have significant adverse effects on the Firm's business, results of operations, financial condition and liquidity. For example, during the recent Eurozone debt crisis, concerns about the possibility of one or more sovereign debt defaults, significant bank failures or defaults and/or the exit of one or more countries from the European Monetary Union resulted in, among other things, declines in market liquidity, a contraction of

available credit, and diminished economic growth and business confidence in the Eurozone. There are continuing concerns as to the ultimate financial effectiveness of the assistance measures taken to date, and the extent to which the austerity measures may exacerbate high unemployment and test the social and political stability of weaker economies in the Eurozone. The Firm's business and results of operations can be adversely affected both by localized economic crises in parts of the world where the Firm does business or when regional economic turmoil causes deterioration of global economic conditions.

#### Credit Risk

The financial condition of JPMorgan Chase's customers, clients and counterparties, including other financial institutions, could adversely affect the Firm.

Financial services institutions are interrelated as a result of market-making, trading, clearing, counterparty or other relationships. The Firm routinely executes transactions with counterparties in the financial services industry, including brokers and dealers, commercial banks, investment banks, mutual and hedge funds, investment managers and other institutional clients. Many of these transactions expose the Firm to credit risk and, in some cases, disputes and litigation in the event of a default by the counterparty or client.

The Firm is a market leader in providing clearing and custodial services, and also acts as a clearing and custody bank in the securities and repurchase transaction market, including the U.S. tri-party repurchase transaction market. Many of these services expose the Firm to credit risk in the event of a default by the counterparty or client, a central counterparty ("CCP") or another market participant.

As part of providing clearing services, the Firm is a member of a number of CCPs, and may be required to pay a portion of the losses incurred by such organizations as a result of the default of other members. As a clearing member, the Firm is also exposed to the risk of non-performance by its clients, which it seeks to mitigate through the maintenance of adequate collateral. In its role as custodian bank in the securities and repurchase transaction market, the Firm can be exposed to intra-day credit risk of its clients. If a client to whom the Firm provides such services becomes bankrupt or insolvent, the Firm may become involved in disputes and litigation with various parties, including one or more CCP's, the client's bankruptcy estate and other creditors, or involved in regulatory investigations. All of such events can increase the Firm's operational and litigation costs and may result in losses if any collateral received by the Firm declines in value.

During periods of market stress or illiquidity, the Firm's credit risk also may be further increased when the Firm cannot realize the fair value of the collateral held by it or when collateral is liquidated at prices that are not sufficient to recover the full amount of the loan, derivative or other exposure due to the Firm. Further, disputes with obligors as

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to the valuation of collateral significantly increase in times of market stress and illiquidity. Periods of illiquidity could produce losses if the Firm is unable to realize the fair value of collateral or manage declines in the value of collateral. Concentration of credit and market risk could increase the potential for significant losses.

JPMorgan Chase has exposure to increased levels of risk when customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions. As a result, the Firm regularly monitors various segments of its portfolio exposures to assess potential concentration risks. The Firm's efforts to diversify or hedge its credit portfolio against concentration risks may not be successful.

In addition, disruptions in the liquidity or transparency of the financial markets may result in the Firm's inability to sell, syndicate or realize the value of its positions, thereby leading to increased concentrations. The inability to reduce the Firm's positions may not only increase the market and credit risks associated with such positions, but also increase the level of risk-weighted assets on the Firm's balance sheet, thereby increasing its capital requirements and funding costs, all of which could adversely affect the operations and profitability of the Firm's businesses.

#### Liquidity Risk

If JPMorgan Chase does not effectively manage its liquidity, its business could suffer.

JPMorgan Chase's liquidity is critical to its ability to operate its businesses. Some potential conditions that could impair the Firm's liquidity include markets that become illiquid or are otherwise experiencing disruption, unforeseen cash or capital requirements (including, among others, commitments that may be triggered to special purpose entities ("SPEs") or other entities), difficulty in selling or inability to sell assets, unforeseen outflows of cash or collateral, and lack of market or customer confidence in the Firm or financial markets in general. These conditions may be caused by events over which the Firm has little or no control. The widespread crisis in investor confidence and resulting liquidity crisis experienced in 2008 and into early 2009 increased the Firm's cost of funding and limited its access to some of its traditional sources of liquidity (such as securitized debt offerings backed by mortgages, credit card receivables and other assets) during that time, and there is no assurance that these conditions could not occur in the future.

If the Firm's access to stable and low cost sources of funding, such as bank deposits, are reduced, the Firm may need to raise alternative funding which may be more expensive or of limited availability.

As a holding company, JPMorgan Chase & Co. relies on the earnings of its subsidiaries for its cash flow and,

consequently, its ability to pay dividends and satisfy its debt and other obligations. These payments by subsidiaries may take the form of dividends, loans or other payments. Several of JPMorgan Chase & Co.'s principal subsidiaries are subject to dividend distribution or capital adequacy requirements or other regulatory restrictions on their ability to provide such payments. Limitations in the payments that JPMorgan Chase & Co. receives from its subsidiaries could reduce its liquidity position.

Some regulators have proposed legislation or regulations requiring large banks to incorporate a separate subsidiary in countries in which they operate, and to maintain independent capital and liquidity for such subsidiaries. If adopted, these requirements could hinder the Firm's ability to efficiently manage its funding and liquidity in a centralized manner.

Reductions in the Firm's credit ratings may adversely affect its liquidity and cost of funding, as well as the value of debt obligations issued by the Firm.

JPMorgan Chase & Co. and certain of its subsidiaries, including JPMorgan Chase Bank, N.A., are currently rated by credit rating agencies. In 2013, Moody's downgraded its ratings of JPMorgan Chase & Co. and several other bank holding companies based on Moody's reassessment of its assumptions relating to implicit government support for such companies. In addition, as of year-end 2013, S&P had JPMorgan Chase & Co. on "negative" outlook, indicating the possibility of a downgrade in ratings. Although the Firm closely monitors and manages factors influencing its credit ratings, there is no assurance that such ratings will not be lowered in the future. Furthermore, the rating agencies continue to evaluate economic and geopolitical trends, regulatory developments, rating uplift assumptions surrounding government support, future profitability, risk management practices and legal expenses, all of which could lead to adverse ratings actions. There is no assurance that any such downgrades from rating agencies, if they affected the Firm's credit ratings, would not occur at times of broader market instability when the Firm's options for responding to

events may be more limited and general investor confidence is low.

Further, a reduction in the Firm's credit ratings could reduce the Firm's access to debt markets, materially increase the cost of issuing debt, trigger additional collateral or funding requirements, and decrease the number of investors and counterparties willing or permitted, contractually or otherwise, to do business with or lend to the Firm, thereby curtailing the Firm's business operations and reducing its profitability. In addition, any such reduction in credit ratings may increase the credit spreads charged by the market for taking credit risk on JPMorgan Chase & Co. and its subsidiaries and, as a result, could adversely affect the value of debt obligations that they have issued or may issue in the future.

### Legal Risk

JPMorgan Chase faces significant legal risks, both from regulatory investigations and proceedings and from private actions brought against the Firm.

JPMorgan Chase is named as a defendant or is otherwise involved in various legal proceedings, including class actions and other litigation or disputes with third parties. Actions currently pending against the Firm may result in judgments, settlements, fines, penalties or other results adverse to the Firm, which could materially adversely affect the Firm's business, financial condition or results of operations, or cause serious reputational harm to the Firm. As a participant in the financial services industry, it is likely that the Firm will continue to experience a high level of litigation related to its businesses and operations.

In addition, and as noted above, the Firm's businesses and operations are also subject to heightened regulatory oversight and scrutiny, which may lead to additional regulatory investigations or enforcement actions. As the regulators and other government agencies continue to examine the operations of the Firm and its bank subsidiaries, there is no assurance that additional consent orders or other enforcement actions will not be issued by them in the future. These and other initiatives from federal and state officials may subject the Firm to further judgments, settlements, fines or penalties, or cause the Firm to be required to restructure its operations and activities, all of which could lead to reputational issues, or higher operational costs, thereby reducing the Firm's revenue.

### Business and Operational Risks

JPMorgan Chase's operations are subject to risk of loss from unfavorable economic, monetary and political developments in the United States and around the world.

JPMorgan Chase's businesses and earnings are affected by the fiscal and other policies that are adopted by various U.S. and non-U.S. regulatory authorities and agencies. The Federal Reserve regulates the supply of money and credit in the United States and its policies determine in large part the cost of funds for lending and investing in the United States and the return earned on those loans and investments. Changes in Federal Reserve policies (as well as the fiscal and monetary policies of non-U.S. central banks or regulatory authorities and agencies) are beyond the Firm's control and, consequently, the impact of changes in these policies on the Firm's activities and results of operations is difficult to predict.

The Firm's businesses and revenue are also subject to risks inherent in investing and market-making in securities of companies worldwide. These risks include, among others, risk of loss from unfavorable political, legal or other developments, including social or political instability, in the countries in which such companies operate, as well as the other risks and considerations as described further below.

Several of the Firm's businesses engage in transactions with, or trade in obligations of, U.S. and non-U.S. governmental entities, including national, state, provincial, municipal and local authorities. These activities can expose the Firm to enhanced sovereign, credit-related, operational and reputational risks, including the risks that a governmental entity may default on or restructure its obligations or may claim that actions taken by government officials were beyond the legal authority of those officials, which could adversely affect the Firm's financial condition and results of operations.

Further, various countries in which the Firm operates or invests, or in which the Firm may do so in the future, have in the past experienced severe economic disruptions particular to those countries or regions. In some cases, concerns regarding the fiscal condition of one or more countries can lead to "market contagion" to other countries in the same region or beyond the region. Accordingly, it is possible that economic disruptions in certain countries, even in countries in which the Firm does not conduct business or have operations, will adversely affect the Firm.

JPMorgan Chase's international strategy may be hindered by local political, social and economic factors, and will be subject to additional compliance costs and risks.

JPMorgan Chase has expanded and plans to continue to grow its international wholesale businesses in Europe/Middle East/Africa ("EMEA"), Asia/Pacific and Latin America/Caribbean over time. As part of its international strategy, the Firm seeks to provide a wider range of financial services to its clients that conduct business in those regions.

Some of the countries in which JPMorgan Chase conducts its wholesale businesses have economies or markets that are less developed and more volatile, and may have legal and regulatory regimes that are less established or

predictable, than the United States and other developed markets in which the Firm currently operates. Some of these countries have in the past experienced severe economic disruptions, including extreme currency fluctuations, high inflation, or low or negative growth, among other negative conditions, or have imposed restrictive monetary policies such as currency exchange controls and other laws and restrictions that adversely affect the local and regional business environment. In addition, these countries have historically been more susceptible to unfavorable political, social or economic developments which have in the past resulted in, and may in the future lead to, social unrest, general strikes and demonstrations, outbreaks of hostilities, overthrow of incumbent governments, terrorist attacks or other forms of internal discord, all of which can adversely affect the Firm's operations or investments in such countries. Political, social or economic disruption or dislocation in certain countries or regions in which the Firm conducts its wholesale businesses can hinder the growth and profitability of those operations, and there can be no assurance that the Firm will be able to successfully execute its international strategy.

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Less developed legal and regulatory systems in certain countries can also have adverse consequences on the Firm's operations in those countries, including, among others, the absence of a statutory or regulatory basis or guidance for engaging in specific types of business or transactions, or the inconsistent application or interpretation of existing laws and regulations; uncertainty as to the enforceability of contractual obligations; difficulty in competing in economies in which the government controls or protects all or a portion of the local economy or specific businesses, or where graft or corruption may be pervasive; and the threat of arbitrary regulatory investigations, civil litigations or criminal prosecutions.

Revenue from international operations and trading in non-U.S. securities and other obligations may be subject to negative fluctuations as a result of the above considerations, as well as due to governmental actions including expropriation, nationalization, confiscation of assets, price controls, capital controls, exchange controls, and changes in laws and regulations. The impact of these fluctuations could be accentuated as some trading markets are smaller, less liquid and more volatile than larger markets. Also, any of the above-mentioned events or circumstances in one country can, and has in the past, affected the Firm's operations and investments in another country or countries, including the Firm's operations in the United States. As a result, any such unfavorable conditions or developments could have an adverse impact on the Firm's business and results of operations.

Conducting business in countries with less developed legal and regulatory regimes often requires the Firm to devote significant additional resources to understanding, and monitoring changes in, local laws and regulations, as well as structuring its operations to comply with local laws and regulations and implementing and administering related internal policies and procedures. There can be no assurance that the Firm will always be successful in its efforts to conduct its business in compliance with laws and regulations in countries with less predictable legal and regulatory systems. In addition, the Firm can also incur higher costs, and face greater compliance risks, in structuring its operations outside the United States to comply with U.S. anti-corruption and anti-money laundering laws and regulations.

JPMorgan Chase's commodities activities are subject to extensive regulation, potential catastrophic events and environmental risks and regulation that may expose the Firm to significant cost and liability.

JPMorgan Chase engages in the storage, transportation, marketing or trading of several commodities, including metals, agricultural products, crude oil, oil products, natural gas, electric power, emission credits, coal, freight, and related products and indices. The Firm is also engaged in power generation and has invested in companies engaged in wind energy and in sourcing, developing and trading emission reduction credits. As a result of all of these

activities, the Firm is subject to extensive and evolving energy, commodities, environmental, and other governmental laws and regulations. The Firm expects laws and regulations affecting its commodities activities to expand in scope and complexity, and to restrict some of the Firm's activities, which could result in lower revenues from the Firm's commodities activities. In addition, the Firm may incur substantial costs in complying with current or future laws and regulations, and the failure to comply with these laws and regulations may result in substantial civil and criminal fines and penalties. Furthermore, liability may be incurred without regard to fault under certain environmental laws and regulations for remediation of contaminations.

The Firm's commodities activities also further expose the Firm to the risk of unforeseen and catastrophic events, including natural disasters, leaks, spills, explosions, release of toxic substances, fires, accidents on land and at sea, wars, and terrorist attacks that could result in personal injuries, loss of life, property damage, damage to the Firm's reputation and suspension of operations. The Firm's commodities activities are also subject to disruptions, many of which are outside of the Firm's control, from the breakdown or failure of power generation equipment, transmission lines or other equipment or processes, and the contractual failure of performance by third-party suppliers or service providers, including the failure to obtain and deliver raw materials necessary for the operation of power generation facilities. The Firm's actions to mitigate its risks related to the above-mentioned considerations may not prove adequate to address every contingency. In addition, insurance covering some of these risks may not be available, and the proceeds, if any, from insurance recovery may not be adequate to cover liabilities with respect to particular incidents. As a result, the Firm's financial condition and results of operations may be adversely affected by such events.

JPMorgan Chase relies on the integrity of its operating systems and employees, and those of third parties, and certain failures of such systems or misconduct by such employees could materially adversely affect the Firm's operations. JPMorgan Chase's businesses are dependent on the Firm's ability to process, record and monitor a large number of complex transactions. If the Firm's financial, accounting, or other data processing systems fail or have other significant shortcomings, the Firm could be materially adversely affected. The Firm is similarly dependent on its employees. The Firm could be materially adversely affected if one or more of its employees causes a significant operational breakdown or failure, either as a result of human error or where an individual purposefully sabotages or fraudulently manipulates the Firm's operations or systems. In addition, as the Firm changes processes or introduces new products and services, the Firm may not fully appreciate or identify new operational risks that may arise from such changes. Any of these occurrences could diminish the Firm's ability to

operate one or more of its businesses, or result in potential liability to clients, increased operating expenses, higher litigation costs (including fines and sanctions), reputational damage, regulatory intervention or weaker competitive standing, any of which could materially and adversely affect the Firm.

Third parties with which the Firm does business, as well as retailers and other third parties with which the Firm's customers do business, can also be sources of operational risk to the Firm, including with respect to security breaches affecting such parties and breakdowns or failures of the systems or misconduct by the employees of such parties.

Incidents of these types may require the Firm to take steps to protect the integrity of its own operational systems or to safeguard confidential information of the Firm or its customers, thereby increasing the Firm's operational costs and potentially diminish customer satisfaction.

If personal, confidential or proprietary information of customers or clients in the Firm's possession were to be mishandled or misused, the Firm could suffer significant regulatory consequences, reputational damage and financial loss. Such mishandling or misuse could include circumstances where, for example, such information was erroneously provided to parties who are not permitted to have the information, either through the fault of the Firm's systems, employees, or counterparties, or where such information was intercepted or otherwise inappropriately taken by third parties.

The Firm may be subject to disruptions of its operating systems arising from events that are wholly or partially beyond the Firm's control, which may include, for example, security breaches (as discussed further below); electrical or telecommunications outages; failures of computer servers or other damage to the Firm's property or assets; natural disasters or severe weather conditions; health emergencies or pandemics; or events arising from local or larger scale political events, including terrorist acts. JPMorgan Chase maintains a global resiliency and crisis management program that is intended to ensure that the Firm has the ability to recover its critical business functions and supporting assets, including staff, technology and facilities, in the event of a business interruption. While the Firm believes that its current resiliency plans are both sufficient and adequate, there can be no assurance that such plans will fully mitigate all potential business continuity risks to the Firm. Any failures or disruptions of the Firm's systems or operations could give rise to losses in service to customers and clients, adversely affect the Firm's business and results of operations by subjecting the Firm to losses or liability, or require the Firm to expend significant resources to correct the failure or disruption, as well as by exposing the Firm to litigation, regulatory fines or penalties or losses not covered by insurance.

A breach in the security of JPMorgan Chase's systems could disrupt its businesses, result in the disclosure of confidential information, damage its reputation and create significant financial and legal exposure for the Firm. Although JPMorgan Chase devotes significant resources to maintain and regularly upgrade its systems and processes that are designed to protect the security of the Firm's computer systems, software, networks and other technology assets and the confidentiality, integrity and availability of information belonging to the Firm and its customers, there is no assurance that all of the Firm's security measures will provide absolute security. JPMorgan Chase and other financial services institutions and companies engaged in data processing have reported breaches in the security of their websites or other systems, some of which have involved sophisticated and targeted attacks intended to obtain unauthorized access to confidential information, destroy data, disrupt or degrade service, sabotage systems or cause other damage, often through the introduction of computer viruses or malware, cyberattacks and other means. In particular, the Firm has experienced several significant distributed denial-of-service attacks from technically sophisticated and well-resourced third parties which were intended to disrupt online banking services, as well as data breaches due to cyberattacks which, in certain instances, have resulted in unauthorized access to customer data. Despite the Firm's efforts to ensure the integrity of its systems, it is possible that the Firm may not be able to anticipate or to implement effective preventive measures against all security breaches of these types, especially because the techniques used change frequently or are not recognized until launched, and because cyberattacks can originate from a wide variety of sources, including third parties outside the Firm such as persons who are involved with organized crime or associated with external service providers or who may be linked to terrorist organizations or hostile foreign governments. Those parties may also attempt to fraudulently induce employees, customers or other users of the Firm's systems to disclose sensitive information in order to gain access to the Firm's data or that of its customers or clients.

These risks may increase in the future as the Firm continues to increase its mobile-payment and other internet-based product offerings and expands its internal usage of web-based products and applications.

A successful penetration or circumvention of the security of the Firm's systems could cause serious negative consequences for the Firm, including significant disruption of the Firm's operations, misappropriation of confidential information of the Firm or that of its customers, or damage to computers or systems of the Firm and those of its customers and counterparties, and could result in violations of applicable privacy and other laws, financial loss to the Firm or to its customers, loss of confidence in the Firm's security measures, customer dissatisfaction, significant

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litigation exposure, and harm to the Firm's reputation, all of which could have a material adverse effect on the Firm.

**Risk Management**

JPMorgan Chase's framework for managing risks and its risk management procedures and practices may not be effective in identifying and mitigating every risk to the Firm, thereby resulting in losses.

JPMorgan Chase's risk management framework seeks to mitigate risk and loss to the Firm. The Firm has established processes and procedures intended to identify, measure, monitor, report and analyze the types of risk to which the Firm is subject. However, as with any risk management framework, there are inherent limitations to the Firm's risk management strategies because there may exist, or develop in the future, risks that the Firm has not appropriately anticipated or identified. Any lapse in the Firm's risk management framework and governance structure or other inadequacies in the design or implementation of the Firm's risk management framework, governance, procedures or practices could, individually or in the aggregate, cause unexpected losses for the Firm, materially and adversely affect the Firm's financial condition and results of operations, require significant resources to remediate any risk management deficiency, attract heightened regulatory scrutiny, expose the Firm to regulatory investigations or legal proceedings, subject the Firm to fines, penalties or judgments, harm the Firm's reputation, or otherwise cause a decline in investor confidence.

The Firm's products, including loans, leases, lending commitments, derivatives, trading account assets and assets held-for-sale, as well as cash management and clearing activities, expose the Firm to credit risk. As one of the nation's largest lenders, the Firm has exposures arising from its many different products and counterparties, and the credit quality of the Firm's exposures can have a significant impact on its earnings. The Firm establishes allowances for probable credit losses inherent in its credit exposure, including unfunded lending commitments. The Firm also employs stress testing and other techniques to determine the capital and liquidity necessary to protect the Firm in the event of adverse economic or market events. These processes are critical to the Firm's financial results and condition, and require difficult, subjective and complex judgments, including forecasts of how economic conditions might impair the ability of the Firm's borrowers and counterparties to repay their loans or other obligations. As is the case with any such assessments, there is always the possibility that the Firm will fail to identify the proper factors or that the Firm will fail to accurately estimate the impact of factors that it identifies.

JPMorgan Chase's market-making businesses may expose the Firm to unexpected market, credit and operational risks that could cause the Firm to suffer unexpected losses. Severe declines in asset values, unanticipated credit events, or unforeseen circumstances that may cause previously uncorrelated factors to become correlated (and vice versa)

may create losses resulting from risks not appropriately taken into account in the development, structuring or pricing of a financial instrument such as a derivative. Certain of the Firm's derivative transactions require the physical settlement by delivery of securities, commodities or obligations that the Firm does not own; if the Firm is unable to obtain such securities, commodities or obligations within the required timeframe for delivery, this could cause the Firm to forfeit payments otherwise due to it and could result in settlement delays, which could damage the Firm's reputation and ability to transact future business. In addition, in situations where trades are not settled or confirmed on a timely basis, the Firm may be subject to heightened credit and operational risk, and in the event of a default, the Firm may be exposed to market and operational losses. In particular, disputes regarding the terms or the settlement procedures of derivative contracts could arise, which could force the Firm to incur unexpected costs, including transaction, legal and litigation costs, and impair the Firm's ability to manage effectively its risk exposure from these products.

In a difficult or less liquid market environment, the Firm's risk management strategies may not be effective because other market participants may be attempting to use the same or similar strategies to deal with the challenging market conditions. In such circumstances, it may be difficult for the Firm to reduce its risk positions due to the activity of such other market participants.

Many of the Firm's risk management strategies or techniques have a basis in historical market behavior, and all such strategies and techniques are based to some degree on management's subjective judgment. For example, many models used by the Firm are based on assumptions regarding correlations among prices of various asset classes or other market indicators. In times of market stress, or in the event of other unforeseen circumstances, previously uncorrelated

indicators may become correlated, or conversely, previously correlated indicators may make unrelated movements. These sudden market movements or unanticipated or unidentified market or economic movements have in some circumstances limited and could again limit the effectiveness of the Firm's risk management strategies, causing the Firm to incur losses.

Many of the models used by the Firm are subject to review not only by the Firm's Model Risk function but also by the Firm's regulators in order that the Firm may utilize such models in connection with the Firm's calculations of market risk risk-weighted assets ("RWA") and credit risk RWA under the Advanced Approach of Basel III. The Firm may be subject to higher capital charges, which could adversely affect its financial results or limit its ability to expand its businesses, if such models do not receive approval by its regulators. In addition, there is no assurance that the amount of capital that the Firm holds with respect to operational risk, as derived from its operational risk capital model required under the Basel III capital standards, will

not be required to increase, which may have the effect of reducing the Firm's profitability.

In addition, the Firm must comply with enhanced standards for the assessment and management of risks associated with vendors and other third parties that provide services to the Firm. These requirements apply to the Firm both under general guidance issued by the banking regulators and, more specifically, under the Consent Order entered into by the Firm relating to collections litigation practices. The Firm has incurred and expects to incur additional costs and expenses in connection with its initiatives to address the risks associated with oversight of its third party relationships. Failure by the Firm to appropriately assess and manage third party relationships, especially those involving significant banking functions, shared services or other critical activities, could result in potential liability to clients and customers, fines, penalties or judgments imposed by the Firm's regulators, increased operating expenses and harm to the Firm's reputation, any of which could materially and adversely affect the Firm.

Lapses in disclosure controls and procedures or internal control over financial reporting could materially and adversely affect the Firm's operations, profitability or reputation.

There can be no assurance that the Firm's disclosure controls and procedures will be effective in every circumstance or that a material weakness or significant deficiency in internal control over financial reporting could not occur again.

Any such lapses or deficiencies may materially and adversely affect the Firm's business and results of operations or financial condition, restrict its ability to access the capital markets, require the Firm to expend significant resources to correct the lapses or deficiencies, expose the Firm to regulatory or legal proceedings, subject it to fines, penalties or judgments, harm the Firm's reputation, or otherwise cause a decline in investor confidence.

#### Other Risks

The financial services industry is highly competitive, and JPMorgan Chase's inability to compete successfully may adversely affect its results of operations.

JPMorgan Chase operates in a highly competitive environment and the Firm expects competitive conditions to continue to intensify as the financial services industry produces better-capitalized and more geographically diverse companies that are capable of offering a wider array of financial products and services at more competitive prices. Competitors include other banks, brokerage firms, investment banking companies, merchant banks, hedge funds, commodity trading companies, private equity firms, insurance companies, mutual fund companies, investment managers, credit card companies, mortgage banking companies, trust companies, securities processing companies, automobile financing companies, leasing

companies, e-commerce and other Internet-based companies, and a variety of other financial services and advisory companies. Technological advances and the growth of e-commerce have made it possible for non-depository institutions to offer products and services that traditionally were banking products, and for financial institutions and other companies to provide electronic and Internet-based financial solutions, including electronic securities trading. The Firm's businesses generally compete on the basis of the quality and variety of the Firm's products and services, transaction execution, innovation, reputation and price. Ongoing or increased competition in any one or all of these areas may put downward pressure on prices for the Firm's products and services or may cause the Firm to lose market share. Increased competition also may require the Firm to make additional capital investments in its businesses in order to remain competitive. These investments may increase expense or may require the Firm to extend more of its capital on behalf of clients in order to execute larger, more competitive transactions. The Firm cannot provide assurance that the significant competition in the financial services industry will not materially adversely affect its future results of operations.

Competitors of the Firm's non-U.S. wholesale businesses are typically subject to different, and in some cases, less stringent, legislative and regulatory regimes. For example, the regulatory objectives underlying several provisions of the Dodd-Frank Act, including the prohibition on proprietary trading under the Volcker Rule and the derivatives "push-out" rules, have not been embraced by governments and regulatory agencies outside the United States and may not be implemented into law in most countries. The more restrictive laws and regulations applicable to U.S. financial services institutions, such as JPMorgan Chase, can put the Firm at a competitive disadvantage to its non-U.S. competitors, including prohibiting the Firm from engaging in certain transactions, making the Firm's pricing of certain transactions more expensive for clients or adversely affecting the Firm's cost structure for providing certain products,

all of which can reduce the revenue and profitability of the Firm's wholesale businesses.

JPMorgan Chase's ability to attract and retain qualified employees is critical to the success of its business, and failure to do so may materially adversely affect the Firm's performance.

JPMorgan Chase's employees are the Firm's most important resource, and in many areas of the financial services industry, competition for qualified personnel is intense. The imposition on the Firm or its employees of restrictions on executive compensation may adversely affect the Firm's ability to attract and retain qualified senior management and employees. If the Firm is unable to continue to retain and attract qualified employees, the Firm's performance, including its competitive position, could be materially adversely affected.

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JPMorgan Chase's financial statements are based in part on assumptions and estimates which, if incorrect, could cause unexpected losses in the future.

Pursuant to accounting principles generally accepted in the United States, JPMorgan Chase is required to use certain assumptions and estimates in preparing its financial statements, including in determining allowances for credit losses and reserves related to litigation, among other items. Certain of the Firm's financial instruments, including trading assets and liabilities, available-for-sale securities, certain loans, MSRs, private equity investments, structured notes and certain repurchase and resale agreements, among other items, require a determination of their fair value in order to prepare the Firm's financial statements. Where quoted market prices are not available, the Firm may make fair value determinations based on internally developed models or other means which ultimately rely to some degree on management estimation and judgment. In addition, sudden illiquidity in markets or declines in prices of certain loans and securities may make it more difficult to value certain balance sheet items, which may lead to the possibility that such valuations will be subject to further change or adjustment. If assumptions or estimates underlying the Firm's financial statements are incorrect, the Firm may experience material losses.

Damage to JPMorgan Chase's reputation could damage its businesses.

Maintaining trust in JPMorgan Chase is critical to the Firm's ability to attract and maintain customers, investors and employees. Damage to the Firm's reputation can therefore cause significant harm to the Firm's business and prospects. Harm to the Firm's reputation can arise from numerous sources, including, among others, employee misconduct, compliance failures, litigation or regulatory outcomes or governmental investigations. The Firm's reputation could also be harmed by the failure of an affiliate, joint-venturer or merchant banking portfolio company, or a vendor or other third party with which the Firm does business, to comply with laws or regulations. In addition, a failure to deliver appropriate standards of service and quality, or a failure or perceived failure to treat customers and clients fairly, can result in customer dissatisfaction, litigation and heightened regulatory scrutiny, all of which can lead to lost revenue, higher operating costs and harm to the Firm's reputation. Adverse publicity regarding the Firm, whether or not true, may result in harm to the Firm's prospects. Actions by the financial services industry generally or by certain members of or individuals in the industry can also affect the Firm's reputation. For example, the role played by financial services firms in the financial crisis, including concerns that consumers have been treated unfairly by financial institutions, has damaged the reputation of the industry as a whole. Should any of these or other events or factors that can undermine the Firm's reputation occur, there is no assurance that the additional costs and expenses that the Firm may need to incur to address the issues giving

rise to the reputational harm could not adversely affect the Firm's earnings and results of operations.

Management of potential conflicts of interests has become increasingly complex as the Firm continues to expand its business activities through more numerous transactions, obligations and interests with and among the Firm's clients. The failure to adequately address, or the perceived failure to adequately address, conflicts of interest could affect the willingness of clients to deal with the Firm, or give rise to litigation or enforcement actions, as well as cause serious reputational harm to the Firm.

**ITEM 1B: UNRESOLVED SEC STAFF COMMENTS**

None.

**ITEM 2: PROPERTIES**

JPMorgan Chase's headquarters is located in New York City at 270 Park Avenue, a 50-story office building owned by JPMorgan Chase. This location contains approximately 1.3 million square feet of space.

In total, JPMorgan Chase owned or leased approximately 11.4 million square feet of commercial office and retail space in New York City at December 31, 2013. JPMorgan Chase and its subsidiaries also own or lease significant administrative and operational facilities in Chicago, Illinois (3.7 million square feet); Houston and Dallas, Texas (3.6 million square feet); Columbus, Ohio (2.8 million square feet); Phoenix, Arizona (1.4 million square feet); Jersey City, New Jersey (1.0 million square feet); as well as owning or leasing 5,630 retail branches in 23 states. At December 31, 2013, the Firm occupied approximately 67.5 million total square feet of space in the United States. On December 17, 2013, the Firm sold One Chase Manhattan Plaza, a 60-story, 2.2 million square foot office building. Contemporaneously, the Firm entered into a lease back agreement on approximately 1.2 million square feet of space

in the building for one year in order to provide time to relocate its employees to other locations, predominantly in New York and New Jersey. Additionally, the Firm entered into long-term lease back agreements ranging from five to ten years for approximately 0.3 million square feet of space, which includes five office floors, portions of the lower level space, and retail branch space on the ground floor.

At December 31, 2013, the Firm also owned or leased approximately 5.4 million square feet of space in Europe, the Middle East and Africa. In the United Kingdom, at December 31, 2013, JPMorgan Chase owned or leased approximately 4.5 million square feet of space, including 1.4 million square feet at 25 Bank Street, the European headquarters of the Corporate & Investment Bank.

In 2008, JPMorgan Chase acquired a 999-year leasehold interest in land at London's Canary Wharf. JPMorgan Chase has a building agreement in place through October 30, 2016, to develop the Canary Wharf site for future use.

JPMorgan Chase and its subsidiaries also occupy offices and other administrative and operational facilities in the Asia/Pacific region, Latin America and Canada under ownership and leasehold agreements aggregating approximately 5.9 million square feet of space at December 31, 2013. This includes leases for administrative and operational facilities in India (2.0 million square feet) and the Philippines (1.0 million square feet).

The properties occupied by JPMorgan Chase are used across all of the Firm's business segments and for corporate purposes. JPMorgan Chase continues to evaluate its current and projected space requirements and may determine from time to time that certain of its premises and facilities are no longer necessary for its operations. There is no assurance that the Firm will be able to dispose of any such excess premises or that it will not incur charges in connection with such dispositions. Such disposition costs may be material to the Firm's results of operations in a given period. For a discussion of occupancy expense, see the Consolidated Results of Operations on pages 71–74.

**ITEM 3: LEGAL PROCEEDINGS**

For a description of the Firm's material legal proceedings, see Note 31 on pages 326–332.

**ITEM 4: MINE SAFETY DISCLOSURES**

Not applicable.

## Part II

## ITEM 5: MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

## Market for registrant's common equity

The outstanding shares of JPMorgan Chase common stock are listed and traded on the New York Stock Exchange, the London Stock Exchange and the Tokyo Stock Exchange. For the quarterly high and low prices of JPMorgan Chase's common stock for the last two years, see the section entitled "Supplementary information – Selected quarterly financial data (unaudited)" on pages 339–340. For a comparison of the cumulative total return for JPMorgan Chase common stock with the comparable total return of the S&P 500 Index, the KBW Bank Index and the S&P Financial Index over the five-year period ended December 31, 2013, see "Five-year stock performance," on page 63.

JPMorgan Chase declared and paid quarterly cash dividends on its common stock in the amount of \$0.38 per share for the second, third and fourth quarters of 2013, \$0.30 per share for the first quarter of 2013, \$0.30 per share for each quarter of 2012 and \$0.25 per share for each quarter of 2011.

The common dividend payout ratio, based on reported net income, was 33% for 2013, 23% for 2012 and 22% for 2011. For a discussion of restrictions on dividend payments, see Note 22 and Note 27 on page 309 and page 316, respectively. At January 31, 2014, there were 207,543 holders of record of JPMorgan Chase common stock. For information regarding securities authorized for issuance under the Firm's employee stock-based compensation plans, see Item 12 on page 24.

## Repurchases under the common equity repurchase program

On March 13, 2012, the Board of Directors authorized a \$15.0 billion common equity (i.e., common stock and warrants) repurchase program. The amount of equity that may be repurchased is also subject to the amount that is set forth in the Firm's annual capital plan that is submitted to

the Federal Reserve as part of the CCAR process. The following table shows the Firm's repurchases of common equity for the years ended December 31, 2013, 2012 and 2011, on a trade-date basis. As of December 31, 2013, \$8.6 billion of authorized repurchase capacity remained under the program.

Year ended December 31,

(in millions)	2013	2012	2011
Total number of shares of common stock repurchased	96	31	229
Aggregate purchase price of common stock repurchases	\$4,789	\$1,329	\$8,827
Total number of warrants repurchased	—	18	10
Aggregate purchase price of warrant repurchases	\$—	\$238	\$122

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity — for example, during internal trading "black-out periods." All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information. The authorization to repurchase common equity will be utilized at management's discretion, and the timing of purchases and the exact amount of common equity that may be repurchased is subject to various factors, including market conditions; legal and regulatory considerations affecting the amount and timing of repurchase activity; the Firm's capital position (taking into account goodwill and intangibles); internal capital generation; and alternative investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 programs; and may be suspended at any time.

Shares repurchased pursuant to the common equity repurchase program during 2013 were as follows.

Year ended December 31, 2013	Total shares of common stock	Average price paid per share	Aggregate repurchases of common	Dollar value of remaining authorized

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	repurchased	of	equity (in	repurchase
		common	millions) <sup>(a)</sup>	(in
		stock <sup>(a)</sup>		millions) <sup>(b)</sup>
First quarter	53,536,385	\$48.16	\$2,578	\$10,854
Second quarter	23,433,465	50.01	1,172	9,683
Third quarter	13,622,765	54.30	740	8,943
October	2,070,102	52.57	109	8,834
November	1,849,030	54.02	100	8,734
December	1,583,907	56.77	90	8,644
Fourth quarter	5,503,039	54.27	299	8,644
Year-to-date	96,095,654	\$49.83	\$4,789	\$8,644

(a) Excludes commissions cost.

(b) The amount authorized by the Board of Directors excludes commissions cost.

## Repurchases under the stock-based incentive plans

Participants in the Firm's stock-based incentive plans may have shares of common stock withheld to cover income taxes. Shares withheld to pay income taxes are repurchased pursuant to the terms of the applicable plan and not under the Firm's repurchase program. Shares repurchased pursuant to these plans during 2013 were as follows.

Year ended	Total shares of common stock repurchased	Average price paid per share of common stock
December 31, 2013		
First quarter	—	\$—
Second quarter	789	50.12
Third quarter	33	52.52
October	—	—
November	—	—
December	—	—
Fourth quarter	—	—
Year-to-date	822	\$50.22

## ITEM 6: SELECTED FINANCIAL DATA

For five-year selected financial data, see "Five-year summary of consolidated financial highlights (unaudited)" on pages 62–63.

## ITEM 7: MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Management's discussion and analysis of financial condition and results of operations, entitled "Management's discussion and analysis," appears on pages 64–181. Such information should be read in conjunction with the Consolidated Financial Statements and Notes thereto, which appear on pages 184–338.

## ITEM 7A: QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

For a discussion of the quantitative and qualitative disclosures about market risk, see the Market Risk Management section of Management's discussion and analysis on pages 142–148.

## ITEM 8: FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The Consolidated Financial Statements, together with the Notes thereto and the report thereon dated February 19, 2014, of PricewaterhouseCoopers LLP, the Firm's independent registered public accounting firm, appear on pages 183–338.

Supplementary financial data for each full quarter within the two years ended December 31, 2013, are included on pages 339–340 in the table entitled "Selected quarterly financial data (unaudited)." Also included is a "Glossary of terms" on pages 341–345.

## ITEM 9: CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

Part II

ITEM 9A: CONTROLS AND PROCEDURES

As of the end of the period covered by this report, an evaluation was carried out under the supervision and with the participation of the Firm's management, including its Chairman and Chief Executive Officer and its Chief Financial Officer, of the effectiveness of its disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934). Based on that evaluation, the Chairman and Chief Executive Officer and the Chief Financial Officer concluded that these disclosure controls and procedures were effective. See Exhibits 31.1 and 31.2 for the Certification statements issued by the Chairman and Chief Executive Officer and Chief Financial Officer. The Firm is committed to maintaining high standards of internal control over financial reporting. Nevertheless, because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. In addition, in a firm as large and complex as JPMorgan Chase, lapses or deficiencies in internal controls may occur from time to time, and there can be no assurance that any such deficiencies will not result in significant deficiencies or material weaknesses in internal controls in the future. For further information, see "Management's report on internal control over financial reporting" on page 182. There was no change in the Firm's internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934) that occurred during the three months ended December 31, 2013, that has materially affected, or is reasonably likely to materially affect, the Firm's internal control over financial reporting.

ITEM 9B: OTHER INFORMATION

Pursuant to Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012, which added Section 13(r) to the Securities Exchange Act of 1934, as amended (the "Exchange Act"), an issuer is required to disclose in its annual or quarterly reports, as applicable, whether it or any of its affiliates knowingly engaged in certain activities, transactions or dealings relating to Iran or with individuals or entities designated pursuant to certain Executive Orders. Disclosure is generally required even where the activities, transactions or dealings were conducted in compliance with applicable law. Except as set forth below, as of the date of this report, the Firm is not aware of any other activity, transaction or dealing by any of its affiliates during the year ended December 31, 2013 that requires disclosure under Section 219.

Carlson Wagonlit Travel ("CWT"), a business travel management firm in which JPMorgan Chase has invested through its merchant banking activities, may be deemed to be an affiliate of the Firm, as that term is defined in Exchange Act Rule 12b-2. CWT has informed the Firm that, during the year ended December 31, 2013, it booked approximately 15 flights (of the approximately 60 million transactions it booked in 2013) to Iran on Iran Air for passengers, including employees of foreign governments and non-governmental organizations. All of such flights originated outside of the United States from countries that permit travel to Iran, and none of such passengers were persons designated under Executive Orders 13224 or 13382 or were employees of foreign governments that are targets of U.S. sanctions. CWT and the Firm believe that this activity is permissible pursuant to certain exemptions from U.S. sanctions for travel-related transactions under the International Emergency Economic Powers Act, as amended. CWT had approximately \$10,000 in gross revenues attributable to these transactions. CWT has informed the Firm that it intends to continue to engage in this activity so long as such activity is permitted under U.S. law.

## Part III

## ITEM 10: DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

## Executive officers of the registrant

Name	Age (at December 31, 2013)	Positions and offices
James Dimon	57	Chairman of the Board, Chief Executive Officer and President. Chief Risk Officer since June 2013. He had been Deputy Chief Risk Officer since June 2012, prior to which he had been Global Head of Market Risk for the Investment Bank (now part of Corporate & Investment Bank).
Ashley Bacon	44	Co-Chief Executive Officer of the Corporate & Investment Bank since July 2012. He had been Chief Executive Officer of Treasury & Securities Services (now part of Corporate & Investment Bank) from June 2010 until July 2012, prior to which he had been Chief Financial Officer.
Michael J. Cavanagh	47	General Counsel.
Stephen M. Cutler	52	Head of Human Resources since January 2009.
John L. Donnelly	57	Chief Executive Officer of Asset Management since September 2009.
Mary Callahan Erdoes	46	Chief Financial Officer since January 1, 2013, prior to which she had been Chief Financial Officer of Consumer & Community Banking since 2009. She previously had served as Global Controller of the Investment Bank (now part of Corporate & Investment Bank) from 2007 to 2009.
Marianne Lake	44	Chief Executive Officer of Commercial Banking since January 2012. He had been Chief Operating Officer of Commercial Banking since October 2010, prior to which he had been Global Head of Natural Resources in the Investment Bank (now part of Corporate & Investment Bank).
Douglas B. Petno	48	Co-Chief Executive Officer of the Corporate & Investment Bank since July 2012 and Chief Executive Officer of Europe, the Middle East and Africa since June 2011. He had been head or co-head of the Global Fixed Income business from November 2009 until July 2012. He was Global Head of Emerging Markets from 2006 until 2009, and was also responsible for the Global Credit Trading & Syndicate business from 2008 until 2009.
Daniel E. Pinto	51	Chief Executive Officer of Consumer & Community Banking since December 2012 prior to which he had been Co-Chief Executive Officer since July 2012. He had been Chief Executive Officer of Card Services since 2007 and of the Auto Finance and Student Lending businesses since 2011.
Gordon A. Smith	55	Chief Operating Officer since April 2013 and head of Mortgage Banking Capital Markets since January 2012. He had been Co-Chief Operating Officer from July 2012 until April 2013. He had been Chief Investment Officer from May until September 2012, co-head of the Global Fixed Income business from November 2009 until May 2012 and co-head of Mortgage Banking Capital Markets from July 2011 until January 2012, prior to which he had served in a number of senior Investment Banking Fixed Income management roles.
Matthew E. Zames	43	

Unless otherwise noted, during the five fiscal years ended December 31, 2013, all of JPMorgan Chase's above-named executive officers have continuously held senior-level positions with JPMorgan Chase. There are no family relationships among the foregoing executive officers. Information to be provided in Items 10, 11, 12, 13 and 14 of Form 10-K and not otherwise included herein is incorporated by reference to the Firm's definitive proxy statement for its 2014 Annual Meeting of Stockholders to be held on May 20, 2014, which will be filed with the SEC within 120 days of the end of the Firm's fiscal year ended December 31, 2013.

## Part III

## ITEM 11: EXECUTIVE COMPENSATION

See Item 10.

## ITEM 12: SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

For security ownership of certain beneficial owners and management, see Item 10.

The following table details the total number of shares available for issuance under JPMorgan Chase's employee stock-based incentive plans (including shares available for issuance to nonemployee directors). The Firm is not authorized to grant stock-based incentive awards to nonemployees, other than to nonemployee directors.

December 31, 2013	Number of shares to be issued upon exercise of outstanding options/SARs	Weighted-average exercise price of outstanding options/SARs	Number of shares remaining available for future issuance under stock compensation plans
Plan category			
Employee stock-based incentive plans approved by shareholders	86,006,791	\$ 44.30	266,462,906 <sup>(a)</sup>
Employee stock-based incentive plans not approved by shareholders	1,068,572	39.96	—
Total	87,075,363	\$ 44.24	266,462,906

<sup>(a)</sup> Represents future shares available under the shareholder-approved Long-Term Incentive Plan, as amended and restated effective May 17, 2011.

All future shares will be issued under the shareholder-approved Long-Term Incentive Plan, as amended and restated effective May 17, 2011. For further discussion, see Note 10 on pages 247–248.

## ITEM 13: CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

See Item 10.

## ITEM 14: PRINCIPAL ACCOUNTING FEES AND SERVICES

See Item 10.

Part IV

ITEM 15: EXHIBITS, FINANCIAL STATEMENT SCHEDULES

Exhibits, financial statement schedules

- 1 Financial statements  
The Consolidated Financial Statements, the Notes thereto and the report of the Independent Registered Public Accounting Firm thereon listed in Item 8 are set forth commencing on page 183.
- 2 Financial statement schedules
- 3 Exhibits
- 3.1 Restated Certificate of Incorporation of JPMorgan Chase & Co., effective April 5, 2006 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed April 7, 2006).
- 3.2 Amendment to the Restated Certificate of Incorporation of JPMorgan Chase & Co., effective June 7, 2013 (incorporated by reference to Appendix F to the Proxy Statement on Schedule 14A of JPMorgan Chase & Co. (File No. 1-5805) filed April 10, 2013).
- 3.3 Certificate of Designations for Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series I (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed April 24, 2008).
- 3.4 Certificate of Designations for 5.50% Non-Cumulative Preferred Stock, Series O (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed August 27, 2012).
- 3.5 Certificate of Designations for 5.45% Non-Cumulative Preferred Stock, Series P (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed February 5, 2013).
- 3.6 Certificate of Designations for Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series Q (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed April 23, 2013).
- 3.7 Certificate of Designations for Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series R (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed July 29, 2013).
- 3.8 Certificate of Designations for Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series S (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed January 22, 2014).
- 3.9 Certificate of Designations for 6.70% Non-Cumulative Preferred Stock, Series T (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed January 30, 2014).

- 3.10 By-laws of JPMorgan Chase & Co., effective June 7, 2013 (incorporated by reference to Exhibit 3.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed June 10, 2013).
- 4.1 Indenture, dated as of October 21, 2010, between JPMorgan Chase & Co. and Deutsche Bank Trust Company Americas, as Trustee (incorporated by reference to Exhibit 4.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No.1-5805) filed October 21, 2010).
- 4.2 Indenture, dated as of October 21, 2010, between JPMorgan Chase & Co. and U.S. Bank Trust National Association, as Trustee (incorporated by reference to Exhibit 4.2 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No.1-5805) filed October 21, 2010).
- 4.3 Form of Subordinated Indenture between JPMorgan Chase & Co. and U.S. Bank Trust National Association, as Trustee (incorporated by reference to Exhibit 4.13 to the Registration Statement on Form S-3 of JPMorgan Chase & Co. (File No. 333-191692) filed October 11, 2013).
- 4.4 Indenture, dated as of May 25, 2001, between JPMorgan Chase & Co. and Bankers Trust Company (succeeded by Deutsche Bank Trust Company Americas), as Trustee (incorporated by reference to Exhibit 4(a)(1) to the Registration Statement on Form S-3 of JPMorgan Chase & Co. (File No. 333-52826) filed June 13, 2001).
- 4.5 Form of Deposit Agreement (incorporated by reference to Exhibit 4.3 to the Registration Statement on Form S-3 of JPMorgan Chase & Co. (File No. 333-191692) filed October 11, 2013).
- 4.6 Form of Warrant to purchase common stock (incorporated by reference to Exhibit 4.2 to the Form 8-A of JPMorgan Chase & Co. (File No. 1-5805) filed December 11, 2009).

Other instruments defining the rights of holders of long-term debt securities of JPMorgan Chase & Co. and its subsidiaries are omitted pursuant to Section (b)(4)(iii)(A) of Item 601 of Regulation S-K. JPMorgan Chase & Co. agrees to furnish copies of these instruments to the SEC upon request.

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Part IV

- 10.1 Deferred Compensation Plan for Non-Employee Directors of JPMorgan Chase & Co., as amended and restated July 2001 and as of December 31, 2004 (incorporated by reference to Exhibit 10.1 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2007).<sup>(a)</sup>
- 10.2 2005 Deferred Compensation Plan for Non-Employee Directors of JPMorgan Chase & Co., effective as of January 1, 2005 (incorporated by reference to Exhibit 10.2 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2007).<sup>(a)</sup>
- 10.3 Post-Retirement Compensation Plan for Non-Employee Directors of The Chase Manhattan Corporation, as amended and restated, effective May 21, 1996 (incorporated by reference to Exhibit 10.3 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).<sup>(a)</sup>
- 10.4 2005 Deferred Compensation Program of JPMorgan Chase & Co., restated effective as of December 31, 2008 (incorporated by reference to Exhibit 10.4 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).<sup>(a)</sup>
- 10.5 JPMorgan Chase & Co. Long-Term Incentive Plan as amended and restated effective May 17, 2011 (incorporated by reference to Appendix C of the Schedule 14A of JPMorgan Chase & Co. (File No. 1-5805) filed April 7, 2011).<sup>(a)</sup>
- 10.6 Key Executive Performance Plan of JPMorgan Chase & Co., as amended and restated effective January 1, 2009 (incorporated by reference to Appendix D of the Schedule 14A of JPMorgan Chase & Co. (File No. 1-5805) filed March 31, 2008).<sup>(a)</sup>
- 10.7 Excess Retirement Plan of JPMorgan Chase & Co., restated and amended as of December 31, 2008, as amended (incorporated by reference to Exhibit 10.7 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2009).<sup>(a)</sup>
- 10.8 1995 Stock Incentive Plan of J.P. Morgan & Co. Incorporated and Affiliated Companies, as amended, dated December 11, 1996 (incorporated by reference to Exhibit 10.8 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).<sup>(a)</sup>
- 10.9 Executive Retirement Plan of JPMorgan Chase & Co., as amended and restated December 31, 2008 (incorporated by reference to Exhibit 10.9 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).<sup>(a)</sup>
- 10.10 Summary of Bank One Corporation Director Deferred Compensation Plan (incorporated by reference to Exhibit 10.19 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2005).<sup>(a)</sup>
- 10.11 Bank One Corporation Stock Performance Plan, as amended and restated effective February 20, 2001 (incorporated by reference to Exhibit 10.12 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).<sup>(a)</sup>

- 10.12 Bank One Corporation Supplemental Savings and Investment Plan, as amended and restated effective December 31, 2008 (incorporated by reference to Exhibit 10.13 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).<sup>(a)</sup>
- 10.13 Revised and Restated Banc One Corporation 1989 Stock Incentive Plan, effective January 18, 1989 (incorporated by reference to Exhibit 10.14 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).<sup>(a)</sup>
- 10.14 Banc One Corporation Revised and Restated 1995 Stock Incentive Plan, effective April 17, 1995 (incorporated by reference to Exhibit 10.15 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).<sup>(a)</sup>
- 10.15 Form of JPMorgan Chase & Co. Long-Term Incentive Plan Award Agreement of January 22, 2008 stock appreciation rights (incorporated by reference to Exhibit 10.25 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2007).<sup>(a)</sup>
- 10.16 Form of JPMorgan Chase & Co. Long-Term Incentive Plan Award Agreement of January 22, 2008 stock appreciation rights for James Dimon (incorporated by reference to Exhibit 10.27 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2007).<sup>(a)</sup>
- 10.17 Form of JPMorgan Chase & Co. Long-Term Incentive Plan Terms and Conditions for stock appreciation rights, dated as of January 20, 2009 (incorporated by reference to Exhibit 10.20 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).<sup>(a)</sup>

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- 10.18 Form of JPMorgan Chase & Co. Long-Term Incentive Plan Terms and Conditions for Operating Committee member stock appreciation rights, dated as of January 20, 2009 (incorporated by reference to Exhibit 10.21 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2008).<sup>(a)</sup>
- 10.19 Form of JPMorgan Chase & Co. Long-Term Incentive Plan Terms and Conditions for Operating Committee member stock appreciation rights, dated as of February 3, 2010 (incorporated by reference to Exhibit 10.23 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2009).<sup>(a)</sup>
- 10.20 Forms of JPMorgan Chase & Co. Long-Term Incentive Plan Terms and Conditions for stock appreciation rights and restricted stock units, dated as of January 18, 2012 (incorporated by reference to Exhibit 10.25 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2011).<sup>(a)</sup>
- 10.21 Forms of JPMorgan Chase & Co. Long-Term Incentive Plan Terms and Conditions for stock appreciation rights and restricted stock units for Operating Committee members, dated as of January 17, 2013 (incorporated by reference to Exhibit 10.23 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2012).<sup>(a)</sup>
- 10.22 Form of JPMorgan Chase & Co. Performance-Based Incentive Compensation Plan, effective as of January 1, 2006, as amended (incorporated by reference to Exhibit 10.27 to the Annual Report on Form 10-K of JPMorgan Chase & Co. (File No. 1-5805) for the year ended December 31, 2009).<sup>(a)</sup>
- 10.23 Deferred Prosecution Agreement dated January 6, 2014 between the United States Attorney's Office for the Southern District of New York and JPMorgan Chase Bank, N.A. (incorporated by reference to Exhibit 99.1 to the Current Report on Form 8-K of JPMorgan Chase & Co. (File No. 1-5805) filed January 7, 2014).
- 12.1 Computation of ratio of earnings to fixed charges.<sup>(b)</sup>
- 12.2 Computation of ratio of earnings to fixed charges and preferred stock dividend requirements.<sup>(b)</sup>
- 21 List of subsidiaries of JPMorgan Chase & Co.<sup>(b)</sup>
- 22.1 Annual Report on Form 11-K of The JPMorgan Chase 401(k) Savings Plan for the year ended December 31, 2013 (to be filed pursuant to Rule 15d-21 under the Securities Exchange Act of 1934).
- 23 Consent of independent registered public accounting firm.<sup>(b)</sup>
- 31.1 Certification.<sup>(b)</sup>
- 31.2 Certification.<sup>(b)</sup>
- 32 Certification pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.<sup>(c)</sup>

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101.INS	XBRL Instance Document. <sup>(b)(d)</sup>
101.SCH	XBRL Taxonomy Extension Schema Document. <sup>(b)</sup>
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document. <sup>(b)</sup>
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document. <sup>(b)</sup>
101.LAB	XBRL Taxonomy Extension Label Linkbase Document. <sup>(b)</sup>
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document. <sup>(b)</sup>

(a) This exhibit is a management contract or compensatory plan or arrangement.

(b) Filed herewith.

Furnished herewith. This exhibit shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that Section. Such exhibit shall not be deemed incorporated into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.

Pursuant to Rule 405 of Regulation S-T, includes the following financial information included in the Firm’s Annual Report on Form 10-K for the year ended December 31, 2013, formatted in XBRL (eXtensible Business Reporting Language) interactive data files: (i) the Consolidated statements of income for the years ended December 31, 2013, 2012 and 2011, (ii) the Consolidated statements of comprehensive income for the years ended December 31, 2013, 2012 and 2011, (iii) the Consolidated balance sheets as of December 31, 2013 and 2012, (iv) the Consolidated statements of changes in stockholders’ equity for the years ended December 31, 2013, 2012 and 2011, (v) the Consolidated statements of cash flows for the years ended December 31, 2013, 2012 and 2011, and (vi) the Notes to consolidated financial statements.

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## Financial

## FIVE-YEAR SUMMARY OF CONSOLIDATED FINANCIAL HIGHLIGHTS

(unaudited)

As of or for the year ended December 31,

(in millions, except per share, ratio and headcount data)

	2013	2012	2011	2010	2009
Selected income statement data					
Total net revenue	\$96,606	\$97,031	\$97,234	\$102,694	\$100,434
Total noninterest expense	70,467	64,729	62,911	61,196	52,352
Pre-provision profit	26,139	32,302	34,323	41,498	48,082
Provision for credit losses	225	3,385	7,574	16,639	32,015
Income before income tax expense and extraordinary gain	25,914	28,917	26,749	24,859	16,067
Income tax expense	7,991	7,633	7,773	7,489	4,415
Income before extraordinary gain	17,923	21,284	18,976	17,370	11,652
Extraordinary gain	—	—	—	—	76
Net income	\$17,923	\$21,284	\$18,976	\$17,370	\$11,728
Per common share data					
Basic earnings					
Income before extraordinary gain	\$4.39	\$5.22	\$4.50	\$3.98	\$2.25
Net income	4.39	5.22	4.50	3.98	2.27
Diluted earnings					
Income before extraordinary gain	\$4.35	\$5.20	\$4.48	\$3.96	\$2.24
Net income	4.35	5.20	4.48	3.96	2.26
Cash dividends declared per share	1.44	1.20	1.00	0.20	0.20
Book value per share	53.25	51.27	46.59	43.04	39.88
Tangible book value per share ("TBVS" <sup>a</sup> )	40.81	38.75	33.69	30.18	27.09
Common shares outstanding					
Average: Basic	3,782.4	3,809.4	3,900.4	3,956.3	3,862.8
Diluted	3,814.9	3,822.2	3,920.3	3,976.9	3,879.7
Common shares at period-end	3,756.1	3,804.0	3,772.7	3,910.3	3,942.0
Share price <sup>(b)</sup>					
High	\$58.55	\$46.49	\$48.36	\$48.20	\$47.47
Low	44.20	30.83	27.85	35.16	14.96
Close	58.48	43.97	33.25	42.42	41.67
Market capitalization	219,657	167,260	125,442	165,875	164,261
Selected ratios					
Return on common equity ("ROE")					
Income before extraordinary gain	9	% 11	% 11	% 10	% 6
Net income	9	11	11	10	6
Return on tangible common equity ("ROTCE" <sup>a</sup> )					
Income before extraordinary gain	11	15	15	15	10
Net income	11	15	15	15	10
Return on assets ("ROA")					
Income before extraordinary gain	0.75	0.94	0.86	0.85	0.58
Net income	0.75	0.94	0.86	0.85	0.58
Return on risk-weighted assets <sup>(c)(d)</sup>					
Income before extraordinary gain	1.28	1.65	1.58	1.50	0.95
Net income	1.28	1.65	1.58	1.50	0.95
Overhead ratio	73	67	65	60	52
Loans-to-deposits ratio	57	61	64	74	68

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High Quality Liquid Assets (“HQLA”) (in billion\$)	\$522	\$341	NA	NA	NA	
Tier 1 capital ratio <sup>(d)</sup>	11.9	% 12.6	% 12.3	% 12.1	% 11.1	%
Total capital ratio <sup>(d)</sup>	14.4	15.3	15.4	15.5	14.8	
Tier 1 leverage ratio	7.1	7.1	6.8	7.0	6.9	
Tier 1 common capital ratio <sup>(d)(f)</sup>	10.7	11.0	10.1	9.8	8.8	
Selected balance sheet data (period-end)						
Trading assets	\$374,664	\$450,028	\$443,963	\$489,892	\$411,128	
Securities <sup>(g)</sup>	354,003	371,152	364,793	316,336	360,390	
Loans	738,418	733,796	723,720	692,927	633,458	
Total assets	2,415,689	2,359,141	2,265,792	2,117,605	2,031,989	
Deposits	1,287,765	1,193,593	1,127,806	930,369	938,367	
Long-term debt <sup>(h)</sup>	267,889	249,024	256,775	270,653	289,165	
Common stockholders’ equity	200,020	195,011	175,773	168,306	157,213	
Total stockholders’ equity	211,178	204,069	183,573	176,106	165,365	
Headcount <sup>(i)</sup>	251,196	258,753	259,940	239,515	221,200	
Credit quality metrics						
Allowance for credit losses	\$16,969	\$22,604	\$28,282	\$32,983	\$32,541	
Allowance for loan losses to total retained loans	2.25	% 3.02	% 3.84	% 4.71	% 5.04	%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans <sup>(i)</sup>	1.80	2.43	3.35	4.46	5.51	
Nonperforming assets	\$9,706	\$11,906	\$11,315	\$16,682	\$19,948	
Net charge-offs	5,802	9,063	12,237	23,673	22,965	
Net charge-off rate	0.81	% 1.26	% 1.78	% 3.39	% 3.42	%

TBVS and ROTCE are non-GAAP financial measures. TBVS represents the Firm's tangible common equity divided by period-end common shares. ROTCE measures the Firm's annualized earnings as a percentage of tangible common equity. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 82–83 of this Annual Report.

Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange. JPMorgan Chase's common stock is also listed and traded on the London Stock Exchange and the Tokyo Stock Exchange.

Return on Basel I risk-weighted assets is the annualized earnings of the Firm divided by its average risk-weighted assets ("RWA").

Basel 2.5 rules became effective for the Firm on January 1, 2013. The implementation of these rules in the first quarter of 2013 resulted in an increase of approximately \$150 billion in RWA compared with the Basel I rules. The implementation of these rules also resulted in decreases of the Firm's Tier 1 capital, Total capital and Tier 1 common capital ratios by 140 basis points, 160 basis points and 120 basis points, respectively, at March 31, 2013. For further discussion of Basel 2.5, see Regulatory capital on pages 160–167 of this Annual Report.

The Firm began estimating its total HQLA as of December 31, 2012, based on its current understanding of the Basel III LCR rules. For further discussion about HQLA, including its components, see Liquidity Risk on page 172 of this Annual Report.

Basel I Tier 1 common capital ratio ("Tier 1 common ratio") is Tier 1 common capital ("Tier 1 common") divided by RWA. The Firm uses Tier 1 common capital along with the other capital measures to assess and monitor its capital position. For further discussion of the Tier 1 common capital ratio, see Regulatory capital on pages 161–165 of this Annual Report.

Included held-to-maturity balances of \$24.0 billion at December 31, 2013. Held-to-maturity balances for the other periods were not material.

Included unsecured long-term debt of \$199.4 billion, \$200.6 billion, \$231.3 billion, \$238.2 billion and \$258.1 billion, respectively, as of December 31, of each year presented.

Effective January 1, 2013, interns are excluded from the firmwide and business segment headcount metrics. Prior periods were revised to conform with this presentation.

Excludes the impact of residential real estate purchased credit-impaired ("PCI") loans. For further discussion, see Allowance for credit losses on pages 139–141 of this Annual Report.

#### FIVE-YEAR STOCK PERFORMANCE

The following table and graph compare the five-year cumulative total return for JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") common stock with the cumulative return of the S&P 500 Index, the KBW Bank Index and the S&P Financial Index. The S&P 500 Index is a commonly referenced U.S. equity benchmark consisting of leading companies from different economic sectors. The KBW Bank Index seeks to reflect the performance of banks and thrifts that are publicly-traded in the U.S. and is composed of 24 leading national money center and regional banks and thrifts. The S&P Financial Index is an index of 81 financial companies, all of which are components of the S&P 500. The Firm is a component of all three industry indices.

The following table and graph assume simultaneous investments of \$100 on December 31, 2008, in JPMorgan Chase common stock and in each of the above indices. The comparison assumes that all dividends are reinvested.

December 31, (in dollars)	2008	2009	2010	2011	2012	2013
JPMorgan Chase	\$100.00	\$134.36	\$137.45	\$110.00	\$149.79	\$204.78
KBW Bank Index	100.00	98.24	121.19	93.08	123.69	170.39
S&P Financial Index	100.00	117.15	131.36	108.95	140.27	190.19
S&P 500 Index	100.00	126.45	145.49	148.55	172.31	228.10



## Management's discussion and analysis

This section of JPMorgan Chase's Annual Report for the year ended December 31, 2013 ("Annual Report"), provides Management's discussion and analysis ("MD&A") of the financial condition and results of operations of JPMorgan Chase. See the Glossary of Terms on pages 341–345 for definitions of terms used throughout this Annual Report. The MD&A included in this Annual Report contains statements that are forward-looking within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. Certain of such risks and uncertainties are described herein (see Forward-looking Statements on page 181 of this Annual Report) and in JPMorgan Chase's Annual Report on Form 10-K for the year ended December 31, 2013 ("2013 Form 10-K"), in Part I, Item 1A: Risk factors; reference is hereby made to both.

## INTRODUCTION

JPMorgan Chase & Co., a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America ("U.S."), with operations worldwide; the Firm has \$2.4 trillion in assets and \$211.2 billion in stockholders' equity as of December 31, 2013. The Firm is a leader in investment banking, financial services for consumers and small businesses, commercial banking, financial transaction processing, asset management and private equity. Under the J.P. Morgan and Chase brands, the Firm serves millions of customers in the U.S. and many of the world's most prominent corporate, institutional and government clients.

JPMorgan Chase's principal bank subsidiaries are JPMorgan Chase Bank, National Association ("JPMorgan Chase Bank, N.A."), a national bank with U.S. branches in 23 states, and Chase Bank USA, National Association ("Chase Bank USA, N.A."), a national bank that is the Firm's credit card-issuing bank. JPMorgan Chase's principal nonbank subsidiary is J.P. Morgan Securities LLC ("JPMorgan Securities"), the Firm's U.S. investment banking firm. The bank and nonbank subsidiaries of JPMorgan Chase operate nationally as well as through overseas branches and subsidiaries, representative offices and subsidiary foreign banks. One of the Firm's principal operating subsidiaries in the United Kingdom ("U.K.") is J.P. Morgan Securities plc (formerly J.P. Morgan Securities Ltd.), a subsidiary of JPMorgan Chase Bank, N.A.

JPMorgan Chase's activities are organized, for management reporting purposes, into four major reportable business segments, as well as a Corporate/Private Equity segment. The Firm's consumer business is the Consumer & Community Banking segment. The Corporate & Investment Bank, Commercial Banking, and Asset Management segments comprise the Firm's wholesale businesses. A description of the Firm's business segments, and the products and services they provide to their respective client bases, follows.

## Consumer &amp; Community Banking

Consumer & Community Banking ("CCB") serves consumers and businesses through personal service at bank branches and through ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking, Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card, Merchant Services & Auto ("Card"). Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios comprised of residential mortgages and home equity loans, including the purchased credit-impaired ("PCI") portfolio acquired in the Washington Mutual transaction. Card issues credit cards to consumers and small businesses, provides payment services to corporate and public sector clients through its commercial card products, offers payment processing services to merchants, and provides auto and student loan services.



### Corporate & Investment Bank

The Corporate & Investment Bank (“CIB”) comprised of Banking and Markets & Investor Services, offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Within Banking, the CIB offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Also included in Banking is Treasury Services, which includes transaction services, comprised primarily of cash management and liquidity solutions, and trade finance products. The Markets & Investor Services segment of the CIB is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes the Securities Services business, a leading global custodian which includes custody, fund accounting and administration, and securities lending products sold principally to asset managers, insurance companies and public and private investment funds.

### Commercial Banking

Commercial Banking (“CB”) delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and nonprofit entities with annual revenue generally ranging from \$20 million to \$2 billion. CB provides financing to real estate investors and owners. Partnering with the Firm’s other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients’ domestic and international financial needs.

### Asset Management

Asset Management (“AM”), with client assets of \$2.3 trillion, is a global leader in investment and wealth management. AM clients include institutions, high-net-worth individuals and retail investors in every major market throughout the world. AM offers investment management across all major asset classes including equities, fixed income, alternatives and money market funds. AM also offers multi-asset investment management, providing solutions to a broad range of clients’ investment needs. For individual investors, AM also provides retirement products and services, brokerage and banking services including trusts and estates, loans, mortgages and deposits. The majority of AM’s client assets are in actively managed portfolios.

### Corporate/Private Equity

The Corporate/Private Equity segment comprises Private Equity, Treasury and Chief Investment Office (“CIO”) and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm’s liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm’s capital plan. The major Other Corporate units include Real Estate, Central Technology, Legal, Compliance, Finance, Human Resources, Internal Audit, Risk Management, Oversight & Control, Corporate Responsibility and various Other Corporate groups. Other centrally managed expense includes the Firm’s occupancy and pension-related expense that are subject to allocation to the businesses.

## Management's discussion and analysis

## EXECUTIVE OVERVIEW

This executive overview of the MD&A highlights selected information and may not contain all of the information that is important to readers of this Annual Report. For a complete description of events, trends and uncertainties, as well as the enterprise risks and critical accounting estimates affecting the Firm and its various lines of business, this Annual Report should be read in its entirety.

## Economic environment

The global economy regained momentum in 2013, led by faster growth in the advanced economies, helped by decisive policy actions in the U.S., European Union, U.K., and Japan. Uncertainties about U.S. fiscal policy were reduced substantially by year-end, as were extreme downside risks to performance in the Eurozone and China that had been concerns earlier in the year. In addition, real consumer spending in the U.S. was supported late in the year by solid job growth, falling gasoline prices, and rising equity and house prices.

The U.S. economic forecast for 2014 looks for a gradual acceleration in real sales growth and for inflation to remain well below the Federal Reserve's Open Market Committee's long-run target of 2%. If the economic forecast for 2014 is realized, the tapering of asset purchases by the Federal Reserve's Open Market Committee will proceed and is expected to be completed before the end of 2014. However, the forecast does not look for a first rate hike by the Federal Reserve's Open Market Committee until sometime in 2015.

The European Central Bank's ("ECB") support in stabilizing European financial markets, along with the constructive steps taken by the European Union to lay the groundwork for a more coherent banking union, helped the region to return to growth during the first half of 2013. However, later in the year, the pace of the Eurozone's recovery remained slow, high unemployment tested the social and political stability of several of Europe's weaker economies, and Cyprus became the fourth country in the Eurozone to receive a full bail-out. While Germany and the northern European economies continued to drive growth, elsewhere in Europe growth was more subdued. More encouraging were signs that the peripheral economies in the region are showing signs of healing.

Economic performance in Asia was mixed in 2013. Japan boomed; in contrast, activity decelerated across much of the rest of the region. Growth outcomes were also mixed across Latin America. Economic activity decelerated in Mexico. Brazil began 2013 with positive momentum but then lost significant steam, with a widening gap between projected growth outcomes and inflation indicators. Policy uncertainties, slowing China demand for commodities, credit overhangs, and elevated inflation all weighed on investment in many emerging countries.

In summary, there is reason to be optimistic about the U.S. economic outlook in 2014. The economy finally appears to have broken out of the 2% range of growth experienced in the first several years of recovery, and the extent of both fiscal policy restraint and fiscal policy uncertainty should be sharply reduced. While growth in emerging markets is expected to remain subdued, economic activity is expected to continue accelerating in Europe.

## Financial performance of JPMorgan Chase

Year ended December 31,

(in millions, except per share data and ratios)	2013	2012	Change	
Selected income statement data				
Total net revenue	\$96,606	\$97,031	—	%
Total noninterest expense	70,467	64,729	9	
Pre-provision profit	26,139	32,302	(19	)
Provision for credit losses	225	3,385	(93	)
Net income	17,923	21,284	(16	)
Diluted earnings per share	4.35	5.20	(16	)
Return on common equity	9	% 11	%	
Capital ratios				
Tier 1 capital	11.9	12.6		
Tier 1 common	10.7	11.0		

### Summary of 2013 Results

JPMorgan Chase reported full-year 2013 net income of \$17.9 billion, or \$4.35 per share, on net revenue of \$96.6 billion. Net income decreased by \$3.3 billion, or 16%, compared with net income of \$21.3 billion, or \$5.20 per share, in 2012. ROE for the year was 9%, compared with 11% for the prior year.

The decrease in net income in 2013 was driven by a higher noninterest expense, partially offset by lower provision for credit losses. The increase in noninterest expense was driven by higher legal expense. The reduction in the provision for credit losses reflected continued favorable credit trends across the consumer and wholesale portfolios.

The decline in the provision for credit losses reflected lower consumer and wholesale provisions as net charge-offs decreased and the related allowance for credit losses was reduced by \$5.6 billion in 2013. The decline in the allowance reflected improved home prices in the residential real estate portfolios, as well as improved delinquency trends in the residential real estate, credit card loan and wholesale portfolios. Firmwide, net charge-offs were \$5.8 billion for the year, down \$3.3 billion, or 36%, from 2012, which included \$800 million of incremental charge-offs related to regulatory guidance. Nonperforming assets at year-end were \$9.7 billion, down \$2.2 billion, or 18%. Total firmwide allowance for credit losses was \$17.0 billion, resulting in a loan loss coverage ratio of 1.80%, excluding the purchased credit-impaired portfolio, compared with 2.43% in 2012.

The Firm's results reflected strong underlying performance across its four major reportable business segments, with strong lending and deposit growth. Consumer & Business Banking within Consumer & Community Banking was #1 in deposit growth for the second year in a row and #1 in customer satisfaction among the largest banks for the second year in a row as measured by The American Customer Satisfaction Index ("ACSI"). In Card, Merchant Services & Auto, credit card sales volume (excluding Commercial Card) was up 10% for the year. The Corporate & Investment Bank maintained its #1 ranking in Global Investment Banking Fees and reported record assets under custody of \$20.5 trillion at December 31, 2013. Commercial Banking loans increased to a record \$137.1 billion, a 7% increase compared with the prior year. Asset Management achieved nineteen consecutive quarters of positive net long-term client flows into assets under management. Asset Management also increased loan balances to a record \$95.4 billion at December 31, 2013.

JPMorgan Chase ended the year with a Basel I Tier 1 common ratio of 10.7%, compared with 11% at year-end 2012. The Firm estimated that its Tier 1 common ratio under the Basel III Advanced Approach on a fully phased-in basis, based on the interim final rule issued in October 2013, was 9.5% as of December 31, 2013. Total deposits increased to \$1.3 trillion, up 8% from the prior year. Total stockholders' equity at December 31, 2013, was \$211.2 billion. (The Basel I and III Tier 1 common ratios are non-GAAP financial measures, which the Firm uses along with the other capital measures, to assess and monitor its capital position. For further discussion of the Tier 1 common capital ratios, see Regulatory capital on pages 161–165 of this Annual Report.)

During 2013, the Firm worked to help its customers, corporate clients and the communities in which it does business. The Firm provided credit to and raised capital of more than \$2.1 trillion for its clients during 2013; this included \$19 billion lent to small businesses and \$79 billion to nonprofit and government entities, including states, municipalities, hospitals and universities. The Firm also originated more than 800,000 mortgages.

The discussion that follows highlights the performance of each business segment compared with the prior year and presents results on a managed basis. Managed basis starts with the reported results under accounting principles generally accepted in the United States of America ("U.S. GAAP") and, for each line of business and the Firm as a whole, includes certain reclassifications to present total net revenue on a tax-equivalent basis. For more information about managed basis, as well as other non-GAAP financial measures used by management to evaluate the performance of each line of business, see pages 82–83 of this Annual Report.

Consumer & Community Banking net income increased compared with the prior year due to lower provision for credit losses and lower noninterest expense, predominantly offset by lower net revenue. Net interest income decreased, driven by lower deposit margins, lower loan balances due to net portfolio runoff and spread compression in Credit Card, largely offset by the impact of higher deposit balances. Noninterest revenue decreased, driven by lower mortgage fees and related income, partially offset by higher card income. The provision for credit losses was \$335 million compared with \$3.8 billion in the prior year. The current-year provision reflected a \$5.5 billion reduction in the allowance for loan losses and total net charge-offs of \$5.8 billion. The prior-year provision reflected a \$5.5 billion reduction in the allowance for loan losses and total net charge-offs of \$9.3 billion, including \$800 million of incremental charge-offs related to regulatory guidance. Noninterest expense decreased compared with the prior year, driven by lower mortgage servicing expense, partially offset by investments in Chase Private Client expansion, higher non-MBS related legal expense in Mortgage Production, higher auto lease depreciation and costs related to the control agenda.

Corporate & Investment Bank net income increased by 2% compared with the prior year. Net revenue included a \$1.5 billion loss from the implementation of a funding valuation adjustment ("FVA") framework for over-the-counter ("OTC") derivatives and structured notes in the fourth quarter, and a \$452 million loss from debit valuation adjustments ("DVA") on structured notes and derivative liabilities. The prior year net revenue included a \$930 million loss from DVA. Banking revenue increased compared with the prior year, reflecting higher lending and investment banking fees revenue, partially offset by Treasury Services revenue which was down slightly from the prior year. Lending revenue increased driven by gains on securities received from restructured loans. Investment banking fees revenue increased compared with the prior year driven by higher equity and debt underwriting fees, partially offset by lower advisory fees. Excluding FVA (effective fourth quarter 2013) and DVA, Markets and Investor Services revenue increased

compared with the prior year. The provision for credit losses was a lower benefit reflecting lower recoveries compared with the prior year. Noninterest expense was slightly down from the prior year primarily driven by lower compensation expense.

Commercial Banking net income was slightly lower for 2013 compared with the prior year, reflecting higher noninterest expense and an increase in the provision for credit losses, partially offset by higher net revenue. Net interest income increased, driven by growth in loan balances and the proceeds from a lending-related workout, partially offset by lower purchase discounts recognized on loan repayments. Noninterest expense increased, primarily reflecting higher product- and headcount-related expense.

## Management's discussion and analysis

Asset Management net income increased in 2013, driven by higher net revenue, largely offset by higher noninterest expense. Net revenue increased, driven by net client inflows, the effect of higher market levels and net interest income resulting from higher loan and deposit balances. Noninterest expense increased, driven by higher headcount related expenses, higher performance-based compensation and costs related to the control agenda.

Corporate/Private Equity reported a higher net loss compared with the prior year driven by higher noninterest expense partially offset by higher net revenue. Noninterest expense for 2013 included \$10.2 billion in legal expenses compared with \$3.7 billion in the prior year. The current year net revenue included a \$1.3 billion gain from the sale of Visa shares and a \$493 million gain from the sale of One Chase Manhattan Plaza. The prior year net revenue included losses from the synthetic credit portfolio in the CIO.

### Consent Orders and Settlements

During the course of 2013, the Firm continued to make progress on its control, regulatory, and litigation agenda and put some significant issues behind it. In January 2013, the Firm entered into the Consent Orders with its banking regulators relating to the Firm's Bank Secrecy Act/Anti-Money Laundering policies, procedures and controls, and with respect to the risk management and control functions in the CIO, as well as with respect to its other trading activities. Other settlements during the year included the Consent Orders entered into in September 2013 concerning oversight of third parties, operational processes and control functions related to credit card collections litigation practices and to billing practices for credit monitoring products formerly offered by the Firm; the settlements in November 2013 of certain repurchase representation and warranty claims by a group of institutional investors and with the U.S.

Department of Justice, several other federal agencies and several State Attorneys General relating to certain residential mortgage-backed securitization activities of the Firm, Bear Stearns and Washington Mutual; the Deferred Prosecution Agreement entered into in January 2014 with the U.S. Department of Justice and related agreements with the OCC and FinCEN relating to Bernard L. Madoff Investment Securities LLC and the Firm's AML compliance programs; and the February 2014 settlement entered into with several federal government agencies relating to the Firm's participation in certain federal mortgage insurance programs.

In addition to the payment of restitution and, in several instances, significant penalties, these Consent Orders and settlements require that the Firm modify or enhance its processes and controls with respect to, among other items, its mortgage foreclosure and servicing procedures, Anti-Money Laundering procedures, oversight of third parties, credit card litigation practices, and risk management, model governance, and other control functions related to the CIO and certain other trading activities at the Firm. The Firm believes it was in the best interest of the company and its

shareholders to accept responsibility for these matters, resolve them, and move forward. These settlements will allow the Firm to focus on continuing to serve its clients and communities, and to continue to build the Firm's businesses.

### Business outlook

The following forward-looking statements are based on the current beliefs and expectations of JPMorgan Chase's management and are subject to significant risks and uncertainties. These risks and uncertainties could cause the Firm's actual results to differ materially from those set forth in such forward-looking statements. See Forward-Looking Statements on page 181 of this Annual Report and the Risk Factors section on pages 9–18 of the 2013 Form 10-K.

As a global financial services firm, JPMorgan Chase is subject to extensive regulation under state and federal laws in the United States, as well as the applicable laws of each of the various other jurisdictions outside the U.S. in which the Firm does business. The Firm is currently experiencing an unprecedented increase in regulations and supervision, and such changes could have a significant impact on how the Firm conducts business. For a summary of the more significant rules and regulations to which it currently is or will shortly be subject, as well as the more noteworthy rules and regulations currently being proposed to be implemented, see Supervision and Regulation on pages 1–9 of the 2013 Form 10-K.

Having reached the minimum capital levels required by the new and proposed rules, the Firm intends to continue to hold excess capital in order to support its businesses. However, the new rules will require the Firm to modify its on- and off-balance sheet assets and liabilities to meet the supplementary leverage ratio requirements, restrict or limit the way the Firm offers products to customers or charges fees for services, exit certain activities and product offerings, and make structural changes with respect to which of its legal entities offer certain products in order to comply with

the margin, extraterritoriality and clearing rules promulgated pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act").

The Firm intends to respond to the new financial architecture resulting from this changing landscape in a way that will allow it to grow its revenues over time, manage its expenses, and comply with the new regulatory requirements, while at the same time investing in its businesses and meeting the needs of its customers and clients. Initiatives will include a disciplined approach to capital and liquidity management as well as optimization of the Firm's balance sheet. The Firm intends to continue to meet the higher U.S. and Basel III liquidity requirements and make progress towards meeting all of its capital targets in advance of regulatory deadlines, while at the same time returning capital to its shareholders. For further information, see Liquidity Risk Management and Capital Management on pages 168–173 and 160–167, respectively, of this Annual Report.

The Firm is also devoting substantial resources in order to continue to execute on its control and regulatory agendas. In 2012, it established its Oversight and Control function, which works closely with all control disciplines, including Compliance, Legal, Risk Management, Internal Audit and other functions, to provide a cohesive and centralized view of control functions and issues and to address complex control-related projects that are cross-line of business and that have significant regulatory impact or respond to regulatory actions such as the Consent Orders. See Operational Risk Management on pages 155–157 in this Annual Report for further information on the Oversight and Control function. The Firm's control agenda is receiving significant senior management and Board of Director attention and oversight, and represents a very high priority for the Firm, with 23 work-streams currently underway involving more than 3,500 employees. In 2013, the Firm increased the amount spent on the control agenda by approximately \$1 billion, and expects to spend an incremental amount of slightly more than \$1 billion on the control agenda in 2014.

The Firm is also executing a business simplification agenda that will allow it to focus on core activities for its core clients and better manage its operational, regulatory and litigation risks. These initiatives include ceasing student loan originations, ceasing to offer traveler's checks and money orders for non-customers, exiting certain high-complexity arrangements (such as third-party lockbox services), and being more selective about on-boarding certain customers, among other initiatives. These business simplification changes will not fundamentally change the breadth of the Firm's business model. However, they are anticipated to reduce both revenues and expenses over time, although the effect on annualized net income is expected to be modest. In addition, the efforts are also expected to have the benefit of freeing up capital over time.

The Firm expects it will continue to make appropriate adjustments to its business and operations, capital and liquidity management practices, and legal entity structure in the year ahead in response to developments in the legal and regulatory, as well as business and economic, environment in which it operates.

#### 2014 Business Outlook

JPMorgan Chase's outlook for the full year 2014 should be viewed against the backdrop of the global and U.S. economies, financial markets activity, the geopolitical environment, the competitive environment, client activity levels, and regulatory and legislative developments in the U.S. and other countries where the Firm does business. Each of these inter-related factors will affect the performance of the Firm and its lines of business.

The Firm expects that net interest margin will be relatively stable in the near term. Firmwide adjusted expense is expected to be below \$59 billion for the full year 2014, excluding firmwide (Corporate and non-Corporate) legal expenses and foreclosure-related matters, even as the Firm continues to invest in controls and compliance.

In the Mortgage Banking business within CCB, management expects that higher levels of mortgage interest rates will continue to have a negative impact on refinancing volumes and margins, and, accordingly, the pretax income of Mortgage Production is anticipated to be modestly negative for the first quarter of 2014. For Real Estate Portfolios within Mortgage Banking, if delinquencies continue to trend down and the macro-economic environment remains stable or improves, management expects charge-offs to decline and a further reduction in the allowance for loan losses.

In Card Services within CCB, the Firm expects that spread compression will continue in 2014; the shift from high-rate and low-FICO balances is expected to be replaced by more engaged customers or transactors, which is expected to positively affect card spend and credit performance in 2014. If current positive credit trends continue, the card-related allowance for loan losses could be reduced over the course of 2014.

The currently anticipated results for CCB described above could be adversely affected if economic conditions, including U.S. housing prices or the unemployment rate, do not continue to improve. Management continues to closely monitor the portfolios in these businesses.

In Private Equity, within the Corporate/Private Equity segment, earnings will likely continue to be volatile and influenced by capital markets activity, market levels, the performance of the broader economy and investment-specific factors.

For Treasury and CIO, within the Corporate/Private Equity segment, as the Firm continues to reinvest its investment securities portfolio, net interest income is expected to improve and to reach break-even during the second half of 2014.



Management's discussion and analysis

Business events

Visa B Shares

In December 2013, the Firm sold 20 million Visa Class B shares, resulting in a net pretax gain of approximately \$1.3 billion recorded in Other income. After the sale, the Firm continues to own approximately 40 million Visa Class B shares. For further information, see Note 2 on pages 326–332 of this Annual Report.

One Chase Manhattan Plaza

On December 17, 2013, the Firm sold One Chase Manhattan Plaza, an office building located in New York City, and recognized a pretax gain of \$493 million in Other Income.

Other events

For information about the Firm's announcements regarding the physical commodities business, One Equity Partners, and the student loan business, see Note 2 on pages 326–332 of this Annual Report.

Subsequent events

Settlement agreement with The U.S. Departments Of Justice, Housing and Urban Development, and Veterans Affairs, and The Federal Housing Administration

On February 4, 2014, the Firm announced that it had reached a settlement with the U.S. Attorney's Office for the Southern District of New York, Federal Housing Administration ("FHA"), the U.S. Department of Housing and Urban Development ("HUD"), and the U.S. Department of Veterans Affairs ("VA") resolving claims relating to the Firm's participation in federal mortgage insurance programs overseen by FHA, HUD and VA ("FHA Settlement"). Under the FHA Settlement, which relates to FHA and VA insurance claims that have been paid to the Firm from 2002 through the date of the settlement, the Firm will pay \$614 million in cash, and agree to enhance its quality control program for loans that are submitted in the future to FHA's Direct Endorsement Lender Program. The Firm is fully reserved for the settlement, and any financial impact related to exposure on future claims is not expected to be significant. For information about the ongoing collectibility of insurance reimbursements on loans sold to Ginnie Mae, see Note 31 on pages 326–332 of this Annual Report.

Madoff Litigation and Investigations

On January 7, 2014, the Firm announced that certain of its bank subsidiaries had entered into settlements with various governmental agencies in resolution of investigations relating to Bernard L. Madoff Investment Securities LLC ("BLMIS"). The Firm and certain of its subsidiaries also entered into settlements with several private parties in resolution of civil litigation relating to BLMIS. At the same time, certain bank subsidiaries of the Firm consented to the assessment of a civil money penalty by the OCC in connection with various Bank Secrecy Act/Anti-Money Laundering deficiencies, including with relation to the BLMIS fraud, and JPMorgan Chase Bank, N.A. additionally agreed to the assessment of a civil money penalty by the Financial Crimes Enforcement Network for failure to detect and adequately report suspicious transactions relating to BLMIS. For further information on these settlements, see Note 31 on pages 326–332 of this Annual Report.

## CONSOLIDATED RESULTS OF OPERATIONS

The following section provides a comparative discussion of JPMorgan Chase's Consolidated Results of Operations on a reported basis for the three-year period ended December 31, 2013. Factors that relate primarily to a single business segment are discussed in more detail within that business segment. For a discussion of the Critical Accounting Estimates Used by the Firm that affect the Consolidated Results of Operations, see pages 174–178 of this Annual Report.

### Revenue

Year ended December 31,

(in millions)	2013	2012	2011
Investment banking fees	\$6,354	\$5,808	\$5,911
Principal transactions <sup>(a)</sup>	10,141	5,536	10,005
Lending- and deposit-related fees	5,945	6,196	6,458
Asset management, administration and commissions	15,106	13,868	14,094
Securities gains	667	2,110	1,593
Mortgage fees and related income	5,205	8,687	2,721
Card income	6,022	5,658	6,158
Other income <sup>(b)</sup>	3,847	4,258	2,605
Noninterest revenue	53,287	52,121	49,545
Net interest income	43,319	44,910	47,689
Total net revenue	\$96,606	\$97,031	\$97,234

Included a \$(1.5) billion loss in the fourth quarter of 2013 as a result of implementing an FVA framework for OTC derivatives and structured notes. Also included DVA on structured notes and derivative liabilities measured at fair value. DVA gains/(losses) were \$(452) million, \$(930) million and \$1.4 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

Included operating lease income of \$1.5 billion, \$1.3 billion and \$1.2 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

### 2013 compared with 2012

Total net revenue for 2013 was \$96.6 billion, down by \$425 million, or less than 1%. The results of 2013 were driven by lower mortgage fees and related income, net interest income, and securities gains. These items were predominantly offset by higher principal transactions revenue, and asset management, administration and commissions revenue. Investment banking fees increased compared with the prior year, reflecting higher equity and debt underwriting fees, partially offset by lower advisory fees. Equity and debt underwriting fees increased, driven by strong market issuance and improved wallet share in equity capital markets and loans. Advisory fees decreased, as the industry-wide M&A wallet declined. For additional information on investment banking fees, see CIB segment results on pages 98–102 and Note 7 on pages 234–235 of this Annual Report.

Principal transactions revenue, which consists of revenue primarily from the Firm's market-making and private equity

investing activities, increased compared with the prior year. The current-year period reflected CIB's strong equity markets revenue, partially offset by a \$1.5 billion loss as a result of implementing a funding valuation adjustment ("FVA") framework for OTC derivatives and structured notes in the fourth quarter of 2013, and a \$452 million loss from DVA on structured notes and derivative liabilities (compared with a \$930 million loss from DVA in the prior year). The prior year included a \$5.8 billion loss on the synthetic credit portfolio incurred by CIO in the six months ended June 30, 2012; a \$449 million loss on the index credit derivative positions retained by CIO in the three months ended September 30, 2012; and additional modest losses incurred by CIB from the synthetic credit portfolio in the last six months of 2012; these were partially offset by a \$665 million gain recognized in 2012 in Other Corporate, representing the recovery on a Bear Stearns-related subordinated loan. For additional information on principal transactions revenue, see CIB and Corporate/Private Equity segment results on pages 98–102 and 109–111, respectively,

and Note 7 on pages 234–235 of this Annual Report.

Lending- and deposit-related fees decreased compared with the prior year, largely due to lower deposit-related fees in CCB, resulting from reductions in certain product and transaction fees. For additional information on lending- and deposit-related fees, see the segment results for CCB on pages 86–97, CIB on pages 98–102 and CB on pages 103–105 of this Annual Report.

Asset management, administration and commissions revenue increased from 2012. The increase was driven by higher investment management fees in AM, due to net client inflows, the effect of higher market levels, and higher performance fees, as well as higher investment sales revenue in CCB. For additional information on these fees and commissions, see the segment discussions for CIB on pages 98–102, CCB on pages 86–97, AM on pages 106–108, and Note 7 on pages 234–235 of this Annual Report.

Securities gains decreased compared with the prior-year period, reflecting the results of repositioning the CIO available-for-sale (“AFS”) portfolio. For additional information on securities gains, see the Corporate/Private Equity segment discussion on pages 109–111, and Note 12 on pages 249–254 of this Annual Report.

Mortgage fees and related income decreased in 2013 compared with 2012. The decrease resulted from lower Mortgage Banking net production and servicing revenue. The decrease in net production revenue was due to lower margins and volumes. The decrease in net servicing revenue was predominantly due to lower mortgage servicing rights (“MSR”) risk management results. For additional information on mortgage fees and related income, see CCB’s Mortgage Banking’s discussion on pages 92–93, and Note 17 on pages 299–304 of this Annual Report.

## Management's discussion and analysis

Card income increased compared with the prior year period. The increase was driven by higher net interchange income on credit and debit cards and merchant servicing revenue, due to growth in sales volume. For additional information on credit card income, see the CCB segment results on pages 86–97 of this Annual Report.

Other income decreased in 2013 compared with the prior year, predominantly reflecting lower revenues from significant items recorded in Corporate/Private Equity. In 2013, the Firm recognized a \$1.3 billion gain on the sale of Visa shares, a \$493 million gain from the sale of One Chase Manhattan Plaza, and a modest loss related to the redemption of trust preferred securities (“TruPS”). In 2012, the Firm recognized a \$1.1 billion benefit from the Washington Mutual bankruptcy settlement and an \$888 million extinguishment gain related to the redemption of TruPS. The net decrease was partially offset by higher revenue in CIB, largely from client-driven activity.

Net interest income decreased in 2013 compared with the prior year, primarily reflecting the impact of the runoff of higher yielding loans and originations of lower yielding loans, and lower trading-related net interest income. The decrease in net interest income was partially offset by lower long-term debt and other funding costs. The Firm's average interest-earning assets were \$2.0 trillion in 2013, and the net interest yield on those assets, on a fully taxable-equivalent (“FTE”) basis, was 2.23%, a decrease of 25 basis points from the prior year.

## 2012 compared with 2011

Total net revenue for 2012 was \$97.0 billion, down slightly from 2011. Results for 2012 were driven by lower principal transactions revenue from losses incurred by CIO, and lower net interest income. These items were predominantly offset by higher mortgage fees and related income and higher other income.

Investment banking fees decreased slightly from 2011, reflecting lower advisory fees on lower industry-wide volumes, and to a lesser extent, slightly lower equity underwriting fees on industry-wide volumes that were flat from the prior year. These declines were predominantly offset by record debt underwriting fees, driven by favorable market conditions and the impact of continued low interest rates.

Principal transactions revenue decreased compared with 2011, predominantly due to \$5.8 billion of losses incurred by CIO from the synthetic credit portfolio for the six months ended June 30, 2012, and \$449 million of losses incurred by CIO from the retained index credit derivative positions for the three months ended September 30, 2012; and additional modest losses incurred by CIB from the synthetic credit portfolio in the last six months of 2012.

Principal transaction revenue also included a \$930 million loss in 2012, compared with a \$1.4 billion gain in 2011, from DVA on structured notes and derivative liabilities, resulting from the tightening of the Firm's credit spreads.

These declines were partially offset by higher market-

making revenue in CIB, driven by strong client revenue and higher revenue in rates-related products, as well as a \$665 million gain recognized in Other Corporate associated with the recovery on a Bear Stearns-related subordinated loan. Private equity gains decreased in 2012, predominantly due to lower unrealized and realized gains on private investments, partially offset by higher unrealized gains on public securities.

Lending- and deposit-related fees decreased in 2012 compared with the prior year. The decrease predominantly reflected lower lending-related fees in CIB and lower deposit-related fees in CCB.

Asset management, administration and commissions revenue decreased from 2011, largely driven by lower brokerage commissions in CIB. This decrease was largely offset by higher asset management fees in AM driven by net client inflows, the effect of higher market levels, and higher performance fees; and higher investment service fees in CCB, as a result of growth in sales of investment products.

Securities gains increased, compared with the 2011 level, reflecting the results of repositioning the CIO AFS securities portfolio.

Mortgage fees and related income increased significantly in 2012 compared with 2011, due to higher Mortgage Banking net production and servicing revenue. The increase in net production revenue, reflected wider margins driven by favorable market conditions; and higher volumes due to historically low interest rates and the Home Affordable Refinance Programs (“HARP”). The increase in net servicing revenue resulted from a favorable swing in risk management results related to mortgage servicing rights (“MSR”), which was a gain of \$619 million in 2012, compared with a loss of \$1.6 billion in 2011.

Card income decreased during 2012, driven by lower debit card revenue, reflecting the impact of the Durbin Amendment; and to a lesser extent, higher amortization of loan origination costs. The decrease in credit card income was offset partially by higher net interchange income associated with growth in credit card sales volume, and higher merchant servicing revenue.

Other income increased in 2012 compared with the prior year, largely due to a \$1.1 billion benefit from the Washington Mutual bankruptcy settlement, and \$888 million of extinguishment gains in Corporate/Private Equity related to the redemption of TruPS. The extinguishment gains were related to adjustments applied to the cost basis of the TruPS during the period they were in a qualified hedge accounting relationship. These items were offset partially by the absence of a prior-year gain on the sale of an investment in AM.

Net interest income decreased in 2012 compared with the prior year, predominantly reflecting the impact of lower average trading asset balances, the runoff of higher-yielding loans, faster prepayment of mortgage-backed securities, limited reinvestment opportunities, as well as the impact of lower interest rates across the Firm's interest-earning

assets. The decrease in net interest income was partially offset by lower deposit and other borrowing costs. The Firm's average interest-earning assets were \$1.8 trillion for 2012, and the net yield on those assets, on a fully taxable-equivalent ("FTE") basis, was 2.48%, a decrease of 26 basis points from 2011.

Provision for credit losses

Year ended December 31,

(in millions)	2013	2012	2011
Consumer, excluding credit card	\$(1,871)	\$302	\$4,672
Credit card	2,179	3,444	2,925
Total consumer	308	3,746	7,597
Wholesale	(83)	(361)	(23)
Total provision for credit losses	\$225	\$3,385	\$7,574

2013 compared with 2012

The provision for credit losses decreased compared with the prior year, due to a decline in the provision for total consumer credit losses. The decrease in the consumer provision was attributable to continued reductions in the allowance for loan losses, resulting from the impact of improved home prices on the residential real estate portfolio, and improved delinquency trends in the residential real estate and credit card portfolios, as well as lower net charge-offs partially due to the prior-year incremental charge-offs recorded in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy. The wholesale provision in the current period reflected a favorable credit environment and stable credit quality trends. For a more detailed discussion of the loan portfolio and the allowance for credit losses, see the segment discussions for CCB on pages 86–97, CIB on pages 98–102, CB on pages 103–105, and Allowance For Credit Losses on pages 139–141 of this Annual Report.

2012 compared with 2011

The provision for credit losses decreased by \$4.2 billion from 2011. The decrease was driven by a lower provision for consumer, excluding credit card loans, which reflected a reduction in the allowance for loan losses, due primarily to lower estimated losses in the non-PCI residential real estate portfolio as delinquency trends improved, partially offset by the impact of charge-offs of Chapter 7 loans. A higher level of recoveries and lower charge-offs in the wholesale provision also contributed to the decrease. These items were partially offset by a higher provision for credit card loans, largely due to a smaller reduction in the allowance for loan losses in 2012 compared with the prior year.

Noninterest expense

Year ended December 31,

(in millions)	2013	2012	2011
Compensation expense	\$30,810	\$30,585	\$29,037
Noncompensation expense:			
Occupancy	3,693	3,925	3,895
Technology, communications and equipment	5,425	5,224	4,947
Professional and outside services	7,641	7,429	7,482
Marketing	2,500	2,577	3,143
Other <sup>(a)(b)</sup>	19,761	14,032	13,559
Amortization of intangibles	637	957	848
Total noncompensation expense	39,657	34,144	33,874
Total noninterest expense	\$70,467	\$64,729	\$62,911

<sup>(a)</sup> Included firmwide legal expense of \$11.1 billion, \$5.0 billion and \$4.9 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

<sup>(b)</sup> Included FDIC-related expense of \$1.5 billion, \$1.7 billion and \$1.5 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

2013 compared with 2012

Total noninterest expense for 2013 was \$70.5 billion, up by \$5.7 billion, or 9%, compared with the prior year. The increase was predominantly due to higher legal expense.

Compensation expense increased in 2013 compared with the prior year, due to the impact of investments across the businesses, including front office sales and support staff, as well as costs related to the Firm's control agenda; partially offset by lower compensation expense in CIB and a decline in CCB's mortgage business, which included the effect of lower servicing headcount.

Noncompensation expense increased in 2013 from the prior year. The increase was due to higher other expense, reflecting \$11.1 billion of firmwide legal expense, predominantly in Corporate/Private Equity, representing additional reserves for several litigation and regulatory proceedings, compared with \$5.0 billion of expense in the prior year. Investments in the businesses, higher legal-related professional services expense, and costs related to the Firm's control agenda also contributed to the increase. The increase was offset partially by lower mortgage servicing expense in CCB and lower occupancy expense for the Firm, which predominantly reflected the absence of charges recognized in 2012 related to vacating excess space. For a further discussion of legal expense, see Note 31 on pages 326–332 of this Annual Report. For a discussion of amortization of intangibles, refer to Note 17 on pages 299–304 of this Annual Report.

## Management's discussion and analysis

## 2012 compared with 2011

Total noninterest expense for 2012 was \$64.7 billion, up by \$1.8 billion, or 3%, from 2011. Compensation expense drove the increase from the prior year.

Compensation expense increased from the prior year, predominantly due to investments in the businesses, including the sales force in CCB and bankers in the other businesses, partially offset by lower compensation expense in CIB. Noncompensation expense for 2012 increased from the prior year, reflecting continued investments in the businesses, including branch builds in CCB; higher expense related to growth in business volume in CIB and CCB; higher regulatory deposit insurance assessments; expenses related to exiting a non-core product and writing-off intangible assets in CCB; and higher legal expense in Corporate/Private Equity. These increases were partially offset by lower legal expense in AM and CCB (including the Independent Foreclosure Review settlement) and lower marketing expense in CCB.

## Income tax expense

Year ended December 31,

(in millions, except rate)

	2013	2012	2011
Income before income tax expense	\$25,914	28,917	26,749
Income tax expense	7,991	7,633	7,773
Effective tax rate	30.8	% 26.4	% 29.1

## 2013 compared with 2012

The increase in the effective tax rate compared with the prior year was predominantly due to the effect of higher nondeductible expense related to litigation and regulatory proceedings in 2013. This was largely offset by the impact of lower reported pre-tax income in combination with changes in the mix of income and expense subject to U.S. federal, state and local taxes, business tax credits, tax benefits associated with prior year tax adjustments and audit resolutions. For additional information on income taxes, see Critical Accounting Estimates Used by the Firm on pages 174–178 and Note 26 on pages 313–315 of this Annual Report.

## 2012 compared with 2011

The decrease in the effective tax rate compared with the prior year was largely the result of changes in the proportion of income subject to U.S. federal and state and local taxes, as well as higher tax benefits associated with tax audits and tax-advantaged investments. This was partially offset by higher reported pretax income and lower benefits associated with the disposition of certain investments. The current and prior periods include deferred tax benefits associated with state and local income taxes.

## BALANCE SHEET ANALYSIS

## Selected Consolidated Balance Sheets data

December 31, (in millions)	2013	2012	Change	
Assets				
Cash and due from banks	\$39,771	\$53,723	(26	)%
Deposits with banks	316,051	121,814	159	
Federal funds sold and securities purchased under resale agreements	248,116	296,296	(16	)
Securities borrowed	111,465	119,017	(6	)
Trading assets:				
Debt and equity instruments	308,905	375,045	(18	)
Derivative receivables	65,759	74,983	(12	)
Securities	354,003	371,152	(5	)
Loans	738,418	733,796	1	
Allowance for loan losses	(16,264	) (21,936	) (26	)
Loans, net of allowance for loan losses	722,154	711,860	1	
Accrued interest and accounts receivable	65,160	60,933	7	
Premises and equipment	14,891	14,519	3	
Goodwill	48,081	48,175	—	
Mortgage servicing rights	9,614	7,614	26	
Other intangible assets	1,618	2,235	(28	)
Other assets	110,101	101,775	8	
Total assets	\$2,415,689	\$2,359,141	2	
Liabilities				
Deposits	\$1,287,765	\$1,193,593	8	
Federal funds purchased and securities loaned or sold under repurchase agreements	181,163	240,103	(25	)
Commercial paper	57,848	55,367	4	
Other borrowed funds	27,994	26,636	5	
Trading liabilities:				
Debt and equity instruments	80,430	61,262	31	
Derivative payables	57,314	70,656	(19	)
Accounts payable and other liabilities	194,491	195,240	—	
Beneficial interests issued by consolidated VIEs	49,617	63,191	(21	)
Long-term debt	267,889	249,024	8	
Total liabilities	2,204,511	2,155,072	2	
Stockholders' equity	211,178	204,069	3	
Total liabilities and stockholders' equity	\$2,415,689	\$2,359,141	2	%

## Consolidated Balance Sheets overview

Total assets increased by \$56.5 billion or 2%, and total liabilities increased by \$49.4 billion or 2%, from December 31, 2012. The following is a discussion of the significant changes in the specific line item captions on the Consolidated Balance Sheets during 2013.

## Cash and due from banks and deposits with banks

The net increase reflected the placement of the Firm's excess funds with various central banks, predominantly Federal Reserve Banks. For additional information, refer to the Liquidity Risk Management discussion on pages 168–173 of this Annual Report.

Federal funds sold and securities purchased under resale agreements; and securities borrowed

The decrease in securities purchased under resale agreements and securities borrowed was predominantly due to a shift in the deployment of the Firm's excess cash by Treasury.

Trading assets and liabilities – debt and equity instruments

The decrease in trading assets was driven by client-driven market-making activity in CIB, which resulted in lower levels of debt securities. For additional information, refer to Note 3 on pages 195–215 of this Annual Report.

The increase in trading liabilities was driven by client-driven market-making activity in CIB, which resulted in higher levels of short positions in debt and equity securities.

Trading assets and liabilities – derivative receivables and payables

Derivative receivables and payables decreased predominantly due to reductions in interest rate derivatives driven by an increase in interest rates and reductions in commodity derivatives due to market movements. The decreases were partially offset by an increase in equity derivatives driven by a rise in equity markets.

For additional information, refer to Derivative contracts on pages 135–136, and Note 3 and Note 6 on pages 195–215 and 220–233, respectively, of this Annual Report.

Securities

The decrease in securities was largely due to repositioning which resulted in lower levels of corporate debt, non-U.S. government securities and non-U.S. residential MBS. The decrease was partially offset by higher levels of U.S.

Treasury and government agency obligations and obligations of U.S. states and municipalities. For additional information related to securities, refer to the discussion in the Corporate/Private Equity segment on pages 109–111, and Note 3 and Note 12 on pages 195–215 and 249–254, respectively, of this Annual Report.

Loans and allowance for loan losses

Loans increased predominantly due to continued growth in wholesale loans partially offset by a decrease in consumer,

## Management's discussion and analysis

excluding credit card loans, predominantly due to paydowns and the charge-off or liquidation of delinquent loans, partially offset by new mortgage and auto originations.

The allowance for loan losses decreased as a result of a \$5.5 billion reduction in the consumer allowance, reflecting the impact of improved home prices on the residential real estate portfolio and improved delinquency trends in the residential real estate and credit card portfolios. For a more detailed discussion of the loan portfolio and the allowance for loan losses, refer to Credit Risk Management on pages 119–141, and Notes 3, 4, 14 and 15 on pages 195–215, 215–218, 258–283 and 284–287, respectively, of this Annual Report.

### Premises and Equipment

The increase in premises and equipment was largely due to investments in CBB in the U.S. and other investments in facilities globally.

### Mortgage servicing rights

The increase was predominantly due to originations and changes in market interest rates, partially offset by collection/realization of expected cash flows, dispositions, and changes in valuation due to model inputs and assumptions. For additional information on MSRs, see Note 17 on pages 299–304 of this Annual Report.

### Other assets

The increase is primarily driven by the implementation of gross initial margin requirements for certain U.S. counterparties for exchange-traded derivatives (“ETD”), higher ETD margin balances, and mandatory clearing for certain over-the-counter derivative contracts in the U.S.

### Deposits

The increase was due to growth in both wholesale and consumer deposits. The increase in wholesale client balances was due to higher short-term deposits as well as growth in client operating balances. Consumer deposit balances increased from the effect of continued strong growth in business volumes and strong customer retention. For more information on consumer deposits, refer to the CCB segment discussion on pages 86–97; the Liquidity Risk Management discussion on pages 168–173; and Notes 3 and 19 on pages 195–215 and 305, respectively, of this Annual Report. For more information on wholesale client deposits, refer to the AM, CB and CIB segment discussions on pages 106–108, 103–105 and 98–102, respectively, of this Annual Report.

### Federal funds purchased and securities loaned or sold under repurchase agreements

The decrease was predominantly due to a change in the mix of the Firm's funding sources. For additional information on the Firm's Liquidity Risk Management, see pages 168–173 of this Annual Report.

### Commercial paper and other borrowed funds

Commercial paper increased slightly due to higher commercial paper issuance from wholesale funding markets and an increase in the volume of liability balances related to CIB's liquidity management product, whereby clients choose to sweep their deposits into commercial paper. Other borrowed funds increased slightly due to higher secured short-term borrowings to meet short-term funding needs. For additional information on the Firm's Liquidity Risk Management and other borrowed funds, see pages 168–173 of this Annual Report.

### Accounts payable and other liabilities

Accounts payable and other liabilities remained relatively flat compared with the prior year. For additional information on the Firm's accounts payable and other liabilities, see Note 20 on page 305 of this Annual Report.

### Beneficial interests issued by consolidated VIEs

Beneficial interests issued by consolidated VIEs decreased primarily due to unwinds of municipal bond vehicles, net credit card maturities and a reduction in outstanding conduit commercial paper held by third parties. For additional information on Firm-sponsored VIEs and loan securitization trusts, see Note 16 on pages 288–299 of this Annual Report.

### Long-term debt

The increase was primarily due to net issuances, which also reflected the redemption of trust preferred securities in the second quarter of 2013. For additional information on the Firm's long-term debt activities, see the Liquidity Risk Management discussion on pages 168–173 of this Annual Report.

### Stockholders' equity

Total stockholders' equity increased, predominantly due to net income; net issuance of preferred stock; and the issuances and commitments to issue under the Firm's employee stock-based compensation plans. The increase was partially offset by the declaration of cash dividends on common and preferred stock, repurchases of common stock and a net decrease in accumulated other comprehensive income. The net decrease in accumulated other comprehensive income was primarily related to the decline in fair value of U.S. government agency issued MBS and obligations of U.S. states and municipalities due to market changes, as well as net realized gains. For additional information on the Firm's capital actions, see Capital actions on pages 166–167 of this Annual Report.

## OFF-BALANCE SHEET ARRANGEMENTS AND CONTRACTUAL CASH OBLIGATIONS

In the normal course of business, the Firm enters into various contractual obligations that may require future cash payments. Certain obligations are recognized on-balance sheet, while others are off-balance sheet under U.S. GAAP. The Firm is involved with several types of off-balance sheet arrangements, including through nonconsolidated special-purpose entities (“SPEs”), which are a type of VIE, and through lending-related financial instruments (e.g., commitments and guarantees).

### Special-purpose entities

The most common type of VIE is an SPE. SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. SPEs are an important part of the financial markets, including the mortgage- and asset-backed securities and commercial paper markets, as they provide market liquidity by facilitating investors’ access to specific portfolios of assets and risks. SPEs may be organized as trusts, partnerships or corporations and are typically established for a single, discrete purpose. SPEs are not typically operating entities and usually have a limited life and no employees. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors.

JPMorgan Chase uses SPEs as a source of liquidity for itself and its clients by securitizing financial assets, and by creating investment products for clients. The Firm is involved with SPEs through multi-seller conduits, investor intermediation activities, and loan securitizations. See Note 16 on pages 288–299 for further information on these types of SPEs.

The Firm holds capital, as deemed appropriate, against all SPE-related transactions and related exposures, such as derivative transactions and lending-related commitments and guarantees.

The Firm has no commitments to issue its own stock to support any SPE transaction, and its policies require that transactions with SPEs be conducted at arm’s length and reflect market pricing. Consistent with this policy, no JPMorgan Chase employee is permitted to invest in SPEs with which the Firm is involved where such investment would violate the Firm’s Code of Conduct. These rules prohibit employees from self-dealing and acting on behalf of the Firm in transactions with which they or their family have any significant financial interest.

### Implications of a credit rating downgrade to JPMorgan Chase Bank, N.A.

For certain liquidity commitments to SPEs, JPMorgan Chase Bank, N.A. could be required to provide funding if its short-term credit rating were downgraded below specific levels, primarily “P-1”, “A-1” and “F1” for Moody’s, Standard & Poor’s and Fitch, respectively. These liquidity commitments support the issuance of asset-backed commercial paper by both Firm-administered consolidated and third-party

sponsored nonconsolidated SPEs. In the event of such a short-term credit rating downgrade, JPMorgan Chase Bank, N.A., absent other solutions, would be required to provide funding to the SPE, if the commercial paper could not be reissued as it matured. The aggregate amounts of commercial paper outstanding, issued by both Firm-administered and third-party sponsored SPEs, that are held by third parties as of December 31, 2013 and 2012, was \$15.5 billion and \$18.1 billion, respectively. The aggregate amounts of commercial paper outstanding could increase in future periods should clients of the Firm-administered consolidated or third-party sponsored nonconsolidated SPEs draw down on certain unfunded lending-related commitments. These unfunded lending-related commitments were \$9.2 billion and \$10.9 billion at December 31, 2013 and 2012, respectively. The Firm could facilitate the refinancing of some of the clients’ assets in order to reduce the funding obligation. For further information, see the discussion of Firm-administered multi-seller conduits in Note 16 on pages 292–293 of this Annual Report.

The Firm also acts as liquidity provider for certain municipal bond vehicles. The Firm’s obligation to perform as liquidity provider is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. See Note 16 on pages 288–299 of this Annual Report for additional information.

Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements. For further discussion of lending-related financial instruments, guarantees and other commitments, and the Firm's accounting for them, see Lending-related commitments on page 135, and Note 29 (including the table that presents the related amounts by contractual maturity as of December 31, 2013) on pages 318–324 of this Annual Report. For a discussion of loan repurchase liabilities, see Mortgage repurchase liability on pages 78–79 and Note 29 on pages 318–324, respectively, of this Annual Report.

## Management's discussion and analysis

## Contractual cash obligations

The accompanying table summarizes, by remaining maturity, JPMorgan Chase's significant contractual cash obligations at December 31, 2013. The contractual cash obligations included in the table below reflect the minimum contractual obligation under legally enforceable contracts with terms that are both fixed and determinable. Excluded from the below table are certain liabilities with variable cash flows and/or no contractual maturity.

The carrying amount of on-balance sheet obligations on the Consolidated Balance Sheets may differ from the minimum contractual amount of the obligations reported below. For a discussion of mortgage loan repurchase liabilities, see Mortgage repurchase liability on pages 78–79 of this Annual Report. For further discussion of other obligations, see the Notes to Consolidated Financial Statements in this Annual Report.

## Contractual cash obligations

By remaining maturity at December 31, (in millions)	2013				2012	
	2014	2015-2016	2017-2018	After 2018	Total	Total
<b>On-balance sheet obligations</b>						
Deposits <sup>(a)</sup>	\$1,269,092	\$11,382	\$2,143	\$3,970	\$1,286,587	\$1,191,776
Federal funds purchased and securities loaned or sold under repurchase agreements	177,109	2,097	608	1,349	181,163	240,103
Commercial paper	57,848	—	—	—	57,848	55,367
Other borrowed funds <sup>(a)</sup>	15,655	—	—	—	15,655	15,357
Beneficial interests issued by consolidated VIEs <sup>(a)</sup>	21,578	12,567	7,986	5,490	47,621	62,021
Long-term debt <sup>(a)</sup>	41,966	74,900	64,354	75,519	256,739	231,223
Other <sup>(b)</sup>	2,864	1,214	973	2,669	7,720	7,012
<b>Total on-balance sheet obligations</b>	<b>1,586,112</b>	<b>102,160</b>	<b>76,064</b>	<b>88,997</b>	<b>1,853,333</b>	<b>1,802,859</b>
<b>Off-balance sheet obligations</b>						
Unsettled reverse repurchase and securities borrowing agreements <sup>(c)</sup>	38,211	—	—	—	38,211	34,871
Contractual interest payments <sup>(d)</sup>	7,230	10,363	6,778	23,650	48,021	56,280
Operating leases <sup>(e)</sup>	1,936	3,532	2,796	6,002	14,266	14,915
Equity investment commitments <sup>(f)</sup>	516	82	28	1,493	2,119	1,909
Contractual purchases and capital expenditures <sup>(g)</sup>	1,227	1,042	615	541	3,425	3,052
Obligations under affinity and co-brand programs	921	1,861	447	54	3,283	4,306
Other	11	—	—	—	11	34
<b>Total off-balance sheet obligations</b>	<b>50,052</b>	<b>16,880</b>	<b>10,664</b>	<b>31,740</b>	<b>109,336</b>	<b>115,367</b>
<b>Total contractual cash obligations</b>	<b>\$1,636,164</b>	<b>\$119,040</b>	<b>\$86,728</b>	<b>\$120,737</b>	<b>\$1,962,669</b>	<b>\$1,918,226</b>

(a) Excludes structured notes where the Firm is not obligated to return a stated amount of principal at the maturity of the notes, but is obligated to return an amount based on the performance of the structured notes.

Primarily includes dividends declared on preferred and common stock, deferred annuity contracts, pension and (b) postretirement obligations and insurance liabilities. Prior periods were revised to conform with the current presentation.

(c) For further information, refer to unsettled reverse repurchase and securities borrowing agreements in Note 29 on pages 321–322 of this Annual Report.

(d)

Includes accrued interest and future contractual interest obligations. Excludes interest related to structured notes where the Firm's payment obligation is based on the performance of certain benchmarks.

(e) Includes noncancelable operating leases for premises and equipment used primarily for banking purposes and for energy-related tolling service agreements. Excludes the benefit of noncancelable sublease rentals of \$2.6 billion and \$1.9 billion at December 31, 2013 and 2012, respectively. Prior periods were revised to conform with the current presentation.

(f) At December 31, 2013 and 2012, included unfunded commitments of \$215 million and \$370 million, respectively, to third-party private equity funds that are generally fair valued at net asset value as discussed in Note 3 on pages 195–215 of this Annual Report; and \$1.9 billion and \$1.5 billion of unfunded commitments, respectively, to other equity investments.

(g) Prior periods were revised to conform with the current presentation.

#### Mortgage repurchase liability

In connection with the Firm's mortgage loan sale and securitization activities with Fannie Mae and Freddie Mac (the "GSEs") and other mortgage loan sale and private-label securitization transactions, the Firm has made representations and warranties that the loans sold meet certain requirements. The Firm has been, and may be, required to repurchase loans and/or indemnify the GSEs (e.g., with "make-whole" payments to reimburse the GSEs for realized losses on liquidated loans) and other investors for losses due to material breaches of these representations

and warranties. To the extent that repurchase demands that are received relate to loans that the Firm purchased from third parties that remain viable, the Firm typically will have the right to seek a recovery of related repurchase losses from the third party.

On October 25, 2013, the Firm announced it had reached a \$1.1 billion agreement with the Federal Housing Finance Agency ("FHFA") to resolve, other than certain limited types of exposures, outstanding and future mortgage repurchase demands associated with loans sold to the GSEs from 2000

to 2008 (“FHFA Settlement Agreement”). The majority of the mortgage repurchase demands that the Firm had received from the GSEs related to loans originated from 2005 to 2008.

The Firm has recognized a mortgage repurchase liability of \$681 million and \$2.8 billion as of December 31, 2013 and 2012, respectively. The amount of the mortgage repurchase liability at December 31, 2013, relates to repurchase losses associated with loans sold in connection with loan sale and securitization transactions with the GSEs that are not covered by the FHFA Settlement Agreement (e.g., post-2008 loan sale and securitization transactions, mortgage insurance rescissions and certain mortgage insurance settlement-related exposures, as well as certain other specific exclusions). At December 31, 2013, the Firm had outstanding repurchase demands of \$330 million and unresolved mortgage insurance rescission notices of \$263 million (excluding mortgage insurance rescission notices on loans for which a repurchase demand also has been received).

The following table summarizes the change in the mortgage repurchase liability for each of the periods presented.

Summary of changes in mortgage repurchase liability

Year ended December 31, (in millions)	2013	2012	2011
Repurchase liability at beginning of period	\$2,811	\$3,557	\$3,285
Net realized losses <sup>(a)(b)</sup>	(1,561)	(1,158)	(1,263)
Reclassification to litigation reserve <sup>(c)</sup>	(179)	—	—
Provision for repurchase losses <sup>(d)</sup>	(390)	412	1,535
Repurchase liability at end of period	\$681	\$2,811	3,557

Presented net of third-party recoveries and includes principal losses and accrued interest on repurchased loans,

(a) “make-whole” settlements, settlements with claimants, and certain related expense. Make-whole settlements were \$414 million, \$524 million and \$640 million, for the years ended December 31, 2013, 2012 and 2011, respectively.

(b) The 2013 amount includes \$1.1 billion for the FHFA Settlement Agreement.

(c) Prior to December 31, 2013, in the absence of a repurchase demand by a party to the relevant contracts, the Firm’s decision to repurchase loans from private-label securitization trusts when it determined it had an obligation to do so was recognized in the mortgage repurchase liability. Pursuant to the terms of the RMBS Trust Settlement, all repurchase obligations relating to the subject private-label securitization trusts, whether resulting from a repurchase demand or otherwise, are now recognized in the Firm’s litigation reserves for this settlement. The RMBS Trust Settlement is fully accrued as of December 31, 2013.

(d) Included a provision related to new loan sales of \$20 million, \$112 million and \$52 million, for the years ended December 31, 2013, 2012 and 2011, respectively.

Private label securitizations

The liability related to repurchase demands associated with private label securitizations is separately evaluated by the Firm in establishing its litigation reserves.

On November 15, 2013, the Firm announced it had reached a \$4.5 billion agreement with 21 major institutional investors to make a binding offer to the trustees of 330 residential mortgage-backed securities trusts issued by J.P.Morgan, Chase and Bear Stearns (“RMBS Trust Settlement”) to resolve all representation and warranty claims, as well as all servicing claims, on all trusts issued by J.P.Morgan, Chase and Bear Stearns between 2005 and 2008. The RMBS Trust Settlement may be subject to court approval. For further information about the RMBS Trust Settlement, see Note 31 on pages 326–332 of this Annual Report.

In addition, from 2005 to 2008, Washington Mutual made certain loan level representations and warranties in connection with approximately \$165 billion of residential mortgage loans that were originally sold or deposited into private-label securitizations by Washington Mutual. Of the \$165 billion, approximately \$75 billion has been repaid. In addition, approximately \$47 billion of the principal amount of such loans has liquidated with an average loss severity of 59%. Accordingly, the remaining outstanding principal balance of these loans as of December 31, 2013, was approximately \$43 billion, of which \$10 billion was 60 days or more past due. The Firm believes that any repurchase obligations related to these loans remain with the FDIC receivership.

For additional information regarding the mortgage repurchase liability, see Note 29 on pages 318–324 of this Annual Report.

## Management's discussion and analysis

## CASH FLOWS ANALYSIS

For the years ended December 31, 2013, 2012 and 2011, cash and due from banks decreased \$14.0 billion and \$5.9 billion, and increased \$32.0 billion, respectively. The following discussion highlights the major activities and transactions that affected JPMorgan Chase's cash flows during 2013, 2012 and 2011, respectively.

## Cash flows from operating activities

JPMorgan Chase's operating assets and liabilities support the Firm's capital markets and lending activities, including the origination or purchase of loans initially designated as held-for-sale. Operating assets and liabilities can vary significantly in the normal course of business due to the amount and timing of cash flows, which are affected by client-driven and risk management activities, and market conditions. Management believes cash flows from operations, available cash balances and the Firm's ability to generate cash through short- and long-term borrowings are sufficient to fund the Firm's operating liquidity needs.

For the year ended December 31, 2013, net cash provided by operating activities was \$108.0 billion, and it was significantly higher than net income. This resulted from a decrease in trading assets - debt and equity instruments driven by client-driven market-making activity in CIB, which resulted in lower levels of debt securities; and an increase in trading liabilities - debt and equity instruments driven by client-driven market-making activity in CIB, which resulted in higher levels of short positions in debt and equity securities. Net cash generated from operating activities also reflected adjustments for noncash items such as deferred taxes, depreciation and amortization, and stock-based compensation. Partially offsetting these cash inflows was cash used for loans originated and purchased with an initial intent to sell, which was slightly higher than the cash proceeds received from sales and paydowns of the loans, and also reflected significantly higher levels of activities over the prior-year period.

For the year ended December 31, 2012, net cash provided by operating activities was \$25.1 billion. This resulted from a decrease in securities borrowed reflecting a shift in the deployment of excess cash to resale agreements, as well as lower client activity in CIB, and lower trading assets - derivative receivables, primarily related to the decline in the U.S. dollar and tightening of credit spreads. Partially offsetting these cash inflows was a decrease in accounts payable and other liabilities predominantly due to lower CIB client balances, and an increase in trading assets - debt and equity instruments driven by client-driven market-making activity in CIB. Net cash generated from operating activities was higher than net income largely as a result of adjustments for noncash items such as depreciation and amortization, provision for credit losses, and stock-based compensation. Cash used to acquire loans was slightly higher than cash proceeds received from sales and paydowns of such loans originated and purchased with an

initial intent to sell, and also reflected a lower level of activity compared with the prior-year period.

For the year ended December 31, 2011, net cash provided by operating activities was \$95.9 billion, and it was significantly higher than net income. This resulted from a net decrease in trading assets and liabilities - debt and equity instruments, driven by client-driven market-making activity in CIB; an increase in accounts payable and other liabilities predominantly due to higher CIB client balances, and a decrease in accrued interest and accounts receivables, primarily in CIB, driven by a large reduction in customer margin receivables due to changes in client activity. Net cash generated from operating activities also reflected adjustments for noncash items such as the provision for credit losses, depreciation and amortization, and stock-based compensation. Additionally, cash provided from sales and paydowns of loans originated or purchased with an initial intent to sell was higher than cash used to acquire such loans. Partially offsetting these cash proceeds was an increase in securities borrowed, predominantly in Corporate due to higher excess cash positions at year-end.

## Cash flows from investing activities

The Firm's investing activities predominantly include loans originated to be held for investment, the investment securities portfolio and other short-term interest-earning assets. For the year ended December 31, 2013, net cash of \$150.5 billion was used in investing activities. This resulted from an increase in deposits with banks reflecting the placement of the Firm's excess funds with various central banks, predominantly Federal Reserve banks; and continued growth of wholesale loans. Partially offsetting this cash outflow was a decrease in securities purchased under resale agreements predominantly due to a shift in the deployment of the Firm's excess cash by Treasury; a decrease in consumer loans excluding credit card loans, predominantly due to paydowns and liquidation of delinquent loans,

partially offset by new mortgage and auto originations; and proceeds from maturities and sales of investment securities which were higher than the cash used to acquire new investment securities.

For the year ended December 31, 2012, net cash of \$119.8 billion was used in investing activities. This resulted from an increase in securities purchased under resale agreements due to deployment of the Firm's excess cash by Treasury; higher deposits with banks reflecting placements of the Firm's excess cash with various central banks, primarily Federal Reserve Banks; and higher levels of wholesale loans, primarily in CB and AM, driven by higher wholesale activity across most of the Firm's regions and businesses. Partially offsetting these cash outflows were a decline in consumer, excluding credit card, loans predominantly due to mortgage-related paydowns and portfolio runoff, and a decline in credit card loans due to higher repayment rates; and proceeds from maturities and sales of AFS securities,

which were higher than the cash used to acquire new AFS securities.

For the year ended December 31, 2011, net cash of \$170.8 billion was used in investing activities. This resulted from a significant increase in deposits with banks reflecting the placement of funds with various central banks, including Federal Reserve Banks, predominantly resulting from the overall growth in wholesale client deposits; an increase in loans reflecting continued growth in client activity across all of the Firm's wholesale businesses and regions; net purchases of AFS securities, largely due to repositioning of the portfolio in Corporate in response to changes in the market environment; and an increase in securities purchased under resale agreements, predominantly in Corporate due to higher excess cash positions at year-end. Partially offsetting these cash outflows were a decline in consumer, excluding credit card, loan balances due to paydowns and portfolio runoff, and in credit card loans, due to higher repayment rates, runoff of the Washington Mutual portfolio and the Firm's sale of the Kohl's portfolio.

#### Cash flows from financing activities

The Firm's financing activities predominantly include taking customer deposits, and issuing long-term debt as well as preferred and common stock. For the year ended December 31, 2013, net cash provided by financing activities was \$28.3 billion. This increase was driven by growth in both wholesale and consumer deposits; net issuances of long-term borrowings, which also reflected the redemption of trust preferred securities in the second quarter of 2013; and proceeds from the net issuance of preferred stock. The increase in wholesale client deposit balances was due to higher short-term deposits as well as growth in client operating balances. Consumer deposit balances increased from the effect of continued strong growth in business volumes and strong customer retention. Partially offsetting these cash inflows was a decrease in securities loaned or sold under repurchase agreements, predominantly due to a change in the mix of the Firm's funding sources; repurchases of common stock; and payments of cash dividends on common and preferred stock.

For the year ended December 31, 2012, net cash provided by financing activities was \$87.7 billion. This was driven by proceeds from long-term borrowings and a higher level of securitized credit cards; an increase in deposits due to growth in both consumer and wholesale deposits; an increase in federal funds purchased and securities loaned or sold under repurchase agreements due to higher secured financings of the Firm's assets; an increase in commercial paper issuance in the wholesale funding markets to meet short-term funding needs, partially offset by a decline in the volume of client deposits and other third-party liability balances related to CIB's liquidity management product; an increase in other borrowed funds due to higher secured and unsecured short-term borrowings to meet short-term funding needs; and proceeds from the issuance of preferred stock. Partially offsetting these cash inflows were

redemptions and maturities of long-term borrowings, including trust preferred securities, and securitized credit cards; and payments of cash dividends on common and preferred stock and repurchases of common stock and warrants.

For the year ended December 31, 2011, net cash provided by financing activities was \$107.7 billion. This was largely driven by a significant increase in deposits, predominantly due to an overall growth in wholesale client balances and, to a lesser extent, consumer deposit balances. The increase in wholesale client balances, particularly in CIB and CB, was primarily driven by lower returns on other available alternative investments and low interest rates during 2011, and in AM, driven by growth in the number of clients and level of deposits. In addition, there was an increase in commercial paper due to growth in the volume of liability balances in sweep accounts related to CIB's cash management program. Cash was used to reduce securities sold under repurchase agreements, predominantly in CIB, reflecting the lower funding requirements of the Firm based on lower trading inventory levels, and change in the mix of funding sources; for net repayments of long-term borrowings, including a decrease in long-term debt, predominantly due to net redemptions and maturities, as well as a decline in long-term beneficial interests issued by consolidated VIEs due to maturities of Firm-sponsored credit card securitization transactions; to reduce other borrowed funds, predominantly driven by maturities of short-term secured borrowings, unsecured bank notes and short-term Federal Home Loan Banks ("FHLB") advances; and for repurchases of common stock and warrants, and payments of cash dividends on common and preferred stock.



## Management's discussion and analysis

## EXPLANATION AND RECONCILIATION OF THE FIRM'S USE OF NON-GAAP FINANCIAL MEASURES

The Firm prepares its consolidated financial statements using accounting principles generally accepted in the U.S. ("U.S. GAAP"); these financial statements appear on pages 184–188 of this Annual Report. That presentation, which is referred to as "reported" basis, provides the reader with an understanding of the Firm's results that can be tracked consistently from year to year and enables a comparison of the Firm's performance with other companies' U.S. GAAP financial statements.

In addition to analyzing the Firm's results on a reported basis, management reviews the Firm's results and the results of the lines of business on a "managed" basis, which is a non-GAAP financial measure. The Firm's definition of managed basis starts with the reported U.S. GAAP results and includes certain reclassifications to present total net revenue for the Firm (and each of the business segments) on a FTE basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in

the managed results on a basis comparable to taxable investments and securities. This non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense. These adjustments have no impact on net income as reported by the Firm as a whole or by the lines of business.

Management also uses certain non-GAAP financial measures at the business-segment level, because it believes these other non-GAAP financial measures provide information to investors about the underlying operational performance and trends of the particular business segment and, therefore, facilitate a comparison of the business segment with the performance of its competitors. Non-GAAP financial measures used by the Firm may not be comparable to similarly named non-GAAP financial measures used by other companies.

The following summary table provides a reconciliation from the Firm's reported U.S. GAAP results to managed basis.

Year ended December 31, (in millions, except ratios)	2013			2012			2011			
	Reported Results	Fully taxable-equivalent adjustments <sup>(a)</sup>	Managed basis	Reported Results	Fully taxable-equivalent adjustments <sup>(a)</sup>	Managed basis	Reported Results	Fully taxable-equivalent adjustments <sup>(a)</sup>	Managed basis	
Other income	\$3,847	\$ 2,495	\$6,342	\$4,258	\$ 2,116	\$6,374	\$2,605	\$ 2,003	\$4,608	
Total noninterest revenue	53,287	2,495	55,782	52,121	2,116	54,237	49,545	2,003	51,548	
Net interest income	43,319	697	44,016	44,910	743	45,653	47,689	530	48,219	
Total net revenue	96,606	3,192	99,798	97,031	2,859	99,890	97,234	2,533	99,767	
Pre-provision profit	26,139	3,192	29,331	32,302	2,859	35,161	34,323	2,533	36,856	
Income before income tax expense	25,914	3,192	29,106	28,917	2,859	31,776	26,749	2,533	29,282	
Income tax expense	7,991	3,192	11,183	7,633	2,859	10,492	7,773	2,533	10,306	
Overhead ratio	73	% NM	71	% 67	% NM	65	% 65	% NM	63	%

(a) Predominantly recognized in CIB and CB business segments and Corporate/Private Equity.

Tangible common equity ("TCE"), ROTCE, tangible book value per share ("TBVS"), and Tier 1 common under Basel I and III rules are each non-GAAP financial measures. TCE represents the Firm's common stockholders' equity (i.e., total stockholders' equity less preferred stock) less goodwill and identifiable intangible assets (other than MSRs), net of related deferred tax liabilities. ROTCE measures the Firm's earnings as a percentage of TCE. TBVS represents the Firm's tangible common equity divided by period-end common shares. Tier 1 common under Basel I and III rules are

used by management, along with other capital measures, to assess and monitor the Firm's capital position. TCE, ROTCE, and TBVS are meaningful to the Firm, as well as investors and analysts, in assessing the Firm's use of equity. The Firm uses ROTCE, a non-GAAP financial measure, to evaluate its use of equity and to facilitate comparisons with competitors. For additional information on Tier 1 common under Basel I and III, see Regulatory capital on pages 161–165 of this Annual Report.

Calculation of certain U.S. GAAP and non-GAAP metrics

The following U.S. GAAP and non-GAAP measures, we calculated as follows:

Return on common equity

Net income\* / Average common stockholders' equity

Return on tangible common equity

Net income\* / Average tangible common equity

Return on assets

Reported net income / Total average assets

Return on risk-weighted assets

Annualized earnings / Average risk-weighted assets

Overhead ratio

Total noninterest expense / Total net revenue

\* Represents net income applicable to common equity

## Average tangible common equity

Year ended December 31, (in millions)	2013	2012	2011
Common stockholders' equity	\$ 196,409	\$ 184,352	\$ 173,266
Less: Goodwill	48,102	48,176	48,632
Less: Certain identifiable intangible assets	1,950	2,833	3,632
Add: Deferred tax liabilities <sup>(a)</sup>	2,885	2,754	2,635
Tangible common equity	\$ 149,242	\$ 136,097	\$ 123,637

(a) Represents deferred tax liabilities related to tax-deductible goodwill and to identifiable intangibles created in nontaxable transactions, which are netted against goodwill and other intangibles when calculating TCE.

## Core net interest income

In addition to reviewing net interest income on a managed basis, management also reviews core net interest income to assess the performance of its core lending, investing (including asset-liability management) and deposit-raising activities (which excludes the impact of CIB's market-based activities). The core data presented below are non-GAAP financial measures due to the exclusion of CIB's market-based net interest income and the related assets. Management believes this exclusion provides investors and analysts a more meaningful measure by which to analyze the non-market-related business trends of the Firm and provides a comparable measure to other financial institutions that are primarily focused on core lending, investing and deposit-raising activities.

## Core net interest income data

Year ended December 31, (in millions, except rates)	2013	2012	2011	
Net interest income - managed basis <sup>(a)(b)</sup>	\$ 44,016	\$ 45,653	\$ 48,219	
Less: Market-based net interest income	4,979	5,787	7,329	
Core net interest income <sup>(a)</sup>	\$ 39,037	\$ 39,866	\$ 40,890	
Average interest-earning assets	\$ 1,970,231	\$ 1,842,417	\$ 1,761,355	
Less: Average market-based earning assets	504,218	499,339	519,655	
Core average interest-earning assets	\$ 1,466,013	\$ 1,343,078	\$ 1,241,700	
Net interest yield on interest-earning assets - managed basis	2.23	% 2.48	% 2.74	%
Net interest yield on market-based activities	0.99	1.16	1.41	
Core net interest yield on core average interest-earning assets	2.66	% 2.97	% 3.29	%

(a) Interest includes the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable.

(b) For a reconciliation of net interest income on a reported and managed basis, see reconciliation from the Firm's reported U.S. GAAP results to managed basis on page 82 of this Annual Report.

## 2013 compared with 2012

Core net interest income decreased by \$829 million to \$39.0 billion for 2013, and core average interest-earning assets increased by \$122.9 billion in 2013 to \$1,466.0 billion. The decline in net interest income in 2013 primarily reflected the impact of the runoff of higher yielding loans and originations of lower yielding loans. The decrease in net interest income was partially offset by lower long-term debt and other funding costs. The increase in average interest-earning assets reflected the impact of higher deposits with banks. The core net interest yield decreased by 31 basis points to 2.66% in 2013, primarily reflecting the impact of a significant increase in deposits with banks and lower loan yields, partially offset by the impact of lower long-term debt yields and deposit rates.

## 2012 compared with 2011

Core net interest income decreased by \$1.0 billion to \$39.9 billion for 2012, and core average interest-earning assets increased by \$101.4 billion in 2012 to \$1,343.1 billion. The decline in net interest income in 2012 reflected the impact of the runoff of higher-yielding loans, faster prepayment of mortgage-backed securities, and limited reinvestment opportunities, as well as the impact of lower interest rates across the Firm's interest-earning assets. The decrease in net interest income was partially offset by lower deposit and other borrowing costs. The increase in average interest-earning assets was driven by higher deposits with banks and other short-term investments, increased levels of loans, and an increase in investment securities. The core net interest yield decreased by 32 basis points to 2.97% in 2012, primarily driven by the runoff of higher-yielding loans, lower customer loan rates, higher financing costs associated with mortgage-backed securities, and limited reinvestment opportunities, slightly offset by lower customer deposit rates.

Management's discussion and analysis

**BUSINESS SEGMENT RESULTS**

The Firm is managed on a line of business basis. There are four major reportable business segments – Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset Management. In addition, there is a Corporate/Private Equity segment.

The business segments are determined based on the products and services provided, or the type of customer

served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 82–83 of this Annual Report.

**Description of business segment reporting methodology**

Results of the business segments are intended to reflect each segment as if it were essentially a stand-alone business. The management reporting process that derives business segment results allocates income and expense using market-based methodologies. The Firm continues to assess the assumptions, methodologies and reporting classifications used for segment reporting, and further refinements may be implemented in future periods.

**Revenue sharing**

When business segments join efforts to sell products and services to the Firm's clients, the participating business segments agree to share revenue from those transactions. The segment results reflect these revenue-sharing agreements.

**Funds transfer pricing**

Funds transfer pricing is used to allocate interest income and expense to each business and transfer the primary interest rate risk exposures to the Treasury group within Corporate/Private Equity. The allocation process is unique

to each business segment and considers the interest rate risk, liquidity risk and regulatory requirements of that segment as if it were operating independently, and as compared with its stand-alone peers. This process is overseen by senior management and reviewed by the Firm's Asset-Liability Committee ("ALCO").

**Business segment capital allocation changes**

Each business segment is allocated capital by taking into consideration stand-alone peer comparisons, regulatory capital requirements (as estimated under Basel III) and economic risk measures. The amount of capital assigned to each business is referred to as equity. Effective January 1, 2013, the Firm refined the capital allocation framework to align it with the line of business structure described above. The increase in equity levels for the lines of businesses is largely driven by evolving regulatory requirements and the higher capital targets the Firm has established under the Basel III Advanced Approach. For further information about these capital changes, see Line of business equity on pages 165–166 of this Annual Report.

## Expense allocation

Where business segments use services provided by support units within the Firm, or another business segment, the costs of those services are allocated to the respective business segments. The expense is generally allocated based on actual cost and upon usage of the services provided. In contrast, certain other expense related to certain corporate functions, or to certain technology and

operations, are not allocated to the business segments and are retained in Corporate. Retained expense includes: parent company costs that would not be incurred if the segments were stand-alone businesses; adjustments to align certain corporate staff, technology and operations allocations with market prices; and other items not aligned with a particular business segment.

## Segment Results – Managed Basis

The following table summarizes the business segment results for the periods indicated.

Year ended December 31, (in millions)	Total net revenue			Total noninterest expense			Pre-provision profit/(loss)		
	2013	2012	2011	2013	2012	2011	2013	2012	2011
Consumer & Community Banking <sup>(a)</sup>	\$46,026	\$49,884	\$45,619	\$27,842	\$28,827	\$27,637	\$18,184	\$21,057	\$17,982
Corporate & Investment Bank	34,225	34,326	33,984	21,744	21,850	21,979	12,481	12,476	12,005
Commercial Banking	6,973	6,825	6,418	2,610	2,389	2,278	4,363	4,436	4,140
Asset Management	11,320	9,946	9,543	8,016	7,104	7,002	3,304	2,842	2,541
Corporate/Private Equity <sup>(a)</sup>	1,254	(1,091)	4,203	10,255	4,559	4,015	(9,001)	(5,650)	188
Total	\$99,798	\$99,890	\$99,767	\$70,467	\$64,729	\$62,911	\$29,331	\$35,161	\$36,856

Year ended December 31, (in millions, except ratios)	Provision for credit losses			Net income/(loss)			Return on equity			
	2013	2012	2011	2013	2012	2011	2013	2012	2011	
Consumer & Community Banking <sup>(a)</sup>	\$335	\$3,774	\$7,620	\$10,749	\$10,551	\$6,105	23	%25	%15	%
Corporate & Investment Bank	(232)	(479)	(285)	8,546	8,406	7,993	15	18	17	
Commercial Banking	85	41	208	2,575	2,646	2,367	19	28	30	
Asset Management	65	86	67	2,031	1,703	1,592	23	24	25	
Corporate/Private Equity <sup>(a)</sup>	(28)	(37)	(36)	(5,978)	(2,022)	919	NM	NM	NM	
Total	\$225	\$3,385	\$7,574	\$17,923	\$21,284	\$18,976	9	%11	%11	%

The 2012 and 2011 data for certain income statement line items (predominantly net interest income, compensation (a) and noncompensation expense) were revised to reflect the transfer of certain technology and operations, as well as real estate-related functions and staff, from Corporate/Private Equity to CCB, effective January 1, 2013.

## Management's discussion and analysis

## CONSUMER &amp; COMMUNITY BANKING

Consumer & Community Banking ("CCB") serves consumers and businesses through personal service at bank branches and through ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking, Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card, Merchant Services & Auto ("Card"). Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios comprised of residential mortgages and home equity loans, including the PCI portfolio acquired in the Washington Mutual transaction. Card issues credit cards to consumers and small businesses, provides payment services to corporate and public sector clients through its commercial card products, offers payment processing services to merchants, and provides auto and student loan services.

Selected income statement data<sup>(a)</sup>

Year ended December 31,

(in millions, except ratios)

	2013	2012	2011
Revenue			
Lending- and deposit-related fees	\$2,983	\$3,121	\$3,219
Asset management, administration and commissions	2,116	2,093	2,046
Mortgage fees and related income	5,195	8,680	2,714
Card income	5,785	5,446	6,152
All other income	1,473	1,473	1,183
Noninterest revenue	17,552	20,813	15,314
Net interest income	28,474	29,071	30,305
Total net revenue	46,026	49,884	45,619
Provision for credit losses	335	3,774	7,620
Noninterest expense			
Compensation expense	11,686	11,632	10,329
Noncompensation expense	15,740	16,420	16,669
Amortization of intangibles	416	775	639
Total noninterest expense	27,842	28,827	27,637
Income before income tax expense	17,849	17,283	10,362
Income tax expense	7,100	6,732	4,257
Net income	\$10,749	\$10,551	\$6,105
Financial ratios			
Return on common equity	23	% 25	% 15
Overhead ratio	60	58	61

The 2012 and 2011 data for certain income statement line items (predominantly net interest income, compensation (a) and noncompensation expense) were revised to reflect the transfer of certain technology and operations, as well as real estate-related functions and staff, from Corporate/Private Equity to CCB, effective January 1, 2013.

## 2013 compared with 2012

Consumer & Community Banking net income was \$10.7 billion, an increase of \$198 million, or 2%, compared with the prior year, due to lower provision for credit losses and lower noninterest expense, predominantly offset by lower net revenue.

Net revenue was \$46.0 billion, a decrease of \$3.9 billion, or 8%, compared with the prior year. Net interest income was \$28.5 billion, down \$597 million, or 2%, driven by lower deposit margins, lower loan balances due to net

portfolio runoff and spread compression in Credit Card, largely offset by higher deposit balances. Noninterest revenue was \$17.6 billion, a decrease of \$3.3 billion, or 16%, driven by lower mortgage fees and related income, partially offset by higher card income.

The provision for credit losses was \$335 million, compared with \$3.8 billion in the prior year. The current-year provision reflected a \$5.5 billion reduction in the allowance for loan losses and total net charge-offs of \$5.8 billion. The prior-year provision reflected a \$5.5 billion reduction in the allowance for loan losses and total net charge-offs of \$9.3 billion, including \$800 million of incremental charge-offs related to regulatory guidance. For more information, including net charge-off amounts and rates, see Consumer Credit Portfolio on pages 120–129 of this Annual Report. Noninterest expense was \$27.8 billion, a decrease of \$985 million, or 3%, from the prior year, driven by lower mortgage servicing expense, partially offset by investments in Chase Private Client expansion, higher non-MBS related legal expense in Mortgage Production, higher auto lease depreciation, and costs related to the control agenda. 2012 compared with 2011

Consumer & Community Banking net income was \$10.6 billion, up 73% when compared with the prior year. The increase was driven by higher net revenue and lower provision for credit losses, partially offset by higher noninterest expense.

Net revenue was \$49.9 billion, up \$4.3 billion, or 9%, compared with the prior year. Net interest income was \$29.1 billion, down \$1.2 billion, or 4%, driven by lower deposit margins and lower loan balances due to portfolio runoff, largely offset by higher deposit balances. Noninterest revenue was \$20.8 billion, up \$5.5 billion, or 36%, driven by higher mortgage fees and related income, partially offset by lower debit card revenue, reflecting the impact of the Durbin Amendment.

The provision for credit losses was \$3.8 billion compared with \$7.6 billion in the prior year. The current-year provision reflected a \$5.5 billion reduction in the allowance for loan losses due to improved delinquency trends and reduced estimated losses in the real estate and credit card loan portfolios. Current-year total net charge-offs were \$9.3 billion, including \$800 million of incremental charge-offs

related to regulatory guidance. Excluding these charge-offs, net charge-offs during the year would have been \$8.5 billion compared with \$11.8 billion in the prior year. For more information, including net charge-off amounts and rates, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

Noninterest expense was \$28.8 billion, an increase of \$1.2 billion, or 4%, compared with the prior year, driven by higher production expense reflecting higher volumes, and investments in sales force, partially offset by lower costs related to mortgage-related matters and lower marketing expense in Card.

#### Selected metrics

As of or for the year ended December 31,  
(in millions, except headcount)

	2013	2012	2011
Selected balance sheet data (period-end) <sup>(a)</sup>			
Total assets	\$452,929	\$467,282	\$486,697
Loans:			
Loans retained	393,351	\$402,963	\$425,581
Loans held-for-sale and loans at fair value <sup>(b)</sup>	7,772	\$18,801	\$12,796
Total loans	401,123	421,764	438,377
Deposits	464,412	\$438,517	397,868
Equity	46,000	43,000	41,000
Selected balance sheet data (average) <sup>(a)</sup>			
Total assets	\$456,468	467,641	491,035
Loans:			
Loans retained	392,797	408,559	429,975
Loans held-for-sale and loans at fair value <sup>(b)</sup>	15,812	18,006	17,187
Total loans	408,609	426,565	447,162
Deposits	453,304	413,948	382,702
Equity	46,000	43,000	41,000
Headcount <sup>(a)</sup>	151,333	164,391	166,053

The 2012 and 2011 data for certain balance sheet line items (predominantly total assets) as well as headcount were (a) revised to reflect the transfer of certain technology and operations, as well as real estate-related functions and staff, from Corporate/Private Equity to CCB, effective January 1, 2013.

(b) Predominantly consists of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets on the Consolidated Balance Sheets.

#### Selected metrics

As of or for the year ended December 31,  
(in millions, except ratios and where otherwise noted)

	2013	2012	2011	
Credit data and quality statistics				
Net charge-offs <sup>(a)(b)</sup>	\$5,826	\$9,280	\$11,815	
Nonaccrual loans:				
Nonaccrual loans retained	7,455	9,114	7,354	
Nonaccrual loans held-for-sale and loans at fair value	40	39	103	
Total nonaccrual loans <sup>(c)(d)(e)(f)</sup>	7,495	9,153	7,457	
Nonperforming assets <sup>(c)(d)(e)(f)</sup>	8,149	9,830	8,292	
Allowance for loan losses <sup>(a)</sup>	12,201	17,752	23,256	
Net charge-off rate <sup>(b)(g)</sup>	1.48	%2.27	%2.75	%
Net charge-off rate, excluding PCI loans <sup>(a)(b)(g)</sup>	1.73	2.68	3.27	

Allowance for loan losses to period-end loans retained	3.10	4.41	5.46
Allowance for loan losses to period-end loans retained, excluding PCI loans <sup>(h)</sup>	2.36	3.51	4.87
Allowance for loan losses to nonaccrual loans retained, excluding credit card <sup>(c)(f)(h)</sup>	57	72	143
Nonaccrual loans to total period-end loans, excluding credit card <sup>(f)</sup>	2.74	3.12	2.44
Nonaccrual loans to total period-end loans, excluding credit card and PCI loans <sup>(c)(f)</sup>	3.40	3.91	3.10
Business metrics			
Number of:			
Branches	5,630	5,614	5,508
ATMs	19,211	18,699	17,235
Active online customers (in thousands)	33,742	31,114	29,749
Active mobile customers (in thousands)	15,629	12,359	8,203

Net charge-offs and net charge-off rates for the year ended December 31, 2013 excluded \$53 million of write-offs (a) in the PCI portfolio. These write-offs decreased the allowance for loan losses for PCI loans. For further information, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

Net charge-offs and net charge-off rates for the year ended December 31, 2012, included \$800 million of charge-offs, recorded in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower (“Chapter 7 loans”) to be charged off to the net realizable value of the (b) collateral and to be considered nonaccrual, regardless of their delinquency status. Excluding these charges-offs, net charge-offs for the year ended December 31, 2012, would have been \$8.5 billion and excluding these charge-offs and PCI loans, the net charge-off rate for the year ended December 31, 2012, would have been 2.45%. For further information, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

(c) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.

(d) Certain mortgages originated with the intent to sell are classified as trading assets on the Consolidated Balance Sheets.

At December 31, 2013, 2012 and 2011, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of \$8.4 billion, \$10.6 billion, and \$11.5 billion, respectively, that are 90 or more days past due; (2) real estate owned insured by U.S. government agencies of \$2.0 billion, \$1.6 billion, and \$954 million, (e) respectively; and (3) student loans insured by U.S. government agencies under the Federal Family Education Loan Program (“FFELP”) of \$428 million, \$525 million, and \$551 million, respectively, that are 90 or more days past due. These amounts have been excluded from nonaccrual loans based upon the government guarantee.

(f) Nonaccrual loans included \$3.0 billion of loans at December 31, 2012, based upon regulatory guidance. For further information, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

(g) Loans held-for-sale and loans accounted for at fair value were excluded when calculating the net charge-off rate.

(h) An allowance for loan losses of \$4.2 billion at December 31, 2013, and \$5.7 billion at December 31, 2012 and 2011 was recorded for PCI loans; these amounts were also excluded from the applicable ratios.

## Management's discussion and analysis

## Consumer &amp; Business Banking

Selected income statement data<sup>(a)</sup>

Year ended December 31,

(in millions, except ratios)

	2013	2012	2011
Revenue			
Lending- and deposit-related fees	\$2,942	\$3,068	\$3,160
Asset management, administration and commissions	1,815	1,638	1,561
Card income	1,495	1,353	2,024
All other income	492	498	473
Noninterest revenue	6,744	6,557	7,218
Net interest income	10,566	10,594	10,732
Total net revenue	17,310	17,151	17,950
Provision for credit losses	347	311	419
Noninterest expense	12,162	11,490	11,336
Income before income tax expense	4,801	5,350	6,195
Net income	\$2,881	\$3,203	\$3,699
Return on common equity	26	% 36	% 39
Overhead ratio	70	67	63
Overhead ratio, excluding core deposit intangibles <sup>(b)</sup>	69	66	62
Equity (period-end and average)	\$11,000	\$9,000	\$9,500

(a) The 2012 and 2011 data for certain income statement line items were revised to reflect the transfer of certain functions and staff from Corporate/Private Equity to CCB, effective January 1, 2013.

Consumer & Business Banking ("CBB") uses the overhead ratio (excluding the amortization of core deposit intangibles ("CDI")), a non-GAAP financial measure, to evaluate the underlying expense trends of the business.

(b) Including CDI amortization expense in the overhead ratio calculation would result in a higher overhead ratio in the earlier years and a lower overhead ratio in later years; this method would therefore result in an improving overhead ratio over time, all things remaining equal. This non-GAAP ratio excluded CBB's CDI amortization expense related to prior business combination transactions of \$163 million, \$200 million, and \$238 million for the years ended December 31, 2013, 2012 and 2011, respectively.

## 2013 compared with 2012

Consumer & Business Banking net income was \$2.9 billion, a decrease of \$322 million, or 10%, compared with the prior year, due to higher noninterest expense, partially offset by higher noninterest revenue.

Net revenue was \$17.3 billion, up 1% compared with the prior year. Net interest income was \$10.6 billion, flat compared with the prior year, driven by higher deposit balances, offset by lower deposit margin. Noninterest revenue was \$6.7 billion, an increase of 3%, driven by higher investment sales revenue and debit card revenue, partially offset by lower deposit-related fees.

The provision for credit losses was \$347 million, compared with \$311 million in the prior year.

Noninterest expense was \$12.2 billion, up 6% from the prior year, reflecting continued investments in the business, and costs related to the control agenda.

## 2012 compared with 2011

Consumer & Business Banking net income was \$3.2 billion, a decrease of \$496 million, or 13%, compared with the prior year. The decrease was driven by lower net revenue and higher noninterest expense, partially offset by lower provision for credit losses.

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Net revenue was \$17.2 billion, down 4% from the prior year. Net interest income was \$10.6 billion, down 1% from the prior year, driven by the impact of lower deposit margins, predominantly offset by higher deposit balances. Noninterest revenue was \$6.6 billion, down 9% from the prior year, driven by lower debit card revenue, reflecting the impact of the Durbin Amendment.

The provision for credit losses was \$311 million, compared with \$419 million in the prior year. The current-year provision reflected a \$100 million reduction in the allowance for loan losses. Net charge-offs were \$411 million compared with \$494 million in the prior year.

Noninterest expense was \$11.5 billion, up 1% from the prior year, resulting from investment in the sales force and new branch builds.

Selected metrics

As of or for the year ended

December 31,

(in millions, except ratios)

	2013	2012	2011
Business metrics			
Business banking origination volume	\$5,148	\$6,542	\$5,827
Period-end loans	19,416	18,883	17,652
Period-end deposits: <sup>(a)</sup>			
Checking	187,182	170,354	147,821
Savings	238,223	216,422	191,891
Time and other	26,022	31,753	36,746
Total period-end deposits	451,427	418,529	376,458
Average loans	18,844	18,104	17,121
Average deposits: <sup>(a)</sup>			
Checking	176,005	153,422	136,602
Savings	229,341	204,449	182,587
Time and other	29,227	34,224	41,577
Total average deposits	434,573	392,095	360,766
Deposit margin	2.32	% 2.57	% 2.82
Average assets <sup>(a)</sup>	\$37,174	\$34,431	\$32,886

<sup>(a)</sup> The 2012 and 2011 data for certain balance sheet line items were revised to reflect the transfer of certain functions and staff from Corporate/Private Equity to CCB, effective January 1, 2013.

## Selected metrics

As of or for the year ended December 31,

(in millions, except ratios and where otherwise noted)

	2013		2012		2011	
Credit data and quality statistics						
Net charge-offs	\$337		\$411		\$494	
Net charge-off rate	1.79	%	2.27	%	2.89	%
Allowance for loan losses	\$707		\$698		\$798	
Nonperforming assets	391		488		710	
Retail branch business metrics						
Investment sales volume	\$35,050		\$26,036		\$22,716	
Client investment assets	188,840		158,502		137,853	
% managed accounts	36	%	29	%	24	%
Number of:						
Chase Private Client locations	2,149		1,218		262	
Personal bankers	23,588		23,674		24,308	
Sales specialists	5,740		6,076		6,017	
Client advisors	3,044		2,963		3,201	
Chase Private Clients	215,888		105,700		21,723	
Accounts (in thousands) <sup>(a)</sup>	29,437		28,073		26,626	

(a) Includes checking accounts and Chase Liquid<sup>SM</sup> cards (launched in the second quarter of 2012).

## Mortgage Banking

Selected income statement data

Year ended December 31,

(in millions, except ratios)

	2013		2012		2011	
Revenue						
Mortgage fees and related income	\$5,195		\$8,680		\$2,714	
All other income	283		475		490	
Noninterest revenue	5,478		9,155		3,204	
Net interest income	4,548		4,808		5,324	
Total net revenue	10,026		13,963		8,528	
Provision for credit losses	(2,681	)	(490	)	3,580	
Noninterest expense	7,602		9,121		8,256	
Income/(loss) before income tax expense/(benefit)	5,105		5,332		(3,308	)
Net income/(loss)	\$3,082		\$3,341		\$(2,138	)
Return on equity	16	%	19	%	(14	)%
Overhead ratio	76		65		97	
Equity (period-end and average)	\$19,500		\$17,500		\$15,500	

## 2013 compared with 2012

Mortgage Banking net income was \$3.1 billion, a decrease of \$259 million, or 8%, compared with the prior year, driven by lower net revenue, predominantly offset by a higher benefit from the provision for credit losses and lower noninterest expense.

Net revenue was \$10.0 billion, a decrease of \$3.9 billion compared with the prior year. Net interest income was \$4.5 billion, a decrease of \$260 million, or 5%, driven by lower loan balances due to net portfolio runoff. Noninterest

revenue was \$5.5 billion, a decrease of \$3.7 billion, driven by lower mortgage fees and related income. The provision for credit losses was a benefit of \$2.7 billion, compared with a benefit of \$490 million in the prior year. The current year reflected a \$3.8 billion reduction in the allowance for loan losses due to continued improvement in home prices and delinquencies. The prior year included a \$3.9 billion reduction in the allowance for loan losses. Noninterest expense was \$7.6 billion, a decrease of \$1.5 billion, or 17%, from the prior year, due to lower servicing expense, partially offset by higher non-MBS related legal expense in Mortgage Production.

2012 compared with 2011

Mortgage Banking net income was \$3.3 billion, compared with a net loss of \$2.1 billion in the prior year. The increase was driven by higher net revenue and lower provision for credit losses, partially offset by higher noninterest expense. Net revenue was \$14.0 billion, up \$5.4 billion, or 64%, compared with the prior year. Net interest income was \$4.8 billion, down \$516 million, or 10%, resulting from lower loan balances due to net portfolio runoff. Noninterest revenue was \$9.2 billion, up \$6.0 billion compared with the prior year, driven by higher mortgage fees and related income.

The provision for credit losses was a benefit of \$490 million, compared with a provision expense of \$3.6 billion in the prior year. The current year reflected a \$3.85 billion reduction in the allowance for loan losses due to improved delinquency trends and lower estimated losses.

Noninterest expense was \$9.1 billion, an increase of \$865 million, or 10%, compared with the prior year, driven by higher production expense reflecting higher volumes, partially offset by lower costs related to mortgage-related matters.

## Management's discussion and analysis

## Functional results

Year ended December 31,

(in millions, except ratios)

	2013		2012		2011	
Mortgage Production						
Production revenue	\$2,673		\$5,783		\$3,395	
Production-related net interest & other income	909		787		840	
Production-related revenue, excluding repurchase (losses)/benefits	3,582		6,570		4,235	
Production expense <sup>(a)</sup>	3,088		2,747		1,895	
Income, excluding repurchase (losses)/benefits	494		3,823		2,340	
Repurchase (losses)/benefits	331		(272)	)	(1,347)	)
Income before income tax expense	825		3,551		993	
Mortgage Servicing						
Loan servicing revenue	3,552		3,772		4,134	
Servicing-related net interest & other income	411		407		390	
Servicing-related revenue	3,963		4,179		4,524	
Changes in MSR asset fair value due to collection/realization of expected cash flows	(1,094)	)	(1,222)	)	(1,904)	)
Default servicing expense	2,069		3,707		3,814	
Core servicing expense	904		1,033		1,031	
Income/(loss), excluding MSR risk management	(104)	)	(1,783)	)	(2,225)	)
MSR risk management, including related net interest income/(expense)	(268)	)	616		(1,572)	)
Income/(loss) before income tax expense/(benefit)	(372)	)	(1,167)	)	(3,797)	)
Real Estate Portfolios						
Noninterest revenue	(209)	)	43		38	
Net interest income	3,721		4,049		4,554	
Total net revenue	3,512		4,092		4,592	
Provision for credit losses	(2,693)	)	(509)	)	3,575	
Noninterest expense	1,553		1,653		1,521	
Income/(loss) before income tax expense/(benefit)	4,652		2,948		(504)	)
Mortgage Banking income/(loss) before income tax expense/(benefit)	\$5,105		\$5,332		\$(3,308)	)
Mortgage Banking net income/(loss)	\$3,082		\$3,341		\$(2,138)	)
Overhead ratios						
Mortgage Production	79	%	43	%	65	%
Mortgage Servicing	114		133		462	
Real Estate Portfolios	44		40		33	

(a) Includes provision for credit losses associated with Mortgage Production.

## Selected income statement data

Year ended December 31,

(in millions)

	2013		2012		2011
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## Supplemental mortgage fees and related income details

## Net production revenue:

Production revenue	\$2,673	\$5,783	\$3,395
Repurchase (losses)/benefits	331	(272)	(1,347)
Net production revenue	3,004	5,511	2,048

## Net mortgage servicing revenue:

## Operating revenue:

Loan servicing revenue	3,552	3,772	4,134
Changes in MSR asset fair value due to collection/realization of expected cash flows	(1,094)	(1,222)	(1,904)
Total operating revenue	2,458	2,550	2,230

## Risk management:

Changes in MSR asset fair value due to market interest rates and other <sup>(a)</sup>	2,119	(587)	(5,390)
Other changes in MSR asset fair value due to other inputs and assumptions in model <sup>(b)</sup>	(511)	(46)	(1,727)
Changes in derivative fair value and other	(1,875)	1,252	5,553
Total risk management	(267)	619	(1,564)
Total net mortgage servicing revenue	2,191	3,169	666
Mortgage fees and related income	\$5,195	\$8,680	\$2,714

(a) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

Represents the aggregate impact of changes in model inputs and assumptions such as projected cash flows (e.g. (b) cost to service), discount rates and changes in prepayments other than those attributable to changes in market interest rates (e.g. changes in prepayments due to changes in home prices).

Net production revenue includes net gains or losses on originations and sales of mortgage loans, other production-related fees and losses related to the repurchase of previously-sold loans.

Net mortgage servicing revenue includes the following components:

(a) Operating revenue predominantly represents the return on Mortgage Servicing's MSR asset and includes:

– Actual gross income earned from servicing third-party mortgage loans, such as contractually specified servicing fees and ancillary income; and

– The change in the fair value of the MSR asset due to the collection or realization of expected cash flows.

(b) Risk management represents the components of

Mortgage Servicing's MSR asset that are subject to ongoing risk management activities, together with derivatives and other instruments used in those risk management activities

Mortgage origination channels comprise the following:

Retail – Borrowers who buy or refinance a home through direct contact with a mortgage banker employed by the Firm using a branch office, the Internet or by phone. Borrowers are frequently referred to a mortgage banker by a banker in a Chase branch, real estate brokers, home builders or other third parties.

Wholesale – Includes loans guaranteed by the U.S. Department of Agriculture under its Section 502 Guaranteed Loan program that serves low-and-moderate income families in small rural communities.

Correspondent – Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm. 2013 compared with 2012

Mortgage Production pretax income was \$825 million, a decrease of \$2.7 billion from the prior year, reflecting lower margins, lower volumes and higher legal expense, partially offset by a benefit in repurchase losses. Production-related revenue, excluding repurchase losses, was \$3.6 billion, a decrease of \$3.0 billion, or 45%, from the prior year, largely reflecting lower margins and lower volumes from rising rates. Production expense was \$3.1 billion, an increase of \$341 million from the prior year, due to higher non-MBS related legal expense and higher compensation-related expense. Repurchase losses for the current year reflected a benefit of \$331 million, compared with repurchase losses of \$272 million in the prior year. The current year reflected a reduction in repurchase liability largely as a result of the settlement with the GSEs. For further information, see Mortgage repurchase liability on pages 78–79 of this Annual Report.

Mortgage Servicing pretax loss was \$372 million, compared with a pretax loss of \$1.2 billion in the prior year, driven by lower expense, partially offset by mortgage servicing rights (“MSR”) risk management loss. Mortgage net servicing-related revenue was \$2.9 billion, a decrease of \$88 million. MSR risk management was a loss of \$268 million, compared with income of \$616 million in the prior year, driven by the net impact of various changes in model inputs and assumptions. See Note 17 on pages 299–304 of this Annual Report for further information regarding changes in value of the MSR asset and related hedges.

Servicing expense was \$3.0 billion, a decrease of \$1.8 billion from the prior year, reflecting lower costs associated with the Independent Foreclosure Review and lower servicing headcount.

Real Estate Portfolios pretax income was \$4.7 billion, up \$1.7 billion from the prior year, due to a higher benefit from the provision for credit losses, partially offset by lower net revenue. Net revenue was \$3.5 billion, a decrease of \$580 million, or 14%, from the prior year. This decrease was due to lower net interest income, resulting from lower loan balances due to net portfolio runoff, and lower noninterest revenue due to higher loan retention. The provision for credit losses was a benefit of \$2.7 billion, compared with a benefit of \$509 million in the prior year. The current-year provision reflected a \$3.8 billion reduction in the allowance for loan losses, \$2.3 billion from the non credit-impaired allowance and \$1.5 billion from the purchased credit-impaired allowance, reflecting continued improvement in home prices and delinquencies. The prior-year provision included a \$3.9 billion reduction in the allowance for loan losses from the non credit-impaired allowance. Net charge-offs were \$1.1 billion, compared with \$3.3 billion in the prior year. Prior-year total net charge-offs included \$744 million of incremental charge-offs reported in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy. See Consumer Credit Portfolio on pages 120–129 of this Annual Report for the net charge-off amounts and rates. Noninterest expense was \$1.6 billion, a decrease of \$100 million, or 6%, compared with the prior year, driven by lower foreclosed asset expense due to lower foreclosure inventory, largely offset by higher FDIC-related expense.

2012 compared with 2011

Mortgage Production pretax income was \$3.6 billion, an increase of \$2.6 billion compared with the prior year. Mortgage production-related revenue, excluding repurchase losses, was \$6.6 billion, an increase of \$2.3 billion, or 55%, from the prior year. These results reflected wider margins, driven by favorable market conditions, and higher volumes due to historically low interest rates and the Home Affordable Refinance Programs (“HARP”). Production expense, including credit costs, was \$2.7 billion, an increase of \$852 million, or 45%, reflecting higher volumes and additional litigation costs. Repurchase losses were \$272 million, compared with \$1.3 billion in the prior year. The current-year reflected a reduction in the repurchase liability of \$683 million compared with a build of \$213 million in the prior year, primarily driven by improved cure rates on Agency repurchase demands and lower outstanding repurchase demand pipeline. For further information, see Mortgage repurchase liability on pages 78–79 of this Annual Report.

Mortgage Servicing reported a pretax loss of \$1.2 billion, compared with a pretax loss of \$3.8 billion in the prior year. Mortgage servicing revenue, including amortization, was \$3.0 billion, an increase of \$337 million, or 13%, from the

## Management's discussion and analysis

prior year, driven by lower mortgage servicing rights ("MSR") asset amortization expense as a result of lower MSR asset value, partially offset by lower loan servicing revenue due to the decline in the third-party loans serviced. MSR risk management income was \$616 million, compared with a loss of \$1.6 billion in the prior year. The prior year MSR risk management loss was driven by refinements to the valuation model and related inputs. See Note 17 on pages 299–304 of this Annual Report for further information regarding changes in value of the MSR asset and related hedges. Servicing expense was \$4.7 billion, down 2% from the prior year, but elevated in both the current and prior year primarily due to higher default servicing costs.

Real Estate Portfolios pretax income was \$2.9 billion, compared with a pretax loss of \$504 million in the prior year. The improvement was driven by a benefit from the provision for credit losses, reflecting the continued improvement in credit trends, partially offset by lower net revenue. Net revenue was \$4.1 billion, down \$500 million, or 11%, from the prior year. The decrease was driven by a decline in net interest income as a result of lower loan balances due to net portfolio runoff. The provision for credit losses reflected a benefit of \$509 million, compared with a provision expense of \$3.6 billion in the prior year. The current-year provision reflected a \$3.9 billion reduction in the non credit-impaired allowance for loan losses due to improved delinquency trends and lower estimated losses.

Current-year net charge-offs totaled \$3.3 billion, including \$744 million of incremental charge-offs reported in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy, compared with \$3.8 billion in the prior year. See Consumer Credit Portfolio on pages 120–129 of this Annual Report for the net charge-off amounts and rates. Nonaccrual loans were \$7.9 billion, compared with \$5.9 billion in the prior year. Excluding the impact of certain regulatory guidance, nonaccrual loans would have been \$4.9 billion at December 31, 2012. For more information on the reporting of Chapter 7 loans and performing junior liens that are subordinate to senior liens that are 90 days or more past due as nonaccrual, see Consumer Credit Portfolio on pages 120–129 of this Annual Report. Noninterest expense was \$1.7 billion, up \$132 million, or 9%, compared with the prior year due to an increase in servicing costs.

## PCI Loans

Included within Real Estate Portfolios are PCI loans that the Firm acquired in the Washington Mutual transaction. For PCI loans, the excess of the undiscounted gross cash flows expected to be collected over the carrying value of the loans (the "accretable yield") is accreted into interest income at a level rate of return over the expected life of the loans. The net spread between the PCI loans and the related liabilities are expected to be relatively constant over time, except for any basis risk or other residual interest rate risk that remains and for certain changes in the accretable yield percentage (e.g., from extended loan liquidation periods

and from prepayments). As of December 31, 2013, the remaining weighted-average life of the PCI loan portfolio is expected to be 8 years. The loan balances are expected to decline more rapidly over the next three years as the most troubled loans are liquidated, and more slowly thereafter as the remaining troubled borrowers have limited refinancing opportunities. Similarly, default and servicing expense are expected to be higher in the earlier years and decline over time as liquidations slow down.

For further information, see Note 14, PCI loans, on pages 274–276 of this Annual Report.

## Mortgage Production and Servicing

## Selected metrics

As of or for the year ended December 31,

(in millions, except ratios)

## Selected balance sheet data

## Period-end loans:

	2013	2012	2011
Prime mortgage, including option ARMs <sup>(a)</sup>	\$15,136	\$17,290	\$16,891
Loans held-for-sale and loans at fair value <sup>(b)</sup>	7,446	18,801	12,694
Average loans:			
Prime mortgage, including option ARMs <sup>(a)</sup>	16,495	17,335	14,580
Loans held-for-sale and loans at fair value <sup>(b)</sup>	15,717	17,573	16,354
Average assets	57,131	59,837	59,891

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Repurchase liability (period-end) <sup>(c)</sup>	651		2,530		3,213	
Credit data and quality statistics						
Net charge-offs:						
Prime mortgage, including option ARMs	12		19		5	
Net charge-off rate:						
Prime mortgage, including option ARMs	0.07	%	0.11	%	0.03	%
30+ day delinquency rate <sup>(d)</sup>	2.75		3.05		3.15	
Nonperforming assets <sup>(e)</sup>	\$559		\$638		\$716	

Predominantly represents prime loans repurchased from Government National Mortgage Association (“Ginnie Mae”) (a) pools, which are insured by U.S. government agencies. See further discussion of loans repurchased from Ginnie Mae pools in Mortgage repurchase liability on pages 78–79 of this Annual Report.

(b) Predominantly consists of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets on the Consolidated Balance Sheets.

(c) For more information on the Firm’s mortgage repurchase liability, see Mortgage repurchase liability on pages 78–79 of this Annual Report.

(d) At December 31, 2013, 2012 and 2011, excluded mortgage loans insured by U.S. government agencies of \$9.6 billion, \$11.8 billion, and \$12.6 billion, respectively, that are 30 or more days past due. These amounts have been excluded from nonaccrual loans based upon the government guarantee. For further discussion, see Note 14 on pages 258–283 of this Annual Report which summarizes loan delinquency information.

(e) At December 31, 2013, 2012 and 2011, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of \$8.4 billion, \$10.6 billion, and \$11.5 billion, respectively, that are 90

or more days past due; and (2) real estate owned insured by U.S. government agencies of \$2.0 billion, \$1.6 billion, and \$954 million, respectively. These amounts have been excluded from nonaccrual loans based upon the government guarantee. For further discussion, see Note 14 on pages 258–283 of this Annual Report which summarizes loan delinquency information.

## Selected metrics

As of or for the year ended

December 31,

(in millions, except ratios and where otherwise noted) 2013

2012

2011

Business metrics (in billions)

Mortgage origination volume by channel

Retail	\$77.0	\$101.4	\$87.2
Wholesale <sup>(a)</sup>	0.2	0.3	0.5
Correspondent <sup>(a)</sup>	88.3	79.1	57.9
Total mortgage origination volume <sup>(b)</sup>	\$165.5	\$180.8	\$145.6
Mortgage application volume by channel			
Retail	\$108.0	\$164.5	\$137.2
Wholesale <sup>(a)</sup>	0.2	0.7	1.0
Correspondent <sup>(a)</sup>	89.0	100.5	66.5
Total mortgage application volume	\$197.2	\$265.7	\$204.7
Third-party mortgage loans serviced (period-end)	\$815.5	\$859.4	\$902.2
Third-party mortgage loans serviced (average)	837.3	847.0	937.6
MSR carrying value (period-end)	9.6	7.6	7.2
Ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end)	1.18	% 0.88	% 0.80
Ratio of loan servicing-related revenue to third-party mortgage loans serviced (average)	0.40	0.46	0.44
MSR revenue multiple <sup>(c)</sup>	2.95	x 1.91x	1.82x

Includes rural housing loans sourced through brokers and correspondents, which are underwritten and closed with (a) pre-funding loan approval from the U.S. Department of Agriculture Rural Development, which acts as the guarantor in the transaction.

(b) Firmwide mortgage origination volume was \$176.4 billion, \$189.9 billion, and \$154.2 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

(c) Represents the ratio of MSR carrying value (period-end) to third-party mortgage loans serviced (period-end) divided by the ratio of loan servicing-related revenue to third-party mortgage loans serviced (average).

## Real Estate Portfolios

## Selected metrics

As of or for the year ended December 31,

(in millions)

2013

2012

2011

Loans, excluding PCI

Period-end loans owned:

Home equity	\$57,863	\$67,385	\$77,800
Prime mortgage, including option ARMs	49,463	41,316	44,284
Subprime mortgage	7,104	8,255	9,664
Other	551	633	718
Total period-end loans owned	\$114,981	\$117,589	\$132,466
Average loans owned:			
Home equity	\$62,369	\$72,674	\$82,886
Prime mortgage, including option ARMs	44,988	42,311	46,971
Subprime mortgage	7,687	8,947	10,471

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Other	588	675	773
Total average loans owned	\$115,632	\$124,607	\$141,101
PCI loans			
Period-end loans owned:			
Home equity	\$18,927	\$20,971	\$22,697
Prime mortgage	12,038	13,674	15,180
Subprime mortgage	4,175	4,626	4,976
Option ARMs	17,915	20,466	22,693
Total period-end loans owned	\$53,055	\$59,737	\$65,546
Average loans owned:			
Home equity	\$19,950	\$21,840	\$23,514
Prime mortgage	12,909	14,400	16,181
Subprime mortgage	4,416	4,777	5,170
Option ARMs	19,236	21,545	24,045
Total average loans owned	\$56,511	\$62,562	\$68,910
Total Real Estate Portfolios			
Period-end loans owned:			
Home equity	\$76,790	\$88,356	\$100,497
Prime mortgage, including option ARMs	79,416	75,456	82,157
Subprime mortgage	11,279	12,881	14,640
Other	551	633	718
Total period-end loans owned	\$168,036	\$177,326	\$198,012
Average loans owned:			
Home equity	\$82,319	\$94,514	\$106,400
Prime mortgage, including option ARMs	77,133	78,256	87,197
Subprime mortgage	12,103	13,724	15,641
Other	588	675	773
Total average loans owned	\$172,143	\$187,169	\$210,011
Average assets	\$163,898	\$175,712	\$197,096
Home equity origination volume	2,124	1,420	1,127

## Management's discussion and analysis

## Credit data and quality statistics

As of or for the year ended December 31, (in millions, except ratios)	2013		2012		2011	
Net charge-offs, excluding PCI loans: <sup>(a)(b)</sup>						
Home equity	\$966		\$2,385		\$2,472	
Prime mortgage, including option ARMs	41		454		682	
Subprime mortgage	90		486		626	
Other	10		16		25	
Total net charge-offs, excluding PCI loans	\$1,107		\$3,341		\$3,805	
Net charge-off rate, excluding PCI loans: <sup>(b)</sup>						
Home equity	1.55	%	3.28	%	2.98	%
Prime mortgage, including option ARMs	0.09		1.07		1.45	
Subprime mortgage	1.17		5.43		5.98	
Other	1.70		2.37		3.23	
Total net charge-off rate, excluding PCI loans	0.96		2.68		2.70	
Net charge-off rate – reported: <sup>(a)(b)</sup>						
Home equity	1.17	%	2.52	%	2.32	%
Prime mortgage, including option ARMs	0.05		0.58		0.78	
Subprime mortgage	0.74		3.54		4.00	
Other	1.70		2.37		3.23	
Total net charge-off rate – reported	0.64		1.79		1.81	
30+ day delinquency rate, excluding PCI loans <sup>(c)</sup>	3.66	%	5.03	%	5.69	%
Allowance for loan losses, excluding PCI loans	\$2,568		\$4,868		\$8,718	
Allowance for PCI loans <sup>(a)</sup>	4,158		5,711		5,711	
Allowance for loan losses	\$6,726		\$10,579		\$14,429	
Nonperforming assets <sup>(d)(e)</sup>	6,919		8,439		6,638	
Allowance for loan losses to period-end loans retained	4.00	%	5.97	%	7.29	%
Allowance for loan losses to period-end loans retained, excluding PCI loans	2.23		4.14		6.58	

Net charge-offs and net charge-off rates for the year ended December 31, 2013 excluded \$53 million of write-offs (a) in the PCI portfolio. These write-offs decreased the allowance for loan losses for PCI loans. For further information, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

Net charge-offs and net charge-off rates for the year ended December 31, 2012, included \$744 million of charge-offs related to regulatory guidance. Excluding these charges-offs, net charge-offs for the year ended December 31, 2012, would have been \$1.8 billion, \$410 million and \$416 million for the home equity, prime (b) mortgage, including option ARMs, and subprime mortgage portfolios, respectively. Net charge-off rates for the same period, excluding these charge-offs and PCI loans, would have been 2.41%, 0.97% and 4.65% for the home equity, prime mortgage, including option ARMs, and subprime mortgage portfolios, respectively. For further information, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

(c) The 30+ day delinquency rate for PCI loans was 15.31%, 20.14%, and 23.30% at December 31, 2013, 2012 and 2011, respectively.

(d) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing.

(e) Nonperforming assets at December 31, 2012, included loans based upon regulatory guidance. For further information, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

#### Mortgage servicing-related matters

The financial crisis resulted in unprecedented levels of delinquencies and defaults of 1-4 family residential real estate loans. Such loans required varying degrees of loss mitigation activities. Foreclosure is usually a last resort, and accordingly, the Firm has made, and continues to make, significant efforts to help borrowers remain in their homes. The Firm has a well-defined foreclosure prevention process when a borrower fails to pay on his or her loan. The Firm makes multiple attempts, in various ways, to contact the borrower in an effort to pursue home retention or options other than foreclosure. If the Firm is unable to contact a borrower, the Firm completes various reviews of the borrower's facts and circumstances before a foreclosure sale is completed. Over the last year, the average delinquency period for the borrower at the time of foreclosure was approximately 28 months.

The high volume of delinquent and defaulted mortgages experienced during the financial crisis placed a significant amount of stress on servicing operations in the industry. The GSEs impose compensatory fees on mortgage servicers, including the Firm, if such servicers are unable to comply with the foreclosure timetables mandated by the GSEs. The Firm has incurred, and continues to incur, compensatory fees, which are reported in default servicing expense. The Firm has made, and will continue to make changes to and refine its mortgage operations to address mortgage servicing, loss mitigation, and foreclosure issues.

Since 2011, the Firm has entered into Consent Orders and settlements with federal and state governmental agencies and private parties related to mortgage servicing, origination, and residential mortgage-backed securities activities. The terms of these Consent Orders and settlements vary, but in general, required cash compensatory payments or fines and/or "borrower relief," including principal reductions, refinancing, short sale assistance, and other specified types of borrower relief. The Firm has satisfied or is committed to satisfying these obligations within the mandated timeframes.

Other obligations required under Consent Orders and settlements, as well as under new regulatory requirements, include enhanced mortgage servicing and foreclosure standards and processes. Among other initiatives, the Firm has implemented a new Customer Assistance Specialist organization to serve as a single point of contact for borrowers requiring assistance in the foreclosure or loss mitigation process; implemented specific controls on "dual tracking" of foreclosure and loss mitigation activities; strengthened its compliance program to ensure mortgage servicing and foreclosure operations comply with applicable legal requirements; and made technological enhancements to automate and streamline processes for document management, payment processing, training, and skills assessment. For further information on these settlements and Consent Orders, see Note 2 and Note 31 on pages 192–

194 and pages 326–332, respectively, of this Annual Report.

The mortgage servicing consent order is subject to ongoing oversight by the Mortgage Compliance Committee of the Board, and certain Consent Orders and settlements are the subject of ongoing reporting to various regulators, and the Office of Mortgage Settlement Oversight (“OMSO”).

#### Card, Merchant Services & Auto

##### Selected income statement data

Year ended December 31,  
(in millions, except ratios)

	2013	2012	2011
Revenue			
Card income	\$4,289	\$4,092	\$4,127
All other income	1,041	1,009	765
Noninterest revenue	5,330	5,101	4,892
Net interest income	13,360	13,669	14,249
Total net revenue	18,690	18,770	19,141
Provision for credit losses	2,669	3,953	3,621
Noninterest expense	8,078	8,216	8,045
Income before income tax expense	7,943	6,601	7,475
Net income	\$4,786	\$4,007	\$4,544
ROE	31	% 24	% 28
Overhead ratio	43	44	42
Equity (period-end and average)	\$15,500	\$16,500	\$16,000

2013 compared with 2012

Card, Merchant Services & Auto net income was \$4.8 billion, an increase of \$779 million, or 19%, compared with the prior year, driven by lower provision for credit losses.

Net revenue was \$18.7 billion, flat compared with the prior year. Net interest income was \$13.4 billion, down \$309 million, or 2%, from the prior year. The decrease was primarily driven by spread compression in Credit Card and Auto and lower average credit card loan balances, largely offset by the impact of lower revenue reversals associated with lower net charge-offs in Credit Card. Noninterest revenue was \$5.3 billion, an increase of \$229 million, or 4%, compared with the prior year primarily driven by higher net interchange income, auto lease income and merchant servicing revenue, largely offset by lower revenue from an exited non-core product and a gain on an investment security recognized in the prior year.

The provision for credit losses was \$2.7 billion, compared with \$4.0 billion in the prior year. The current-year provision reflected lower net charge-offs and a \$1.7 billion reduction in the allowance for loan losses due to lower estimated losses reflecting improved delinquency trends and restructured loan performance. The prior-year provision included a \$1.6 billion reduction in the allowance for loan losses. The Credit Card net charge-off rate was 3.14%, down from 3.95% in the prior year; and the 30+ day delinquency rate was 1.67%, down from 2.10% in the prior year. The Auto net charge-off rate was 0.31%, down from 0.39% in the prior year.

## Management's discussion and analysis

Noninterest expense was \$8.1 billion, a decrease of \$138 million, or 2%, from the prior year. This decrease is due to one-time expense items recognized in the prior year related to the exit of a non-core product and the write-off of intangible assets associated with a non-strategic relationship. The reduction in expenses was partially offset by increased auto lease depreciation and payments to customers required by a regulatory Consent Order during 2013. 2012 compared with 2011

Card, Merchant Services & Auto net income was \$4.0 billion, a decrease of \$537 million, or 12%, compared with the prior year. The decrease was driven by lower net revenue and higher provision for credit losses.

Net revenue was \$18.8 billion, a decrease of \$371 million, or 2%, from the prior year. Net interest income was \$13.7 billion, down \$580 million, or 4%, from the prior year. The decrease was driven by narrower loan spreads and lower average loan balances, partially offset by lower revenue reversals associated with lower net charge-offs.

Noninterest revenue was \$5.1 billion, an increase of \$209 million, or 4%, from the prior year. The increase was driven by higher net interchange income, including lower partner revenue-sharing due to the impact of the Kohl's portfolio sale on April 1, 2011, and higher merchant servicing revenue, partially offset by higher amortization of loan origination costs.

The provision for credit losses was \$4.0 billion, compared with \$3.6 billion in the prior year. The current-year provision reflected lower net charge-offs and a \$1.6 billion reduction in the allowance for loan losses due to lower estimated losses. The prior-year provision included a \$3.9 billion reduction in the allowance for loan losses. The Credit Card net charge-off rate was 3.95%, down from 5.44% in the prior year; and the 30+ day delinquency rate was 2.10%, down from 2.81% in the prior year. The net charge-off rate would have been 3.88% absent a policy change on restructured loans that do not comply with their modified payment terms. The Auto net charge-off rate was 0.39%, up from 0.32% in the prior year, including \$53 million of charge-offs related to regulatory guidance. Excluding these charge-offs, the net charge-off rate would have been 0.28%.

Noninterest expense was \$8.2 billion, an increase of \$171 million, or 2%, from the prior year, driven by expenses related to a non-core product that is being exited and the write-off of intangible assets associated with a non-strategic relationship, partially offset by lower marketing expense.

## Selected metrics

As of or for the year ended December 31,

(in millions, except ratios and where otherwise noted)

Selected balance sheet data (period-end)

Loans:

	2013	2012	2011
Credit Card	\$127,791	\$127,993	\$132,277
Auto	52,757	49,913	47,426
Student	10,541	11,558	13,425
Total loans	\$191,089	\$189,464	\$193,128

Selected balance sheet data (average)

Total assets	\$198,265	\$197,661	\$201,162
Loans:			
Credit Card	123,613	125,464	128,167
Auto	50,748	48,413	47,034
Student	11,049	12,507	13,986
Total loans	\$185,410	\$186,384	\$189,187

Business metrics

Credit Card, excluding Commercial Card

Sales volume (in billions)	\$419.5	\$381.1	\$343.7
New accounts opened	7.3	6.7	8.8
Open accounts	65.3	64.5	65.2
Accounts with sales activity	32.3	30.6	30.7

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% of accounts acquired online	55	% 51	% 32	%
Merchant Services (Chase Paymentech Solutions)				
Merchant processing volume (in billions)	\$750.1	\$655.2	\$553.7	
Total transactions (in billions)	35.6	29.5	24.4	
Auto & Student Origination volume (in billions)				
Auto	\$26.1	\$23.4	\$21.0	
Student	0.1	0.2	0.3	

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The following are brief descriptions of selected business metrics within Card, Merchant Services & Auto.

Card Services includes the Credit Card and Merchant Services businesses.

Merchant Services is a business that processes transactions for merchants.

Total transactions – Number of transactions and authorizations processed for merchants.

Commercial Card provides a wide range of payment services to corporate and public sector clients worldwide through the commercial card products. Services include procurement, corporate travel and entertainment, expense management services, and business-to-business payment solutions.

Sales volume - Dollar amount of cardmember purchases, net of returns.

Open accounts – Cardmember accounts with charging privileges.

Auto origination volume - Dollar amount of auto loans and leases originated.

Selected metrics

As of or for the year ended December 31,  
(in millions, except ratios)

Credit data and quality statistics

Net charge-offs:

	2013	2012	2011
Credit Card	\$3,879	\$4,944	6,925
Auto <sup>(a)</sup>	158	188	152
Student	333	377	434
Total net charge-offs	\$4,370	\$5,509	\$7,511

Net charge-off rate:

	2013	%	2012	%	2011	%
Credit Card <sup>(b)</sup>	3.14		3.95		5.44	
Auto <sup>(a)</sup>	0.31		0.39		0.32	
Student	3.01		3.01		3.10	
Total net charge-off rate	2.36		2.96		3.99	

Delinquency rates

30+ day delinquency rate:

Credit Card <sup>(c)</sup>	1.67	2.10	2.81
Auto	1.15	1.25	1.13
Student <sup>(d)</sup>	2.56	2.13	1.78
Total 30+ day delinquency rate	1.58	1.87	2.32

90+ day delinquency rate – Credit Card<sup>(f)</sup>

	0.80	1.02	1.44
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Nonperforming assets<sup>(e)</sup>

	\$280	\$265	\$228
Allowance for loan losses:			
Credit Card	\$3,795	\$5,501	\$6,999
Auto & Student	953	954	1,010
Total allowance for loan losses	\$4,748	\$6,455	\$8,009

Allowance for loan losses to period-end loans:

	2013	%	2012	%	2011	%
Credit Card <sup>(c)</sup>	2.98		4.30		5.30	
Auto & Student	1.51		1.55		1.66	
Total allowance for loan losses to period-end loans	2.49		3.41		4.15	

Net charge-offs and net charge-off rates for the year ended December 31, 2012, included \$53 million of charge-offs of Chapter 7 loans. Excluding these incremental charge-offs, net charge-offs for the year ended December 31, 2012 (a) would have been \$135 million, and the net charge-off rate would have been 0.28%. For further information, see Consumer Credit Portfolio on pages 120–129 of this Annual Report.

(b)

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Average credit card loans included loans held-for-sale of \$95 million, \$433 million, and \$833 million for the years ended December 31, 2013, 2012 and 2011, respectively. These amounts are excluded when calculating the net charge-off rate.

Period-end credit card loans included loans held-for-sale of \$326 million and \$102 million at December 31, 2013 (c) and 2011, respectively. There were no loans held-for-sale at December 31, 2012. These amounts are excluded when calculating delinquency rates and the allowance for loan losses to period-end loans.

Excluded student loans insured by U.S. government agencies under the FFELP of \$737 million, \$894 million and (d) \$989 million at December 31, 2013, 2012 and 2011, respectively, that are 30 or more days past due. These amounts are excluded as reimbursement of insured amounts is proceeding normally.

Nonperforming assets excluded student loans insured by U.S. government agencies under the FFELP of \$428 (e) million, \$525 million and \$551 million at December 31, 2013, 2012 and 2011, respectively, that are 90 or more days past due. These amounts are excluded as reimbursement of insured amounts is proceeding normally.

Card Services supplemental information

Year ended December 31, (in millions, except ratios)	2013		2012		2011	
Revenue						
Noninterest revenue	\$3,977		\$3,887		\$3,740	
Net interest income	11,466		11,611		12,084	
Total net revenue	15,443		15,498		15,824	
Provision for credit losses	2,179		3,444		2,925	
Noninterest expense	6,245		6,566		6,544	
Income before income tax expense	7,019		5,488		6,355	
Net income	\$4,235		\$3,344		\$3,876	
Percentage of average loans:						
Noninterest revenue	3.22	%	3.10	%	2.92	%
Net interest income	9.28		9.25		9.43	
Total net revenue	12.49		12.35		12.35	

## Management's discussion and analysis

## CORPORATE &amp; INVESTMENT BANK

The Corporate & Investment Bank ("CIB") offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Within Banking, the CIB offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Also included in Banking is Treasury Services, which includes transaction services, comprised primarily of cash management and liquidity solutions, and trade finance products. The Markets & Investor Services segment of the CIB is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes the Securities Services business, a leading global custodian which holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

## Selected income statement data

Year ended December 31,

(in millions)	2013	2012	2011
Revenue			
Investment banking fees	\$6,331	\$5,769	\$5,859
Principal transactions <sup>(a)</sup>	9,289	9,510	8,347
Lending- and deposit-related fees	1,884	1,948	2,098
Asset management, administration and commissions	4,713	4,693	4,955
All other income	1,593	1,184	1,264
Noninterest revenue	23,810	23,104	22,523
Net interest income	10,415	11,222	11,461
Total net revenue <sup>(b)</sup>	34,225	34,326	33,984
Provision for credit losses	(232)	(479)	(285)
Noninterest expense			
Compensation expense	10,835	11,313	11,654
Noncompensation expense	10,909	10,537	10,325
Total noninterest expense	21,744	21,850	21,979
Income before income tax expense	12,713	12,955	12,290
Income tax expense	4,167	4,549	4,297
Net income	\$8,546	\$8,406	\$7,993

Included a \$(1.5) billion loss in the fourth quarter of 2013 as a result of implementing a FVA framework for OTC derivatives and structured notes. Also included DVA on structured notes and derivative liabilities. DVA gains/(losses) were \$(452) million, \$(930) million and \$1.4 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

Included tax-equivalent adjustments, predominantly due to income tax credits related to affordable housing and alternative energy investments, as well as tax-exempt income from municipal bond investments of \$2.3 billion, \$2.0 billion and \$1.9 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

## Selected income statement data

Year ended December 31,

(in millions, except ratios)	2013	2012	2011
Financial ratios			
Return on common equity <sup>(a)</sup>	15	% 18	% 17
Overhead ratio <sup>(B)</sup>	64	64	65

Compensation expense as percentage of total net revenue <sup>(c)</sup>	32	33	34
Revenue by business			
Advisory	\$1,315	\$1,491	\$1,792
Equity underwriting	1,499	1,026	1,181
Debt underwriting	3,517	3,252	2,886
Total investment banking fees	6,331	5,769	5,859
Treasury Services	4,135	4,249	3,841
Lending	1,595	1,331	1,054
Total Banking	12,061	11,349	10,754
Fixed Income Markets <sup>(d)</sup>	15,468	15,412	14,784
Equity Markets	4,758	4,406	4,476
Securities Services	4,082	4,000	3,861
Credit Adjustments & Other <sup>(e)</sup>	(2,144 )	(841 )	109
Total Markets & Investor Services	22,164	22,977	23,230
Total net revenue	\$34,225	\$34,326	\$33,984

(a) Return on equity excluding FVA (effective fourth quarter 2013) and DVA, a non-GAAP financial measure, was 17%, 19% and 15% for the years ended December 31, 2013, 2012 and 2011, respectively.

(b) Overhead ratio excluding FVA (effective fourth quarter 2013) and DVA, a non-GAAP financial measure, was 60%, 62% and 68% for the years ended December 31, 2013, 2012 and 2011, respectively.

(c) Compensation expense as a percentage of total net revenue excluding FVA (effective fourth quarter 2013) and DVA, a non-GAAP financial measure, was 30%, 32% and 36% for the years ended December 31, 2013, 2012 and 2011, respectively.

(d) Includes results of the synthetic credit portfolio that was transferred from the CIO effective July 2, 2012.

Primarily credit portfolio credit valuation adjustments (“CVA”) net of associated hedging activities; DVA gains/(losses) on structured notes and derivative liabilities of \$(452) million, \$(930) million and \$1.4 billion for the years ended December 31, 2013, 2012 and 2011, respectively; a \$(1.5) billion loss in the fourth quarter of 2013 as a result of implementing an FVA framework for OTC derivatives and structured notes, and nonperforming derivative receivable results.

CIB provides several non-GAAP financial measures which exclude the impact of FVA (effective fourth quarter 2013) and DVA on: net revenue, net income, compensation ratio, overhead ratio, and return on equity. The ratio for the allowance for loan losses to end-of-period loans is calculated excluding the impact of consolidated Firm-administered multi-seller conduits and trade finance, to provide a more meaningful assessment of CIB's allowance coverage ratio. These measures are used by management to assess the underlying performance of the business and for comparability with peers.

2013 compared with 2012

Net income was \$8.6 billion, up 2% compared with the prior year.

Net revenue was \$34.2 billion compared with \$34.3 billion in the prior year. Net revenue in the current year's fourth quarter included a \$1.5 billion loss as a result of implementing a funding valuation adjustment ("FVA") framework for over-the-counter ("OTC") derivatives and structured notes. The FVA framework incorporates the impact of funding into the Firm's valuation estimates for OTC derivatives and structured notes and reflects an industry migration towards incorporating the market cost of unsecured funding in the valuation of such instruments. The loss recorded in the fourth quarter of 2013 is a one-time adjustment arising on implementation of the new FVA framework. In future periods the Firm will incorporate FVA in its estimates of fair value for OTC derivatives and structured notes from the date of initial recognition.

Net revenue also included a \$452 million loss from debit valuation adjustments ("DVA") on structured notes and derivative liabilities, compared with a loss of \$930 million in the prior year. Excluding the impact of FVA (effective fourth quarter of 2013) and DVA, net revenue was \$36.1 billion and net income was \$9.7 billion, compared with \$35.3 billion and \$9.0 billion in the prior year, respectively.

Banking revenues were \$12.1 billion, compared with \$11.3 billion in the prior year. Investment banking fees were \$6.3 billion, up 10% from the prior year, driven by higher equity underwriting fees of \$1.5 billion (up 46%) and record debt underwriting fees of \$3.5 billion (up 8%), partially offset by lower advisory fees of \$1.3 billion (down 12%). Equity underwriting results were driven by higher industry-wide issuance and an increase in the Firm's wallet share compared with the prior year, according to Dealogic. Industry-wide loan syndication volumes and wallet increased as the low rate environment continued to fuel refinancing activity. The Firm also ranked #1 in wallet and volumes shares across high grade, high yield and loan products. Advisory fees were lower compared with the prior year as industry-wide completed M&A wallet declined 13%. The Firm maintained its #2 ranking and improved share for both announced and completed volumes during the period.

Treasury Services revenue was \$4.1 billion, down 3% compared with the prior year, primarily reflecting lower trade finance spreads, partially offset by higher net interest income on higher deposit balances. Lending revenue was

\$1.6 billion, up from \$1.3 billion, in the prior year reflecting net interest income on retained loans, fees on lending related commitments, as well as gains on securities received from restructured loans.

Markets and Investor Services revenue was \$22.2 billion compared to \$23.0 billion in the prior year. Combined Fixed Income and Equity Markets revenue was \$20.2 billion, up from \$19.8 billion the prior year. Fixed Income Markets revenue of \$15.5 billion was slightly higher reflecting consistently strong client revenue and lower losses from the synthetic credit portfolio, which was partially offset by lower rates-related revenue given an uncertain rate outlook and low spread environment. Equities Markets revenue of \$4.8 billion was up 8% compared with the prior year driven by higher revenue in derivatives and cash equities products as well as Prime Services primarily on higher balances. Securities Services revenue was \$4.1 billion compared with \$4.0 billion in the prior year on higher custody and fund services revenue primarily driven by record assets under custody of \$20.5 trillion. Credit Adjustments & Other was a loss of \$2.1 billion predominantly driven by FVA (effective the fourth quarter of 2013) and DVA.

The provision for credit losses was a benefit of \$232 million, compared with a benefit of \$479 million in the prior year. The current year benefit reflected lower recoveries as compared to 2012 as the prior year benefited from the restructuring of certain nonperforming loans. Net recoveries were \$78 million, compared with \$284 million in the prior year reflecting a continued favorable credit environment with stable credit quality trends. Nonperforming loans were down 57% from the prior year.

Noninterest expense of \$21.7 billion was slightly down compared with the prior year, driven by lower compensation expense, offset by higher non compensation expense related to higher litigation expense as compared to the prior year. The compensation ratio, excluding the impact of DVA and FVA which was effective for the fourth quarter of 2013, was 30% and 32% for 2013 and 2012, respectively.

Return on equity was 15% on \$56.5 billion of average allocated capital and 17% excluding FVA (effective fourth quarter of 2013) and DVA.

2012 compared with 2011

Net income was \$8.4 billion, up 5% compared with the prior year. These results primarily reflected slightly higher net revenue compared with 2011, lower noninterest expense and a larger benefit from the provision for credit losses. Net revenue was \$34.3 billion, compared with \$34.0 billion in the prior year. Net revenue included a \$930 million loss from DVA on structured notes and derivative liabilities resulting from the tightening of the Firm's credit spreads. Excluding the impact of DVA, net revenue was \$35.3 billion and net income was \$9.0 billion, compared with \$32.5 billion and \$7.1 billion in the prior year, respectively.

Banking revenues were \$11.3 billion, compared with \$10.8 billion in the prior year. Investment banking fees were

## Management's discussion and analysis

\$5.8 billion, down 2% from the prior year; these consisted of record debt underwriting fees of \$3.3 billion (up 13%), advisory fees of \$1.5 billion (down 17%) and equity underwriting fees of \$1.0 billion (down 13%). Industry-wide debt capital markets volumes were at their second highest annual level since 2006, as the low rate environment continued to fuel issuance and refinancing activity. In contrast there was lower industry-wide announced mergers and acquisitions activity, while industry-wide equity underwriting volumes remained steady. Treasury Services revenue was a record \$4.2 billion compared with \$3.8 billion in the prior year driven by continued deposit balance growth and higher average trade loans outstanding during the year. Lending revenue was \$1.3 billion, compared with \$1.1 billion in the prior year due to higher net interest income on increased average retained loans as well as higher fees on lending-related commitments. This was partially offset by higher fair value losses on credit risk-related hedges of the retained loan portfolio.

Markets and Investor Services revenue was \$23.0 billion compared to \$23.2 billion in the prior year. Combined Fixed Income and Equity Markets revenue was \$19.8 billion, up from \$19.3 billion the prior year as client revenue remained strong across most products, with particular strength in rates-related products, which improved from the prior year. 2012 generally saw credit spread tightening and lower volatility in both the credit and equity markets compared with the prior year, during which macroeconomic concerns, including those in the Eurozone, caused credit spread widening and generally more volatile market conditions, particularly in the second half of the year. Securities Services revenue was \$4.0 billion compared with \$3.9 billion the prior year primarily driven by higher deposit balances. Assets under custody grew to a record \$18.8 trillion by the end of 2012, driven by both market appreciation as well as net inflows. Credit Adjustments & Other was a loss of \$841 million, driven predominantly by DVA, which was a loss of \$930 million due to the tightening of the Firm's credit spreads.

The provision for credit losses was a benefit of \$479 million, compared with a benefit of \$285 million in the prior year, as credit trends remained stable. The 2012 benefit reflected recoveries and a net reduction in the allowance for credit losses, both related to the restructuring of certain nonperforming loans, credit trends and other portfolio activities. Net recoveries were \$284 million, compared with net charge-offs of \$161 million in the prior year. Nonperforming loans were down 35% from the prior year.

Noninterest expense was \$21.9 billion, down 1%, driven primarily by lower compensation expense.

Return on equity was 18% on \$47.5 billion of average allocated capital.

## Selected metrics

As of or for the year ended December 31,  
(in millions, except headcount)

	2013	2012	2011
Selected balance sheet data (period-end)			
Assets	\$843,577	\$876,107	\$845,095
Loans:			
Loans retained <sup>(a)</sup>	95,627	109,501	111,099
Loans held-for-sale and loans at fair value	11,913	5,749	3,016
Total loans	107,540	115,250	114,115
Equity	56,500	47,500	47,000
Selected balance sheet data (average)			
Assets	\$859,071	\$854,670	\$868,930
Trading assets-debt and equity instruments	321,585	312,944	348,234
Trading assets-derivative receivables	70,353	74,874	73,200
Loans:			
Loans retained <sup>(a)</sup>	104,864	110,100	91,173
Loans held-for-sale and loans at fair value	5,158	3,502	3,221
Total loans	110,022	113,602	94,394
Equity	56,500	47,500	47,000
Headcount	52,250	52,022	53,557

(a) Loans retained includes credit portfolio loans, trade finance loans, other held-for-investment loans and overdrafts.

## Selected metrics

As of or for the year ended December 31,  
(in millions, except ratios and where  
otherwise noted)

	2013	2012	2011	
Credit data and quality statistics				
Net charge-offs/(recoveries)	\$(78	) \$(284	)	\$161
Nonperforming assets:				
Nonaccrual loans:				
Nonaccrual loans retained <sup>(a)(b)</sup>	163	535	1,039	
Nonaccrual loans held-for-sale and loans at fair value <sup>(c)</sup>	180	254	166	
Total nonaccrual loans	343	789	1,205	
Derivative receivables	415	239	293	
Assets acquired in loan satisfactions	80	64	79	
Total nonperforming assets	838	1,092	1,577	
Allowance for credit losses:				
Allowance for loan losses	1,096	1,300	1,501	
Allowance for lending-related commitments	525	473	467	
Total allowance for credit losses	1,621	1,773	1,968	
Net charge-off/(recovery) rate <sup>(a)</sup>	(0.07	) (0.26	)	0.18 %
Allowance for loan losses to period-end loans retained <sup>(a)</sup>	1.15	1.19	1.35	
Allowance for loan losses to period-end loans retained, excluding trade finance and conduits	2.02	2.52	3.06	
Allowance for loan losses to nonaccrual loans retained <sup>(a)(b)</sup>	672	243	144	
Nonaccrual loans to total period-end loans <sup>(c)</sup>	0.32	0.68	1.06	
Business metrics				
Assets under custody (“AUC”) by asset class (period-end) in billions:				
Fixed Income	\$11,903	\$11,745	\$10,926	
Equity	6,913	5,637	4,878	
Other <sup>(d)</sup>	1,669	1,453	1,066	
Total AUC	\$20,485	\$18,835	\$16,870	
Client deposits and other third party liabilities (average) <sup>(e)</sup>	\$383,667	\$355,766	\$318,802	
Trade finance loans (period-end)	30,752	35,783	36,696	

(a) Loans retained includes credit portfolio loans, trade finance loans, other held-for-investment loans and overdrafts.

(b) Allowance for loan losses of \$51 million, \$153 million and \$263 million were held against these nonaccrual loans at December 31, 2013, 2012 and 2011, respectively.

(c) In 2013 certain loans that resulted from restructurings that were previously classified as performing were reclassified as nonperforming loans. Prior periods were revised to conform with the current presentation.

(d) Consists of mutual funds, unit investment trusts, currencies, annuities, insurance contracts, options and other contracts.

(e)

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Client deposits and other third party liabilities pertain to the Treasury Services and Securities Services businesses, and include deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased and securities loaned or sold under repurchase agreements) as part of their client cash management program.

Market shares and rankings<sup>(a)</sup>

Year ended December 31,	2013		2012		2011	
	Market Share	Rankings	Market Share	Rankings	Market Share	Rankings
Global investment banking fees <sup>(b)</sup>	8.6%	#1	7.5%	#1	8.1%	#1
Debt, equity and equity-related						
Global	7.3	1	7.2	1	6.7	1
U.S.	11.8	1	11.5	1	11.1	1
Syndicated loans						
Global	10.0	1	9.5	1	10.8	1
U.S.	17.5	1	17.6	1	21.2	1
Long-term debt <sup>(c)</sup>						
Global	7.2	1	7.1	1	6.7	1
U.S.	11.7	1	11.6	1	11.2	1
Equity and equity-related						
Global <sup>(d)</sup>	8.2	2	7.8	4	6.8	3
U.S.	12.1	2	10.4	5	12.5	1
Announced M&A <sup>(e)</sup>						
Global	23.0	2	19.9	2	18.3	2
U.S.	36.1	1	24.3	2	26.7	2

(a) Source: Dealogic. Global Investment Banking fees reflects the ranking of fees and market share. The remaining rankings reflects transaction volume and market share. Global announced M&A is based on transaction value at announcement; because of joint M&A assignments, M&A market share of all participants will add up to more than 100%. All other transaction volume-based rankings are based on proceeds, with full credit to each book manager/equal if joint.

(b) Global investment banking fees rankings exclude money market, short-term debt and shelf deals.

(c) Long-term debt rankings include investment-grade, high-yield, supranationals, sovereigns, agencies, covered bonds, asset-backed securities ("ABS") and mortgage-backed securities; and exclude money market, short-term debt, and U.S. municipal securities.

(d) Global equity and equity-related ranking includes rights offerings and Chinese A-Shares.

(e) Announced M&A reflects the removal of any withdrawn transactions. U.S. announced M&A represents any U.S. involvement ranking.

## Management's discussion and analysis

## International metrics

Year ended December 31,  
(in millions)

	2013	2012	2011
Total net revenue <sup>(a)</sup>			
Europe/Middle East/Africa	\$10,509	\$10,639	\$11,102
Asia/Pacific	4,698	4,100	4,589
Latin America/Caribbean	1,329	1,524	1,409
Total international net revenue	16,536	16,263	17,100
North America	17,689	18,063	16,884
Total net revenue	\$34,225	\$34,326	\$33,984

Loans (period-end)<sup>(a)</sup>

Europe/Middle East/Africa	\$29,392	\$30,266	\$29,484
Asia/Pacific	22,151	27,193	27,803
Latin America/Caribbean	8,362	10,220	9,692
Total international loans	59,905	67,679	66,979
North America	35,722	41,822	44,120
Total loans	\$95,627	\$109,501	\$111,099

Client deposits and other third-party liabilities  
(average)<sup>(a)</sup>

Europe/Middle East/Africa	\$143,807	\$127,326	\$123,920
Asia/Pacific	54,428	51,180	43,524
Latin America/Caribbean	15,301	11,052	12,625
Total international	\$213,536	\$189,558	\$180,069
North America	170,131	166,208	138,733
Total client deposits and other third-party liabilities	\$383,667	\$355,766	\$318,802

AUC (period-end) (in billions)<sup>(a)</sup>

North America	\$11,299	\$10,504	\$9,735
All other regions	9,186	8,331	7,135
Total AUC	\$20,485	\$18,835	\$16,870

Total net revenue is based predominantly on the domicile of the client or location of the trading desk, as applicable.

(a) Loans outstanding (excluding loans held-for-sale and loans at fair value), client deposits and other third-party liabilities, and AUC are based predominantly on the domicile of the client.

## COMMERCIAL BANKING

Commercial Banking delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and nonprofit entities with annual revenue generally ranging from \$20 million to \$2 billion. CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

## Selected income statement data

Year ended December 31, (in millions, except ratios)	2013	2012	2011
Revenue			
Lending- and deposit-related fees	\$1,033	\$1,072	\$1,081
Asset management, administration and commissions	116	130	136
All other income <sup>(a)</sup>	1,149	1,081	978
Noninterest revenue	2,298	2,283	2,195
Net interest income	4,675	4,542	4,223
Total net revenue <sup>(b)</sup>	6,973	6,825	6,418
Provision for credit losses	85	41	208
Noninterest expense			
Compensation expense <sup>(c)</sup>	1,115	1,014	936
Noncompensation expense <sup>(c)</sup>	1,472	1,348	1,311
Amortization of intangibles	23	27	31
Total noninterest expense	2,610	2,389	2,278
Income before income tax expense	4,278	4,395	3,932
Income tax expense	1,703	1,749	1,565
Net income	\$2,575	\$2,646	\$2,367
Revenue by product			
Lending	\$3,826	\$3,675	\$3,455
Treasury services	2,429	2,428	2,270
Investment banking	575	545	498
Other	143	177	195
Total Commercial Banking revenue	\$6,973	\$6,825	\$6,418
Investment banking revenue, gross	\$1,676	\$1,597	\$1,421
Revenue by client segment			
Middle Market Banking <sup>(d)</sup>	\$3,019	\$2,971	\$2,803
Corporate Client Banking <sup>(d)</sup>	1,824	1,819	1,603
Commercial Term Lending	1,215	1,194	1,168
Real Estate Banking	549	438	416
Other	366	403	428
Total Commercial Banking revenue	\$6,973	\$6,825	\$6,418
Financial ratios			
Return on common equity	19	% 28	% 30
Overhead ratio	37	35	35

(a) Includes revenue from investment banking products and commercial card transactions.

(b) Total net revenue included tax-equivalent adjustments from income tax credits related to equity investments in designated community development entities that provide loans to qualified businesses in low-

income communities, as well as tax-exempt income from municipal bond activity of \$407 million, \$381 million, and \$345 million for the years ended December 31, 2013, 2012 and 2011, respectively.

Effective July 1, 2012, certain Treasury Services product sales staff supporting CB were transferred from CIB to CB. As a result, compensation expense for these sales staff is now reflected in CB's compensation expense rather than as an allocation from CIB in noncompensation expense. CB's and CIB's previously reported headcount, compensation expense and noncompensation expense have been revised to reflect this transfer.

Effective January 1, 2013, the financial results of financial institution clients were transferred to Corporate Client Banking from Middle Market Banking. Prior periods were revised to conform with this presentation.

CB revenue comprises the following:

Lending includes a variety of financing alternatives, which are predominantly provided on a basis secured by receivables, inventory, equipment, real estate or other assets. Products include term loans, revolving lines of credit, bridge financing, asset-based structures, leases, commercial card products and standby letters of credit.

Treasury services includes revenue from a broad range of products and services that enable CB clients to manage payments and receipts, as well as invest and manage funds.

Investment banking includes revenue from a range of products providing CB clients with sophisticated capital-raising alternatives, as well as balance sheet and risk management tools through advisory, equity underwriting, and loan syndications. Revenue from Fixed income and Equity market products available to CB clients is also included.

Investment banking revenue, gross, represents total revenue related to investment banking products sold to CB clients.

Other product revenue primarily includes tax-equivalent adjustments generated from Community Development Banking activity and certain income derived from principal transactions.

Commercial Banking is divided into four primary client segments for management reporting purposes: Middle Market Banking, Commercial Term Lending, Corporate Client Banking, and Real Estate Banking.

Middle Market Banking covers corporate, municipal and nonprofit clients, with annual revenue generally ranging between \$20 million and \$500 million.

Commercial Term Lending primarily provides term financing to real estate investors/owners for multifamily properties as well as financing office, retail and industrial properties.

Corporate Client Banking covers clients with annual revenue generally ranging between \$500 million and \$2 billion and focuses on clients that have broader investment banking needs.

Real Estate Banking provides full-service banking to investors and developers of institutional-grade real estate properties.

Other primarily includes lending and investment activity within the Community Development Banking and Chase Capital businesses.

2013 compared with 2012

Net income was \$2.6 billion, a decrease of \$71 million, or 3%, from the prior year, driven by an increase in noninterest expense and the provision for credit losses partially offset by an increase in net revenue.

## Management's discussion and analysis

Net revenue was a record \$7.0 billion, an increase of \$148 million, or 2%, from the prior year. Net interest income was \$4.7 billion, up by \$133 million, or 3%, driven by higher loan balances and the proceeds from a lending-related workout, partially offset by lower purchase discounts recognized on loan repayments. Noninterest revenue was \$2.3 billion, flat compared with the prior year.

Revenue from Middle Market Banking was \$3.0 billion, an increase of \$48 million, or 2%, from the prior year. Revenue from Commercial Term Lending was \$1.2 billion, an increase of \$21 million, or 2%, from the prior year. Revenue from Corporate Client Banking was \$1.8 billion, flat compared with the prior year. Revenue from Real Estate Banking was \$549 million, an increase of \$111 million, or 25%, driven by the proceeds from a lending related-workout.

The provision for credit losses was \$85 million, compared with \$41 million in the prior year. Net charge-offs were \$43 million (0.03% net charge-off rate) compared with net charge-offs of \$35 million (0.03% net charge-off rate) in 2012. Nonaccrual loans were \$514 million, down by \$159 million, or 24%, due to repayments. The allowance for loan losses to period-end retained loans was 1.97%, down slightly from 2.06%.

Noninterest expense was \$2.6 billion, an increase of \$221 million, or 9%, from the prior year, reflecting higher product- and headcount-related expense.

2012 compared with 2011

Record net income was \$2.6 billion, an increase of \$279 million, or 12%, from the prior year. The improvement was driven by an increase in net revenue and a decrease in the provision for credit losses, partially offset by higher noninterest expense.

Net revenue was a record \$6.8 billion, an increase of \$407 million, or 6%, from the prior year. Net interest income was \$4.5 billion, up by \$319 million, or 8%, driven by growth in loans and client deposits, partially offset by spread compression. Loan growth was strong across all client segments and industries. Noninterest revenue was \$2.3 billion, up by \$88 million, or 4%, compared with the prior year, largely driven by increased investment banking revenue.

Revenue from Middle Market Banking was \$3.0 billion, an increase of \$168 million, or 6%, from the prior year driven by higher loans and client deposits, partially offset by lower spreads from lending and deposit products. Revenue from Commercial Term Lending was \$1.2 billion, an increase of \$26 million, or 2%. Revenue from Corporate Client Banking was \$1.8 billion, an increase of \$216 million, or 13%, driven by growth in loans and client deposits and higher revenue from investment banking products, partially offset by lower lending spreads. Revenue from Real Estate Banking was \$438 million, an increase of \$22 million, or 5%, partially driven by higher loan balances.

The provision for credit losses was \$41 million, compared with \$208 million in the prior year. Net charge-offs were \$35 million (0.03% net charge-off rate) compared with net charge-offs of \$187 million (0.18% net charge-off rate) in 2011. The decrease in the provision and net charge-offs was largely driven by improving trends in the credit quality of the portfolio. Nonaccrual loans were \$673 million, down by \$380 million, or 36%, due to repayments and loan sales. The allowance for loan losses to period-end retained loans was 2.06%, down from 2.34%.

Noninterest expense was \$2.4 billion, an increase of \$111 million, or 5%, from the prior year, reflecting higher compensation expense driven by expansion, portfolio growth and increased regulatory requirements.

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Selected metrics

As of or for the year ended December 31, (in millions, except headcount and ratios)	2013	2012	2011
Selected balance sheet data (period-end)			
Total assets	\$ 190,782	\$ 181,502	\$ 158,040
Loans:			
Loans retained <sup>(a)</sup>	135,750	126,996	111,162
Loans held-for-sale and loans at fair value	1,388	1,212	840
Total loans	\$ 137,138	\$ 128,208	\$ 112,002
Equity	13,500	9,500	8,000

Period-end loans by client segment

Middle Market Banking <sup>(b)</sup>	\$ 52,289	\$ 50,552	\$ 44,224
Corporate Client Banking <sup>(b)</sup>	20,925	21,707	16,960
Commercial Term Lending	48,925	43,512	38,583
Real Estate Banking	11,024	8,552	8,211
Other	3,975	3,885	4,024
Total Commercial Banking loans	\$ 137,138	\$ 128,208	\$ 112,002

Selected balance sheet data (average)

Total assets	\$ 185,776	\$ 165,111	\$ 146,230
Loans:			
Loans retained <sup>(a)</sup>	131,100	119,218	103,462
Loans held-for-sale and loans at fair value	930	882	745
Total loans	\$ 132,030	\$ 120,100	\$ 104,207
Client deposits and other third-party liabilities <sup>(c)</sup>	198,356	195,912	174,729
Equity	13,500	9,500	8,000
Average loans by client segment			
Middle Market Banking <sup>(b)</sup>	\$ 51,830	\$ 47,009	\$ 40,497
Corporate Client Banking <sup>(b)</sup>	20,918	19,572	14,255
Commercial Term Lending	45,989	40,872	38,107
Real Estate Banking	9,582	8,562	7,619
Other	3,711	4,085	3,729
Total Commercial Banking loans	\$ 132,030	\$ 120,100	\$ 104,207

Headcount<sup>(d)(e)</sup> 6,848 6,117 5,782

(a) Effective January 1, 2013, whole loan financing agreements, previously reported as other assets, were reclassified as loans. For the year ended December 31, 2013, the impact on period-end and average loans was \$1.6 billion.

(b) Effective January 1, 2013, the financial results of financial institution clients were transferred to Corporate Client Banking from Middle Market Banking. Prior periods were revised to conform with this presentation.

(c) Client deposits and other third-party liabilities include deposits, as well as deposits that are swept to on-balance sheet liabilities (e.g., commercial paper, federal funds purchased, and securities loaned or sold under repurchase agreements) as part of client cash management programs.

(d) Effective January 1, 2013, headcount includes transfers from other business segments largely related to operations, technology and other support staff.

(e) Effective July 1, 2012, certain Treasury Services product sales staff supporting CB were transferred from CIB to CB. For further discussion of this transfer, see footnote (c) on page 103 of this Annual Report.

2013 2012 2011

As of or for the year ended December 31, (in millions, except headcount and ratios)

## Credit data and quality statistics

Net charge-offs	\$43		\$35		\$187	
Nonperforming assets						
Nonaccrual loans:						
Nonaccrual loans retained <sup>(a)</sup>	471		644		1,036	
Nonaccrual loans held-for-sale and loans at fair value	43		29		17	
Total nonaccrual loans	514		673		1,053	
Assets acquired in loan satisfactions	15		14		85	
Total nonperforming assets	529		687		1,138	
Allowance for credit losses:						
Allowance for loan losses	2,669		2,610		2,603	
Allowance for lending-related commitments	142		183		189	
Total allowance for credit losses	2,811		2,793		2,792	
Net charge-off rate <sup>(b)</sup>	0.03	%	0.03	%	0.18	%
Allowance for loan losses to period-end loans retained	1.97		2.06		2.34	
Allowance for loan losses to nonaccrual loans retained <sup>(a)</sup>	567		405		251	
Nonaccrual loans to total period-end loans	0.37		0.52		0.94	

(a) Allowance for loan losses of \$81 million, \$107 million and \$176 million was held against nonaccrual loans retained at December 31, 2013, 2012 and 2011, respectively.

(b) Loans held-for-sale and loans at fair value were excluded when calculating the net charge-off rate.

## Management's discussion and analysis

## ASSET MANAGEMENT

Asset Management, with client assets of \$2.3 trillion, is a global leader in investment and wealth management. AM clients include institutions, high-net-worth individuals and retail investors in every major market throughout the world. AM offers investment management across all major asset classes including equities, fixed income, alternatives and money market funds. AM also offers multi-asset investment management, providing solutions to a broad range of clients' investment needs. For individual investors, AM also provides retirement products and services, brokerage and banking services including trusts and estates, loans, mortgages and deposits. The majority of AM's client assets are in actively managed portfolios.

## Selected income statement data

Year ended December 31, (in millions, except ratios)	2013	2012	2011
Revenue			
Asset management, administration and commissions	\$8,232	\$7,041	\$6,748
All other income	797	806	1,147
Noninterest revenue	9,029	7,847	7,895
Net interest income	2,291	2,099	1,648
Total net revenue	11,320	9,946	9,543
Provision for credit losses	65	86	67
Noninterest expense			
Compensation expense	4,875	4,405	4,152
Noncompensation expense	3,002	2,608	2,752
Amortization of intangibles	139	91	98
Total noninterest expense	8,016	7,104	7,002
Income before income tax expense	3,239	2,756	2,474
Income tax expense	1,208	1,053	882
Net income	\$2,031	\$1,703	\$1,592
Revenue by client segment			
Private Banking	\$6,020	\$5,426	\$5,116
Institutional	2,536	2,386	2,273
Retail	2,764	2,134	2,154
Total net revenue	\$11,320	\$9,946	\$9,543
Financial ratios			
Return on common equity	23	% 24	% 25
Overhead ratio	71	71	73
Pretax margin ratio	29	28	26

## 2013 compared with 2012

Net income was \$2.0 billion, an increase of \$328 million, or 19%, from the prior year, reflecting higher net revenue, largely offset by higher noninterest expense.

Net revenue was \$11.3 billion, an increase of \$1.4 billion, or 14%, from the prior year. Noninterest revenue was \$9.0 billion, up \$1.2 billion, or 15%, from the prior year, due to net client inflows, the effect of higher market levels and higher performance fees. Net interest income was \$2.3

billion, up \$192 million, or 9%, from the prior year, due to higher loan and deposit balances, partially offset by narrower loan and deposit spreads.

Revenue from Private Banking was \$6.0 billion, up 11% from the prior year due to higher net interest income from loan and deposit balances and higher brokerage revenue. Revenue from Retail was \$2.8 billion, up 30% due to net

client inflows and the effect of higher market levels. Revenue from Institutional was \$2.5 billion, up 6% due to higher valuations of seed capital investments, the effect of higher market levels and higher performance fees.

The provision for credit losses was \$65 million, compared with \$86 million in the prior year.

Noninterest expense was \$8.0 billion, an increase of \$912 million, or 13%, from the prior year, primarily due to higher headcount-related expense driven by continued front office expansion efforts, higher performance-based compensation and costs related to the control agenda.

2012 compared with 2011

Net income was \$1.7 billion, an increase of \$111 million, or 7%, from the prior year. These results reflected higher net revenue, partially offset by higher noninterest expense and a higher provision for credit losses.

Net revenue was \$9.9 billion, an increase of \$403 million, or 4%, from the prior year. Noninterest revenue was \$7.8 billion, down \$48 million, or 1%, due to lower loan-related revenue and the absence of a prior-year gain on the sale of an investment. These decreases were predominantly offset by net client inflows, higher valuations of seed capital investments, the effect of higher market levels, higher brokerage revenue and higher performance fees. Net interest income was \$2.1 billion, up \$451 million, or 27%, due to higher loan and deposit balances.

Revenue from Private Banking was \$5.4 billion, up 6% from the prior year due to higher net interest income from loan and deposit balances and higher brokerage revenue, partially offset by lower loan-related fee revenue. Revenue from Institutional was \$2.4 billion, up 5% due to net client inflows and the effect of higher market levels. Revenue from Retail was \$2.1 billion, down 1% due to the absence of a prior-year gain on the sale of an investment, predominantly offset by higher valuations of seed capital investments and higher performance fees.

The provision for credit losses was \$86 million, compared with \$67 million in the prior year.

Noninterest expense was \$7.1 billion, an increase of \$102 million, or 1%, from the prior year, due to higher performance-based compensation and higher headcount-related expense, partially offset by the absence of non-client-related litigation expense.

## Selected metrics

## Business metrics

As of or for the year ended December 31, (in

millions, except headcount, ranking data, ratios 2013

and where otherwise noted)

Number of:

		2012		2011	
Client advisors	2,962	2,821		2,883	
% of customer assets in 4 & 5 Star Funds <sup>(a)</sup>	49	% 47		% 43	%
% of AUM in 1 <sup>st</sup> and 2 <sup>nd</sup> quartiles: <sup>(b)</sup>					
1 year	68	67		48	
3 years	68	74		72	
5 years	69	76		78	

Selected balance sheet data (period-end)

Total assets	\$ 122,414	\$ 108,999		\$ 86,242	
Loans <sup>(c)</sup>	95,445	80,216		57,573	
Deposits	146,183	144,579		127,464	
Equity	9,000	7,000		6,500	

Selected balance sheet data (average)

Total assets	\$ 113,198	\$ 97,447		\$ 76,141	
Loans	86,066	68,719		50,315	
Deposits	139,707	129,208		106,421	
Equity	9,000	7,000		6,500	

Headcount 20,048 18,465 18,036

## Credit data and quality statistics

Net charge-offs	\$ 40	\$ 64		\$ 92	
Nonaccrual loans	167	250		317	
Allowance for credit losses:					
Allowance for loan losses	278	248		209	
Allowance for lending-related commitments	5	5		10	
Total allowance for credit losses	283	253		219	
Net charge-off rate	0.05	% 0.09		% 0.18	%
Allowance for loan losses to period-end loans	0.29	0.31		0.36	
Allowance for loan losses to nonaccrual loans	166	99		66	
Nonaccrual loans to period-end loans	0.17	0.31		0.55	

AM firmwide disclosures<sup>(d)</sup>

Total net revenue	13,391	11,443		10,715	
Client assets (in billions) <sup>(e)</sup>	2,534	2,244		2,035	
Number of client advisors	6,006	5,784		6,084	

(a) Derived from Morningstar for the U.S., the U.K., Luxembourg, France, Hong Kong and Taiwan; and Nomura for Japan.

(b) Quartile ranking sourced from: Lipper for the U.S. and Taiwan; Morningstar for the U.K., Luxembourg, France and Hong Kong; and Nomura for Japan.

(c) Included \$18.9 billion, \$10.9 billion and \$2.1 billion of prime mortgage loans reported in the Consumer, excluding credit card, loan portfolio at December 31, 2013, 2012 and 2011, respectively. For the same periods, excluded \$3.7 billion, \$6.7 billion and \$13.0 billion of

prime mortgage loans reported in the CIO portfolio within the Corporate/Private Equity segment, respectively.

Includes Chase Wealth Management (“CWM”), which is a unit of Consumer & Business Banking. The firmwide (d)metrics are presented in order to capture AM’s partnership with CWM. Management reviews firmwide metrics in assessing the financial performance of AM’s client asset management business.

(e)Excludes CWM client assets that are managed by AM.

AM’s client segments comprise the following:

Private Banking offers investment advice and wealth management services to high- and ultra-high-net-worth individuals, families, money managers, business owners and small corporations worldwide, including investment management, capital markets and risk management, tax and estate planning, banking, capital raising and specialty-wealth advisory services.

Institutional brings comprehensive global investment services – including asset management, pension analytics, asset-liability management and active risk-budgeting strategies – to corporate and public institutions, endowments, foundations, non-profit organizations and governments worldwide.

Retail provides worldwide investment management services and retirement planning and administration, through financial intermediaries and direct distribution of a full range of investment products.

J.P. Morgan Asset Management has two high-level measures of its overall fund performance.

- Percentage of assets under management in funds rated 4- and 5-stars (three years). Mutual fund rating services rank funds based on their risk-adjusted performance over various periods. A 5-star rating is the best and represents the top 10% of industry-wide ranked funds. A 4-star rating represents the next 22% of industry wide ranked funds. The worst rating is a 1-star rating.

- Percentage of assets under management in first- or second- quartile funds (one, three and five years). Mutual fund rating services rank funds according to a peer-based performance system, which measures returns according to specific time and fund classification (small-, mid-, multi- and large-cap).

## Management's discussion and analysis

## Client assets

## 2013 compared with 2012

Client assets were \$2.3 trillion at December 31, 2013, an increase of \$248 billion, or 12%, compared with the prior year. Assets under management were \$1.6 trillion, an increase of \$172 billion, or 12%, from the prior year, due to net inflows to long-term products and the effect of higher market levels. Custody, brokerage, administration and deposit balances were \$745 billion, up \$76 billion, or 11%, from the prior year, due to the effect of higher market levels and custody inflows, partially offset by brokerage outflows.

## 2012 compared with 2011

Client assets were \$2.1 trillion at December 31, 2012, an increase of \$174 billion, or 9%, from the prior year. Assets under management were \$1.4 trillion, an increase of \$90 billion, or 7%, due to the effect of higher market levels and net inflows to long-term products, partially offset by net outflows from liquidity products. Custody, brokerage, administration and deposit balances were \$669 billion, up \$84 billion, or 14%, due to the effect of higher market levels and custody and brokerage inflows.

## Client assets

December 31, (in billions)	2013	2012	2011
Assets by asset class			
Liquidity	\$451	\$458	\$501
Fixed income	330	330	287
Equity	370	277	236
Multi-asset and alternatives	447	361	312
Total assets under management	1,598	1,426	1,336
Custody/brokerage/administration/deposits	745	669	585
Total client assets	\$2,343	\$2,095	\$1,921
Alternatives client assets	158	142	134
Assets by client segment			
Private Banking	\$361	\$318	\$291
Institutional	777	741	722
Retail	460	367	323
Total assets under management	\$1,598	\$1,426	\$1,336
Private Banking	\$977	\$877	\$781
Institutional	777	741	723
Retail	589	477	417
Total client assets	\$2,343	\$2,095	\$1,921
Mutual fund assets by asset class			
Liquidity	\$392	\$410	\$458
Fixed income	137	136	107
Equity	198	139	116
Multi-asset and alternatives	77	46	39
Total mutual fund assets	\$804	\$731	\$720

Year ended December 31, (in billions)	2013	2012	2011
Assets under management rollforward			
Beginning balance	\$1,426	\$1,336	\$1,298
Net asset flows:			

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Liquidity	(4	) (41	) 20
Fixed income	8	27	36
Equity	34	8	—
Multi-asset and alternatives	48	23	15
Market/performance/other impacts	86	73	(33
Ending balance, December 31	\$1,598	\$1,426	\$1,336
Client assets rollforward			
Beginning balance	\$2,095	\$1,921	\$1,840
Net asset flows	80	60	123
Market/performance/other impacts	168	114	(42
Ending balance, December 31	\$2,343	\$2,095	\$1,921
International metrics			
Year ended December 31,	2013	2012	2011
(in billions, except where otherwise noted)			
Total net revenue (in millions) <sup>(a)</sup>			
Europe/Middle East/Africa	\$1,852	\$1,641	\$1,704
Asia/Pacific	1,175	967	971
Latin America/Caribbean	867	772	808
North America	7,426	6,566	6,060
Total net revenue	\$11,320	\$9,946	\$9,543
Assets under management			
Europe/Middle East/Africa	\$305	\$258	\$278
Asia/Pacific	132	114	105
Latin America/Caribbean	47	45	34
North America	1,114	1,009	919
Total assets under management	\$1,598	\$1,426	\$1,336
Client assets			
Europe/Middle East/Africa	\$367	\$317	\$329
Asia/Pacific	180	160	139
Latin America/Caribbean	117	110	89
North America	1,679	1,508	1,364
Total client assets	\$2,343	\$2,095	\$1,921

(a) Regional revenue is based on the domicile of the client.

## CORPORATE/PRIVATE EQUITY

The Corporate/Private Equity segment comprises Private Equity, Treasury and Chief Investment Office (“CIO”), and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm’s liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm’s capital plan. The major Other Corporate units include Real Estate, Central Technology, Legal, Compliance, Finance, Human Resources, Internal Audit, Risk Management, Oversight & Control, Corporate Responsibility and various Other Corporate groups. Other centrally managed expense includes the Firm’s occupancy and pension-related expense that are subject to allocation to the businesses.

Selected income statement data<sup>(a)</sup>

Year ended December 31, (in millions, except headcount)	2013	2012	2011
Revenue			
Principal transactions	\$ 563	\$(4,268 )	\$ 1,434
Securities gains	666	2,024	1,600
All other income	1,864	2,434	587
Noninterest revenue	3,093	190	3,621
Net interest income	(1,839 )	(1,281 )	582
Total net revenue <sup>(b)</sup>	1,254	(1,091 )	4,203
Provision for credit losses	(28 )	(37 )	(36 )
Noninterest expense			
Compensation expense	2,299	2,221	1,966
Noncompensation expense <sup>(c)</sup>	13,208	6,972	6,325
Subtotal	15,507	9,193	8,291
Net expense allocated to other businesses	(5,252 )	(4,634 )	(4,276 )
Total noninterest expense	10,255	4,559	4,015
Income before income tax expense/(benefit)	(8,973 )	(5,613 )	224
Income tax expense/(benefit)	(2,995 )	(3,591 )	(695 )
Net income/(loss)	\$(5,978 )	\$(2,022 )	\$ 919
Total net revenue			
Private equity	\$ 589	\$ 601	\$ 836
Treasury and CIO	(792 )	(3,064 )	3,196
Other Corporate <sup>(a)</sup>	1,457	1,372	171
Total net revenue	\$ 1,254	\$(1,091 )	\$ 4,203
Net income/(loss)			
Private equity	\$ 285	\$ 292	\$ 391
Treasury and CIO	(676 )	(2,093 )	1,349
Other Corporate <sup>(a)</sup>	(5,587 )	(221 )	(821 )
Total net income/(loss)	\$(5,978 )	\$(2,022 )	\$ 919
Total assets (period-end) <sup>(a)</sup>	\$ 805,987	\$ 725,251	\$ 689,718
Headcount <sup>(a)</sup>	20,717	17,758	16,653

(a) The 2012 and 2011 data for certain income statement line items (predominantly net interest income, compensation, and non compensation) were revised to reflect the transfer of certain technology and operations, as well as real estate-related functions and staff from Corporate/Private Equity to CCB, effective January 1, 2013.

For further information on this transfer, see footnote (a) on page 86 of this Annual Report.

Included tax-equivalent adjustments, predominantly due to tax-exempt income from municipal bond investments (b) of \$480 million, \$443 million and \$298 million for the years ended December 31, 2013, 2012 and 2011, respectively.

(c) Included litigation expense of \$10.2 billion, \$3.7 billion and \$3.2 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

2013 compared with 2012

Net loss was \$6.0 billion, compared with a net loss of \$2.0 billion in the prior year.

Private Equity reported net income of \$285 million, compared with net income of \$292 million in the prior year. Net revenue was of \$589 million, compared with \$601 million in the prior year.

Treasury and CIO reported a net loss of \$676 million, compared with a net loss of \$2.1 billion in the prior year. Net revenue was a loss of \$792 million, compared with a loss of \$3.1 billion in the prior year. Net revenue in the current year includes \$659 million of net securities gains from the sales of available-for-sale investment securities, compared with securities gains of \$2.0 billion and \$888 million of pretax extinguishment gains related to the redemption of trust preferred capital debt securities in the prior year. The extinguishment gains were related to adjustments applied to the cost basis of the trust preferred securities during the period they were in a qualified hedge accounting relationship. The prior year loss also reflected \$5.8 billion of losses incurred by CIO from the synthetic credit portfolio for the six months ended June 30, 2012, and \$449 million of losses from the retained index credit derivative positions for the three months ended September 30, 2012. Current year net interest income was a loss of \$1.4 billion compared with a loss of \$683 million in the prior year, primarily due to low interest rates and limited reinvestment opportunities. Net interest income improved in the fourth quarter of 2013 due to higher interest rates and better reinvestment opportunities.

Other Corporate reported a net loss of \$5.6 billion, compared with a net loss of \$221 million in the prior year. Current year noninterest revenue was \$1.8 billion compared with \$1.8 billion in the prior year. Current year noninterest revenue included gains of \$1.3 billion and \$493 million on the sales of Visa shares and One Chase Manhattan Plaza, respectively. Noninterest revenue in the prior year included a \$1.1 billion benefit for the Washington Mutual bankruptcy settlement and a \$665 million gain for the recovery on a Bear Stearns-related subordinated loan. Noninterest expense of \$9.7 billion was up \$5.9 billion compared to the prior year. The current year included \$10.2 billion of legal expense, including reserves for litigation and regulatory proceedings compared with \$3.7 billion of expense for additional litigation reserves, largely for mortgage-related matters, in the prior year.

## Management's discussion and analysis

## 2012 compared with 2011

Net loss was \$2.0 billion, compared with a net income of \$919 million in the prior year.

Private Equity reported net income of \$292 million, compared with net income of \$391 million in the prior year. Net revenue was \$601 million, compared with \$836 million in the prior year, due to lower unrealized and realized gains on private investments, partially offset by higher unrealized gains on public securities. Noninterest expense was \$145 million, down from \$238 million in the prior year.

Treasury and CIO reported a net loss of \$2.1 billion, compared with net income of \$1.3 billion in the prior year. Net revenue was a loss of \$3.1 billion, compared with net revenue of \$3.2 billion in the prior year. The current year loss reflected \$5.8 billion of losses incurred by CIO from the synthetic credit portfolio for the six months ended June 30, 2012, and \$449 million of losses from the retained index credit derivative positions for the three months ended September 30, 2012. These losses were partially offset by securities gains of \$2.0 billion. The current year revenue reflected \$888 million of extinguishment gains related to the redemption of trust preferred securities, which are included in all other income in the above table. The extinguishment gains were related to adjustments applied to the cost basis of the trust preferred securities during the period they were in a qualified hedge accounting relationship. Net interest income was negative \$683 million, compared with \$1.4 billion in the prior year, primarily reflecting the impact of lower portfolio yields and higher deposit balances across the Firm.

Other Corporate reported a net loss of \$221 million, compared with a net loss of \$821 million in the prior year. Noninterest revenue of \$1.8 billion was driven by a \$1.1 billion benefit for the Washington Mutual bankruptcy settlement, which is included in all other income in the above table, and a \$665 million gain from the recovery on a Bear Stearns-related subordinated loan. Noninterest expense of \$3.8 billion was up \$1.0 billion compared with the prior year. The current year included expense of \$3.7 billion for additional litigation reserves, largely for mortgage-related matters. The prior year included expense of \$3.2 billion for additional litigation reserves.

## Treasury and CIO overview

Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The risks managed by Treasury and CIO arise from the activities undertaken by the Firm's four major reportable business segments to serve their respective client bases, which generate both on- and off-balance sheet assets and liabilities.

CIO achieves the Firm's asset-liability management objectives generally by investing in high-quality securities that are managed for the longer-term as part of the Firm's AFS and HTM investment securities portfolios (the "investment securities portfolio"). CIO also uses derivatives, as well as securities that are not classified as AFS or HTM, to meet the Firm's asset-liability management objectives. For further information on derivatives, see Note 6 on pages 220–233 of this Annual Report. For further information about securities not classified within the AFS or HTM portfolio, see Note 3 on pages 195–215 of this Annual Report. The Treasury and CIO investment securities portfolio primarily consists of U.S. and non-U.S. government securities, agency and non-agency mortgage-backed securities, other asset-backed securities, corporate debt securities and obligations of U.S. states and municipalities. At December 31, 2013, the total Treasury and CIO investment securities portfolio was \$347.6 billion; the average credit rating of the securities comprising the Treasury and CIO investment securities portfolio was AA+ (based upon external ratings where available and where not available, based primarily upon internal ratings that correspond to ratings as defined by S&P and Moody's). See Note 12 on pages 249–254 of this Annual Report for further information on the details of the Firm's investment securities portfolio.

For further information on liquidity and funding risk, see Liquidity Risk Management on pages 168–173 of this Annual Report. For information on interest rate, foreign exchange and other risks, Treasury and CIO Value-at-risk ("VaR") and the Firm's structural interest rate-sensitive revenue at risk, see Market Risk Management on pages 142–148 of this Annual Report.

## Selected income statement and balance sheet data

As of or for the year ended December 31, (in millions)	2013	2012	2011
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Securities gains	\$659	\$2,028	\$1,385
Investment securities portfolio (average)	353,712	358,029	330,885
Investment securities portfolio (period-end) <sup>(a)</sup>	347,562	365,421	355,605
Mortgage loans (average)	5,145	10,241	13,006
Mortgage loans (period-end)	3,779	7,037	13,375

(a) Period-end investment securities included held-to-maturity balance of \$24.0 billion at December 31, 2013. Held-to-maturity balances for the other periods were not material.

## Private Equity portfolio

## Selected income statement and balance sheet data

Year ended December 31, (in millions)	2013	2012	2011
Private equity gains/(losses)			
Realized gains	\$(170	) \$17	\$1,842
Unrealized gains/(losses) <sup>(a)</sup>	734	639	(1,305
Total direct investments	564	656	537
Third-party fund investments	137	134	417
Total private equity gains/(losses) <sup>(b)</sup>	\$701	\$790	\$954

(a) Includes reversals of unrealized gains and losses that were recognized in prior periods and have now been realized.

(b) Included in principal transactions revenue in the Consolidated Statements of Income.

Private equity portfolio information<sup>(a)</sup>

December 31, (in millions)	2013	2012	2011
Direct investments			
Publicly held securities			
Carrying value	\$1,035	\$578	\$805
Cost	672	350	573
Quoted public value	1,077	578	896
Privately held direct securities			
Carrying value	5,065	5,379	4,597
Cost	6,022	6,584	6,793
Third-party fund investments <sup>(b)</sup>			
Carrying value	1,768	2,117	2,283
Cost	1,797	1,963	2,452
Total private equity portfolio			
Carrying value	\$7,868	\$8,074	\$7,685
Cost	8,491	8,897	9,818

(a) For more information on the Firm's policies regarding the valuation of the private equity portfolio, see Note 3 on pages 195–215 of this Annual Report.

(b) Unfunded commitments to third-party private equity funds were \$215 million, \$370 million and \$789 million at December 31, 2013, 2012 and 2011, respectively.

## 2013 compared with 2012

The carrying value of the private equity portfolio at December 31, 2013 was \$7.9 billion, down from \$8.1 billion at December 31, 2012. The decrease in the portfolio was predominantly driven by sales of investments, partially offset by new investments and unrealized gains.

## 2012 compared with 2011

The carrying value of the private equity portfolio at December 31, 2012 was \$8.1 billion, up from \$7.7 billion at December 31, 2011. The increase in the portfolio was predominantly driven by new investments and unrealized gains, partially offset by sales of investments.

## Management's discussion and analysis

## INTERNATIONAL OPERATIONS

During the years ended December 31, 2013, 2012 and 2011, the Firm recorded \$24.0 billion, \$18.5 billion and \$24.5 billion, respectively, of managed revenue derived from clients, customers and counterparties domiciled outside of North America. Of those amounts, 65%, 57% and 66%, respectively, were derived from Europe/Middle

East/Africa ("EMEA"); 26%, 30% and 25%, respectively, from Asia/Pacific; and 9%, 13% and 9%, respectively, from Latin America/Caribbean. For additional information regarding international operations, see Note 32 on page 333 of this Annual Report.

## International wholesale activities

The Firm is committed to meeting the needs of its clients as part of a coordinated international business strategy.

Set forth below are certain key metrics related to the Firm's wholesale international operations, including, for each of EMEA, Asia/Pacific and Latin America/Caribbean, the number of countries in each such region in which they operate, front-office headcount, number of significant clients, revenue and selected balance-sheet data.

As of or for the year ended December 31, (in millions, except headcount and where otherwise noted)	EMEA			Asia/Pacific			Latin America/Caribbean		
	2013	2012	2011	2013	2012	2011	2013	2012	2011
Revenue <sup>(a)</sup>	\$ 15,441	\$ 10,398	\$ 16,141	\$ 6,138	\$ 5,590	\$ 5,971	\$ 2,233	\$ 2,327	\$ 2,232
Countries of operation <sup>(b)</sup>	33	33	33	17	17	16	9	9	9
New offices	—	—	1	—	2	2	—	—	4
Total headcount <sup>(c)</sup>	15,560	15,485	16,185	21,699	20,509	20,212	1,495	1,435	1,380
Front-office headcount	6,285	5,805	5,937	4,353	4,166	4,263	655	591	524
Significant clients <sup>(d)</sup>	1,071	1,008	950	498	509	496	177	162	138
Deposits (average) <sup>(e)</sup>	\$ 192,064	\$ 169,693	\$ 168,882	\$ 56,440	\$ 57,329	\$ 57,684	\$ 5,546	\$ 4,823	\$ 5,318
Loans (period-end) <sup>(f)</sup>	45,571	40,760	36,637	26,560	30,287	31,119	29,214	30,322	25,141
Assets under management (in billions)	305	258	278	132	114	105	47	45	34
Client assets (in billions)	367	317	329	180	160	139	117	110	89
Assets under custody (in billions)	7,348	6,502	5,430	1,607	1,577	1,426	231	252	279

Note: International wholesale operations is comprised of CIB, AM, CB and Treasury and CIO.

(a) Revenue is based predominantly on the domicile of the client, the location from which the client relationship is managed, or the location of the trading desk.

(b) Countries of operation represents locations where the Firm has a physical presence with employees actively engaged in "client facing" activities.

(c) Total headcount includes all employees, including those in service centers, located in the region. Effective January 1, 2013, interns are excluded from the firmwide and business segment headcount metrics. Prior periods were revised to conform with this presentation.

(d) Significant clients are defined as companies with over \$1 million in revenue over a trailing 12-month period in the region (excludes private banking clients).

(e) Deposits are based on the location from which the client relationship is managed.

(f) Loans outstanding are based predominantly on the domicile of the borrower and exclude loans held-for-sale and loans carried at fair value.

## ENTERPRISE-WIDE RISK MANAGEMENT

Risk is an inherent part of JPMorgan Chase's business activities. The Firm employs a holistic approach to risk management that is intended to ensure the broad spectrum of risk types are considered in managing its business activities.

The Firm believes effective risk management requires:

- Acceptance of responsibility by all individuals within the Firm;
- Ownership of risk management within each line of business; and
- Firmwide structures for risk governance and oversight.

Firmwide Risk Management is overseen and managed on an enterprise-wide basis. The Firm's Chief Executive Officer ("CEO"), Chief Financial Officer ("CFO"), Chief Risk Officer ("CRO") and Chief Operating Officer ("COO") develop and set the risk management framework and governance structure for the Firm which is intended to provide comprehensive controls and ongoing management of the major risks inherent in the Firm's business activities. The

Firm's risk management framework is intended to create a culture of risk transparency and awareness, and personal responsibility throughout the Firm where collaboration, discussion, escalation and sharing of information are encouraged. The CEO, CFO, CRO and COO are ultimately responsible and accountable to the Firm's Board of Director's.

The Firm believes that risk management is the responsibility of every employee. Employees are expected to operate with the highest standards of integrity and identify, escalate, and correct mistakes. The Firm's risk culture strives for continual improvement through ongoing employee training and development, as well as talent retention. The Firm also approaches its incentive compensation arrangements through an integrated risk, compensation and financial management framework to encourage a culture of risk awareness and personal accountability. The Firm's overall objective in managing risk is to protect the safety and soundness of the Firm, and avoid excessive risk taking.

Management’s discussion and analysis

The following sections outline the key risks that are inherent in the Firm’s business activities.

	Risk	Definition	Key risk management metrics	Page references
Risks managed centrally	Capital risk	The risk the Firm has insufficient capital resources to support the Firm’s business activities and related risks.	Risk-based capital ratios, Supplementary Leverage ratio	160-167
	Liquidity risk	The risk the Firm will not have the appropriate amount, composition or tenor of funding and liquidity to support its assets and obligations.	LCR; Stress; Parent Holding Company Pre-Funding	168-173
	Non-USD FX risk	Risk arising from capital investments, forecasted expense and revenue, investment securities portfolio or issuing debt in denominations other than the U.S. dollar.	FX Net Open Position (“NOP”)	220, 229-231
	Structural interest rate risk	Risk resulting from the Firm’s traditional banking activities (both on- and off-balance sheet positions) arising from the extension of loans and credit facilities, taking deposits and issuing debt, and the impact of the CIO investment securities portfolio.	Earnings-at-risk	147-148
	Country risk	Risk that a sovereign’s unwillingness or inability to pay will result in market, credit, or other losses.	Default exposure at 0% recovery, Stress	149-152
	Credit risk	Risk of loss from obligor or counterparty default.	Total exposure; industry and geographic concentrations; risk ratings; delinquencies; loss experience; stress	117-141
	Fiduciary risk	Risk of failing to exercise the applicable standard of care or to act in the best interests of clients or treat all clients fairly as required under applicable law or regulation.	Not Applicable	159
	Legal risk	Risk of loss or imposition of damages, fines, penalties or other liability arising from failure to comply with a contractual obligation or to comply with laws or regulations to which the Firm is subject.	Not Applicable	158
Risks managed on an LOB aligned basis	Market risk	Risk of loss arising from adverse changes in the value of the Firm’s assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity and commodity prices and their implied volatilities, and credit spreads.	VaR, Stress, Sensitivities	142-148
	Model risk	Risk of a material inaccuracy in the quantification of the value of, or an inaccuracy of the identification and measurement of a position held by or activity engaged in by the Firm.	Model Status, Model Tier	153
	Operational risk	Risk of loss resulting from inadequate or failed processes or systems, human factors or external events	Various metrics- see page 156	155-157

Principal risk	Risk of an adverse change in the value of privately-held financial assets and instruments, typically representing an ownership or junior capital position. These positions have unique risks due to their illiquidity or for which there is less observable market or valuation data.	Carrying Value, Stress	154
Regulatory and Compliance risk	Risk of regulatory actions, including fines or penalties, arising from the failure to comply with the various U.S. federal and state laws and regulations and the laws and regulations of the various jurisdictions outside the United States in which the Firm conducts business.	Not Applicable	158
Reputation risk	Risk that an action, transaction, investment or event will reduce the trust that clients, shareholders, employees or the broader public has in the Firm's integrity or competence.	Not Applicable	159

#### Risk governance and oversight

The Board of Directors provides oversight of risk principally through the Board of Directors' Risk Policy Committee ("DRPC"), Audit Committee and, with respect to compensation, Compensation & Management Development Committee.

The Firm's overall risk appetite is established by management taking into consideration the Firm's capital and liquidity positions, earnings power, and diversified business model. The risk appetite framework is a tool to measure the capacity to take risk and is expressed in loss tolerance parameters at the Firm and/or LOB levels, including net income loss tolerances, liquidity limits and market limits. Performance against these parameters informs management's strategic decisions and is reported to the DRPC.

The Firm-level risk appetite parameters are set and approved by the Firm's CEO, CFO, CRO and COO. LOB-level risk appetite parameters are set by the LOB CEO, CFO, and CRO and are approved by the Firm's functional heads as noted above. Firmwide LOB diversification allows the sum of the LOBs' loss tolerances to be greater than the Firmwide loss tolerance.

The CRO is responsible for the overall direction of the Firm's Risk Management function and is the head of the Risk Management Organization. The LOBs and legal entities are ultimately responsible for managing the risks inherent in their respective business activities.

The Firm's Risk Management Organization and other Firmwide functions with risk-related responsibilities (i.e., Regulatory Capital Management Office ("RCMO"), Oversight and Control Group, Valuation Control Group ("VCG"), Legal and Compliance) provide independent oversight of the monitoring, evaluation and escalation of risk.

The chart below illustrates the Firm's Risk Governance structure and certain key management level committees that are primarily responsible for key risk-related functions; there are additional committees not represented in the chart (e.g. Firmwide Fiduciary Risk Committee, and other functional forums) that are also responsible for management and oversight of risk. Additionally, the chart illustrates how the primary escalation mechanism works.

In assisting the Board in its oversight of risk, primary responsibility with respect to credit risk, market risk, structural interest rate risk, principal risk, liquidity risk, country risk, fiduciary risk and model risk rests with the DRPC, while primary responsibility with respect to operating risk, legal risk and compliance risk rests with the Audit Committee. Each committee of the Board oversees reputation risk issues within its scope of responsibility.

The Directors' Risk Policy Committee ("DRPC") assists the Board in its oversight of management's exercise of its responsibility to (i) assess and manage the Firm's risk; (ii) ensure that there is in place an effective system reasonably designed to evaluate and control such risks throughout the Firm; and (iii) manage capital and liquidity planning and analysis. The DRPC reviews and approves Primary Risk Policies (as designated by the DRPC), reviews firmwide value-at-risk, stress limits and any other metrics agreed to with management, and performance against such metrics. The Firm's CRO, LOB CROs, LOB CEOs, heads of risk for Country Risk, Market Risk, Wholesale Credit Risk, Consumer Credit Risk, Model Risk, Risk Management Policy, Reputation Risk Governance, Fiduciary Risk Governance, and Operational Risk Governance (all referred to as Firmwide Risk Executives) meet with and provide updates and escalations to the DRPC. Additionally, breaches in risk

appetite tolerances, liquidity issues that may have a material adverse impact on the Firm and other significant matters as determined by the CRO or Firmwide functions with risk responsibility are escalated to the DRPC.

The Audit Committee assists the Board in its oversight of guidelines and policies that govern the process by which risk assessment and management is undertaken. In addition, the Audit Committee reviews with management the system of internal control that is relied upon to provide reasonable assurance of compliance with the Firm's execution of operational risk. In addition, Internal Audit, an independent function within the Firm that provides independent and objective assessments of the control environment, reports directly to the Audit Committee and administratively to the CEO. Internal Audit conducts independent reviews to evaluate the Firm's internal control structure and compliance with applicable regulatory requirements and is responsible for providing the Audit Committee, senior management and regulators with an independent assessment of the Firm's ability to manage and control risk.

The Compensation & Management Development Committee, assists the Board in its oversight of the Firm's compensation programs and reviews and approves the Firm's overall compensation philosophy and practices. The Committee

## Management's discussion and analysis

reviews the Firm's compensation practices as they relate to risk and risk management in light of the Firm's objectives, including its safety and soundness and the avoidance of excessive risk taking. The Committee reviews and approves the terms of compensation award programs, including recovery provisions, restrictive covenants and vesting periods. The Committee also reviews and approves the Firm's overall incentive compensation pools and reviews those of each of the Firm's lines of business and Corporate/Private Equity segment. The Committee reviews the performance and approves all compensation awards for the Firm's Operating Committee on a name-by-name basis. The full Board's independent directors review the performance and approve the compensation of the Firm's CEO.

Among the Firm's management level committees that are primarily responsible for key risk-related functions are: The Asset-Liability Committee ("ALCO"), chaired by the Corporate Treasurer under the direction of the COO, monitors the Firm's overall liquidity risk. ALCO is responsible for reviewing and approving the Firm's liquidity policy and contingency funding plan. ALCO also reviews the Firm's funds transfer pricing policy (through which lines of business "transfer" interest rate and foreign exchange risk to Treasury), overall structural interest rate risk position, funding requirements and strategy, and the Firm's securitization programs (and any required liquidity support by the Firm of such programs).

The Capital Governance Committee, chaired by the Firm's CFO, is responsible for reviewing the Firm's Capital Management Policy and the principles underlying capital issuance and distribution alternatives. The Committee is also responsible for governing the capital adequacy assessment process, including overall design, assumptions and risk streams; and, ensuring that capital stress test programs are designed to adequately capture the idiosyncratic risks across the Firm's businesses.

The Firmwide Risk Committee ("FRC") provides oversight of the risks inherent in the Firm's businesses, including market, credit, principal, structural interest rate, operational risk framework, fiduciary, reputational, country, liquidity and model risks. The Committee is co-chaired by the Firm's CEO and CRO. Members of the committee include the the Firm's COO, LOB CEOs, LOB CROs, General Counsel, and other senior managers from risk and control functions. This committee serves as an escalation point for risk topics and issues raised by the Firm's Operating Committee, the Line of Business Risk Committees, Firmwide Control Committee ("FCC") and other subordinate committees. The Firmwide Control Committee ("FCC") provides a forum for senior management to review and discuss firmwide operational risks including existing and emerging issues, as well as operational risk metrics, management and execution. The FCC serves as an escalation point for significant issues raised from LOB and Functional Control Committees, particularly those with potential enterprise-wide impact. The FCC (as well as the LOB and Functional Control Committees) oversees the risk and control environment, which includes reviewing the identification, management and monitoring of operational risk, control issues, remediation actions and enterprise-wide trends. The FCC escalates significant issues to the FRC.

Each LOB Risk Committee is responsible for decisions relating to risk strategy, policy, measurement and control within its respective LOB. The committee is co-chaired by the LOB CRO and LOB CEO or equivalent. The committee has a clear set of escalation rules and it is the responsibility of committee members to escalate line of business risk topics to the Firmwide Risk Committee as appropriate.

Other corporate functions and forums with risk management-related responsibilities include:

The Firm's Oversight and Control Group is comprised of dedicated control officers within each of the lines of business and Corporate functional areas, as well as a central oversight team. The group is charged with enhancing the Firm's controls by looking within and across the lines of business and Corporate functional areas to identify and control issues. The group enables the Firm to detect control problems more quickly, escalate issues promptly and get the right people involved to understand common themes and interdependencies among the various parts of the Firm. The group works closely with the Firm's other control-related functions, including Compliance, Legal, Internal Audit and Risk Management, to effectively remediate identified control issues across all affected areas of the Firm. As a result, the group facilitates the effective execution of the Firm's control framework and helps support operational risk management across the Firm.

The Firmwide Valuation Governance Forum ("VGF") is composed of senior finance and risk executives and is responsible for overseeing the management of risks arising from valuation activities conducted across the Firm. The

VGF is chaired by the firmwide head of the Valuation Control function (under the direction of the Firm's CFO), and also includes sub-forums for the CIB, Mortgage Bank, and certain corporate functions, including Treasury and CIO. In addition to the committees, forums and groups listed above, the Firm has other management committees and forums at the LOB and regional levels, where risk-related topics are discussed and escalated as necessary. The membership of these committees is composed of senior management of the Firm including representation from the business and various control functions. The committees meet regularly to discuss a broad range of topics. The JPMorgan Chase Bank N.A. Board of Directors is responsible for the oversight of management on behalf of JPMorgan Chase Bank N.A. The JPMorgan Chase Bank N.A. Board accomplishes this function acting directly and through the principal standing committees of the Firm's Board of Directors. Risk oversight on behalf of JPMorgan Chase Bank N.A. is primarily the responsibility of the Firm's DRPC, Audit Committee and, with respect to compensation-related matters, the Compensation & Management Development Committee.

## CREDIT RISK MANAGEMENT

Credit risk is the risk of loss from obligor or counterparty default. The Firm provides credit to a variety of customers, ranging from large corporate and institutional clients to individual consumers and small businesses. In its consumer businesses, the Firm is exposed to credit risk through its residential real estate, credit card, auto, business banking and student lending businesses. Originated mortgage loans are retained in the mortgage portfolio, or securitized or sold to U.S. government agencies and U.S. government-sponsored enterprises; other types of consumer loans are typically retained on balance sheet. In its wholesale businesses, the Firm is exposed to credit risk through its underwriting, lending and derivatives activities with and for clients and counterparties, as well as through its operating services activities, such as cash management and clearing activities. A portion of the loans originated or acquired by the Firm's wholesale businesses are generally retained on the balance sheet; the Firm's syndicated loan business distributes a significant percentage of originations into the market and is an important component of portfolio management.

### Credit risk organization

Credit risk management is overseen by the Chief Risk Officer and implemented within the lines of business. The Firm's credit risk management governance consists of the following activities:

- Establishing a comprehensive credit risk policy framework
- Monitoring and managing credit risk across all portfolio segments, including transaction and line approval
- Assigning and managing credit authorities in connection with the approval of all credit exposure
- Managing criticized exposures and delinquent loans
- Determining the allowance for credit losses and ensuring appropriate credit risk-based capital management

### Risk identification and measurement

Credit Risk Management works in partnership with the business segments in identifying and aggregating exposures across all lines of business. To measure credit risk, the Firm employs several methodologies for estimating the likelihood of obligor or counterparty default. Methodologies for measuring credit risk vary depending on several factors, including type of asset (e.g., consumer versus wholesale), risk measurement parameters (e.g., delinquency status and borrower's credit score versus wholesale risk-rating) and risk management and collection processes (e.g., retail collection center versus centrally managed workout groups). Credit risk measurement is based on the probability of default of an obligor or counterparty, the loss severity given a default event and the exposure at default.

Based on these factors and related market-based inputs, the Firm estimates credit losses for its exposures. Probable credit losses inherent in the consumer and wholesale loan

portfolios are reflected in the allowance for loan losses, and probable credit losses inherent in lending-related commitments are reflected in the allowance for lending-related commitments. These losses are estimated using statistical analyses and other factors as described in Note 15 on pages 284–287 of this Annual Report. In addition, potential and unexpected credit losses are reflected in the allocation of credit risk capital and represent the potential volatility of actual losses relative to the established allowances for loan losses and lending-related commitments. The analyses for these losses include stress testing (considering alternative economic scenarios) as described in the Stress Testing section below.

The methodologies used to estimate credit losses depend on the characteristics of the credit exposure, as described below.

### Scored exposure

The scored portfolio is generally held in CCB and includes residential real estate loans, credit card loans, certain auto and business banking loans, and student loans. For the scored portfolio, credit loss estimates are based on statistical analysis of credit losses over discrete periods of time and are estimated using portfolio modeling, credit scoring, and decision-support tools, which consider loan level factors such as delinquency status, credit scores, collateral values, and other risk factors. Credit loss analyses also consider, as appropriate, uncertainties and other factors, including those related to current macroeconomic and political conditions, the quality of underwriting standards, and other internal and external factors. The factors and analysis are updated on a quarterly basis or more frequently as market conditions dictate.

### Risk-rated exposure

Risk-rated portfolios are generally held in CIB, CB and AM, but also include certain business banking and auto dealer loans held in CCB that are risk-rated because they have characteristics similar to commercial loans. For the risk-rated portfolio, credit loss estimates are based on estimates of the probability of default and loss severity given a default. The estimation process begins with risk-ratings that are assigned to each loan facility to differentiate risk within the portfolio. These risk-ratings are reviewed on an ongoing basis by Credit Risk management and revised as needed to reflect the borrower's current financial position, risk profile and related collateral. The probability of default is the likelihood that a loan will default and not be fully repaid by the borrower. The probability of default is estimated for each borrower, and a loss given default is estimated considering the collateral and structural support for each credit facility. The calculations and assumptions are based on management information systems and methodologies that are under continual review.

Management's discussion and analysis

Stress testing

Stress testing is important in measuring and managing credit risk in the Firm's credit portfolio. The process assesses the potential impact of alternative economic and business scenarios on estimated credit losses for the Firm. Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied across the businesses. These scenarios are articulated in terms of macroeconomic factors, and the stress test results may indicate credit migration, changes in delinquency trends and potential losses in the credit portfolio. In addition to the periodic stress testing processes, management also considers additional stresses outside these scenarios, as necessary. The Firm uses stress testing to inform our decisions on setting risk appetite both at a Firm and line of business level, as well as for assessing the impact of stress on industry concentrations.

Risk monitoring and management

The Firm has developed policies and practices that are designed to preserve the independence and integrity of the approval and decision-making process of extending credit to ensure credit risks are assessed accurately, approved properly, monitored regularly and managed actively at both the transaction and portfolio levels. The policy framework establishes credit approval authorities, concentration limits, risk-rating methodologies, portfolio review parameters and guidelines for management of distressed exposures. In addition, certain models, assumptions and inputs used in evaluating and monitoring credit risk are independently validated by groups that are separate from the line of businesses.

For consumer credit risk, delinquency and other trends, including any concentrations at the portfolio level, are monitored, as certain of these trends can be modified through changes in underwriting policies and portfolio guidelines. Consumer Risk Management evaluates delinquency and other trends against business expectations, current and forecasted economic conditions, and industry benchmarks. Loss mitigation strategies are employed for all residential real estate portfolios. These strategies include interest rate reductions, term or payment extensions, principal and interest deferral and other actions intended to minimize economic loss and avoid foreclosure. Historical and forecasted trends are incorporated into the modeling of estimated consumer credit losses and are part of the monitoring of the credit risk profile of the portfolio. Under the Firm's model risk policy, new significant risk management models, as well as major changes to such models, are required to be reviewed and approved by the Model Review Group prior to implementation into the operating environment. Internal Audit also periodically tests the internal controls around the modeling process including the integrity of the data utilized. For a discussion of the Model Review Group, see page 153 of this Annual Report. For further discussion of consumer loans, see Note 14 on pages 258–283 of this Annual Report.

Wholesale credit risk is monitored regularly at an aggregate portfolio, industry and individual counterparty level with established concentration limits that are reviewed and revised, as deemed appropriate by management, typically on an annual basis. Industry and counterparty limits, as measured in terms of exposure and economic credit risk capital, are subject to stress-based loss constraints.

Management of the Firm's wholesale credit risk exposure is accomplished through a number of means including:

- Loan underwriting and credit approval process
- Loan syndications and participations
- Loan sales and securitizations
- Credit derivatives
- Use of master netting agreements
- Collateral and other risk-reduction techniques

In addition to Risk Management, Internal Audit performs periodic exams, as well as continuous review, where appropriate, of the Firm's consumer and wholesale portfolios. For risk-rated portfolios, a credit review group within Internal Audit is responsible for:

- Independently assessing and validating the changing risk grades assigned to exposures; and
- Evaluating the effectiveness of business units' risk-ratings, including the accuracy and consistency of risk grades, the timeliness of risk grade changes and the justification of risk grades in credit memoranda

Risk reporting

To enable monitoring of credit risk and effective decision-making, aggregate credit exposure, credit quality forecasts, concentration levels and risk profile changes are reported regularly to senior Credit Risk Management. Detailed portfolio reporting of industry, customer, product and geographic concentrations occurs monthly, and the appropriateness of the allowance for credit losses is reviewed by senior management at least on a quarterly basis. Through the risk reporting and governance structure, credit risk trends and limit exceptions are provided regularly to, and discussed with, senior management and the Board of Directors as appropriate.

## CREDIT PORTFOLIO

## 2013 Credit Risk Overview

The credit environment in 2013 continued to improve, with reduced concerns around the European financial crisis and improving market conditions in the U.S. Over the course of the year, the Firm continued to actively manage its underperforming and nonaccrual loans and reduce such exposures through repayments, loan sales and workouts. The Firm saw decreased downgrade, default and charge-off activity and improved consumer delinquency trends. The Firm increased its overall lending activity driven by the wholesale businesses. The combination of these factors resulted in an improvement in the credit quality of the portfolio compared with 2012 and contributed to the Firm's reduction in the allowance for credit losses. For further discussion of the consumer credit environment and consumer loans, see Consumer Credit Portfolio on pages 120–129 and Note 14 on pages 258–283 of this Annual Report. For further discussion of wholesale credit environment and wholesale loans, see Wholesale Credit Portfolio on pages 130–138 and Note 14 on pages 258–283 of this Annual Report.

The following tables present the Firm's credit-related information with respect to its credit portfolio. Total credit exposure was \$1.9 trillion at December 31, 2013, an increase of \$2.2 billion from December 31, 2012, reflecting an increase in the wholesale portfolio of \$13.7 billion offset by a decrease in the consumer portfolio of \$11.5 billion. For further information on the changes in the credit portfolio, see Consumer Credit Portfolio on pages 120–129, and Wholesale Credit Portfolio on pages 130–138, of this Annual Report.

In the following tables, reported loans include loans retained (i.e., held-for-investment); loans held-for-sale (which are carried at the lower of cost or fair value, with valuation changes recorded in noninterest revenue); and certain loans accounted for at fair value. In addition, the Firm records certain loans accounted for at fair value in trading assets. For further information regarding these loans see Note 3 on pages 195–215 of this Annual Report. For additional information on the Firm's loans and derivative receivables, including the Firm's accounting policies, see Note 14 and Note 6 on pages 258–283 and 220–233, respectively, of this Annual Report.

For further information regarding the credit risk inherent in the Firm's investment securities portfolio, see Note 12 on pages 249–254 of this Annual Report.

Total credit portfolio December 31, 2013 (in millions)	Credit exposure		Nonperforming <sup>(c)(d)(e)</sup>	
	2013	2012	2013	2012
Loans retained	\$724,177	\$726,835	\$8,317	\$10,609
Loans held-for-sale	12,230	4,406	26	18
Loans at fair value <sup>(a)</sup>	2,011	2,555	197	265
Total loans – reported	738,418	733,796	8,540	10,892
Derivative receivables	65,759	74,983	415	239
Receivables from customers and other	26,883	23,761	—	—
Total credit-related assets	831,060	832,540	8,955	11,131
Assets acquired in loan satisfactions				
Real estate owned	NA	NA	710	738
Other	NA	NA	41	37
Total assets acquired in loan satisfactions	NA	NA	751	775
Total assets	831,060	832,540	9,706	11,906
Lending-related commitments	1,031,672	1,027,988	206	355
Total credit portfolio	\$1,862,732	\$1,860,528	\$9,912	\$12,261
Credit Portfolio Management derivatives notional, net <sup>(b)</sup>	\$(27,996)	\$(27,447)	\$(5)	\$(25)
Liquid securities and other cash collateral held against derivatives	(14,435)	(15,201)	NA	NA
Year ended December 31,		2013		2012

(in millions, except ratios)

Net charge-offs <sup>(f)</sup>	\$5,802	\$9,063	
Average retained loans			
Loans – reported	720,152	717,035	
Loans – reported, excluding residential real estate PCI loans	663,629	654,454	
Net charge-off rates <sup>(f)</sup>			
Loans – reported	0.81	% 1.26	%
Loans – reported, excluding PCI	0.87	1.38	

(a) During 2013, certain loans that resulted from restructurings that were previously classified as performing were reclassified as nonperforming loans. Prior periods were revised to conform with the current presentation.

(b) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. Excludes the synthetic credit portfolio. For additional information, see Credit derivatives on pages 137–138 and Note 6 on pages 220–233 of this Annual Report.

(c) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing. At December 31, 2013 and 2012, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of \$8.4 billion and \$10.6 billion, respectively, that are 90 or more days past due; (2) real estate owned insured by U.S. government agencies of \$2.0 billion and \$1.6 billion, respectively; and (3) student loans insured by

(d) U.S. government agencies under the FFELP of \$428 million and \$525 million, respectively, that are 90 or more days past due. These amounts have been excluded from nonaccrual loans based upon the government guarantee. In addition, the Firm’s policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance issued by the Federal Financial Institutions Examination Council (“FFIEC”).

(e) At December 31, 2013 and 2012, total nonaccrual loans represented 1.16% and 1.48%, respectively, of total loans. Net charge-offs and net charge-off rates for the year ended December 31, 2012, included \$800 million of

(f) incremental charge-offs of Chapter 7 loans. See Consumer Credit Portfolio on pages 120–129 of this Annual Report for further details.

Management's discussion and analysis

CONSUMER CREDIT PORTFOLIO

JPMorgan Chase's consumer portfolio consists primarily of residential real estate loans, credit card loans, auto loans, business banking loans, and student loans. The Firm's focus is on serving the prime segment of the consumer credit market. For further information on consumer loans, see Note 14 on pages 258–283 of this Annual Report.

A substantial portion of the consumer loans acquired in the Washington Mutual transaction were identified as purchased credit-impaired ("PCI") based on an analysis of high-risk characteristics, including product type, loan-to-value ("LTV") ratios, FICO risk scores and delinquency status. These PCI loans are accounted for on a pool basis, and the pools are considered to be performing. For further information on PCI loans see Note 14 on pages 258–283 of this Annual Report.

The credit performance of the consumer portfolio continues to improve as the economy slowly expands and home prices improve. Loss rates are improving, particularly in the credit card and residential real estate portfolios. Early-stage residential real estate delinquencies (30–89 days delinquent), excluding government guaranteed loans, declined from December 31, 2012. Late-stage delinquencies (150+ days delinquent) continued to decline but remain elevated. The elevated level of the late-stage delinquent loans is due, in part, to loss mitigation activities currently being undertaken and to elongated foreclosure processing timelines. Losses related to these loans continue to be recognized in accordance with the Firm's standard charge-off practices, but some delinquent loans that would otherwise have been foreclosed upon remain in the mortgage and home equity loan portfolios.

The following table presents consumer credit-related information with respect to the credit portfolio held by CCB as well as for prime mortgage loans held in the Asset Management and the Corporate/Private Equity segments for the dates indicated. For further information about the Firm's nonaccrual and charge-off accounting policies, see Note 14 on pages 258–283 of this Annual Report.

## Consumer credit portfolio

As of or for the year ended December 31, (in millions, except ratios)	Credit exposure		Nonaccrual loans <sup>(f)(g)</sup>		Net charge-offs <sup>(h)(i)</sup>		Average annual net charge-off rate <sup>(h)(i)(j)</sup>	
	2013	2012	2013	2012	2013	2012	2013	2012
Consumer, excluding credit card								
Loans, excluding PCI loans and loans held-for-sale								
Home equity – senior lien	\$17,113	\$19,385	\$932	\$931	\$132	\$279	0.72	%1.33 %
Home equity – junior lien	40,750	48,000	1,876	2,277	834	2,106	1.90	4.07
Prime mortgage, including option ARMs	87,162	76,256	2,666	3,445	59	487	0.07	0.64
Subprime mortgage	7,104	8,255	1,390	1,807	90	486	1.17	5.43
Auto <sup>(a)</sup>	52,757	49,913	161	163	158	188	0.31	0.39
Business banking	18,951	18,883	385	481	337	411	1.81	2.27
Student and other	11,557	12,191	86	70	297	340	2.51	2.58
Total loans, excluding PCI loans and loans held-for-sale	235,394	232,883	7,496	9,174	1,907	4,297	0.82	1.81
Loans – PCI								
Home equity	18,927	20,971	NA	NA	NA	NA	NA	NA
Prime mortgage	12,038	13,674	NA	NA	NA	NA	NA	NA
Subprime mortgage	4,175	4,626	NA	NA	NA	NA	NA	NA
Option ARMs	17,915	20,466	NA	NA	NA	NA	NA	NA
Total loans – PCI	53,055	59,737	NA	NA	NA	NA	NA	NA
Total loans – retained	288,449	292,620	7,496	9,174	1,907	4,297	0.66	1.43
Loans held-for-sale <sup>(b)</sup>	614	—	—	—	—	—	—	—
Total consumer, excluding credit card loans	289,063	292,620	7,496	9,174	1,907	4,297	0.66	1.43
Lending-related commitments								
Home equity – senior lien <sup>(f)</sup>	13,158	15,180						
Home equity – junior lien <sup>(f)</sup>	17,837	21,796						
Prime mortgage	4,817	4,107						
Subprime mortgage	—	—						
Auto	8,309	7,185						
Business banking	11,251	11,092						
Student and other	685	796						
Total lending-related commitments	56,057	60,156						
Receivables from customers <sup>(d)</sup>	139	113						
Total consumer exposure, excluding credit card	345,259	352,889						
Credit Card								
Loans retained <sup>(e)</sup>	127,465	127,993	—	1	3,879	4,944	3.14	3.95
Loans held-for-sale	326	—	—	—	—	—	—	—
Total credit card loans	127,791	127,993	—	1	3,879	4,944	3.14	3.95
Lending-related commitments <sup>(c)</sup>	529,383	533,018						

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Total credit card exposure	657,174	661,011							
Total consumer credit portfolio	\$1,002,433	\$1,013,900	\$7,496	\$9,175	\$5,786	\$9,241	1.40	%2.17	%
Memo: Total consumer credit portfolio, excluding PCI	\$949,378	\$954,163	\$7,496	\$9,175	\$5,786	\$9,241	1.62	%2.55	%

(a) At December 31, 2013 and 2012, excluded operating lease-related assets of \$5.5 billion and \$4.7 billion, respectively.

(b) Represents prime mortgage loans held-for-sale.

(c) Credit card and home equity lending-related commitments represent the total available lines of credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit would be used at the same time. For credit card and home equity commitments (if certain conditions are met), the Firm can reduce or cancel these lines of credit by providing the borrower notice or, in some cases, without notice as permitted by law.

(d) Receivables from customers primarily represent margin loans to retail brokerage customers, which are included in accrued interest and accounts receivable on the Consolidated Balance Sheets.

(e) Includes accrued interest and fees net of an allowance for the uncollectible portion of accrued interest and fee income.

(f) At December 31, 2013 and 2012, nonaccrual loans excluded: (1) mortgage loans insured by U.S. government agencies of \$8.4 billion and \$10.6 billion, respectively, that are 90 or more days past due; and (2) student loans insured by U.S. government agencies under the FFELP of \$428 million and \$525 million, respectively, that are 90 or more days past due. These amounts have been excluded from nonaccrual loans based upon the government guarantee. In addition, the Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

Management's discussion and analysis

- (g) Excludes PCI loans. The Firm is recognizing interest income on each pool of PCI loans as they are all performing. Charge-offs and net charge-off rates for the year ended December 31, 2012, included incremental Chapter 7 loan net charge-offs of \$91 million for senior lien home equity, \$539 million for junior lien home equity, \$47 million for prime mortgage, including option ARMs, \$70 million for subprime mortgage and \$53 million for auto loans. Net charge-off rates for the for the year ended December 31, 2012, excluding these incremental net charge-offs would have been 0.90%, 3.03%, 0.58%, 4.65% and 0.28% for the senior lien home equity, junior lien home equity, prime mortgage, including option ARMs, subprime mortgages and auto loans, respectively. See Consumer Credit Portfolio on pages 120–129 of this Annual Report for further details.
- (h) Net charge-offs and net charge-off rates excluded \$53 million of write-offs of prime mortgages in the PCI portfolio for the year ended December 31, 2013. See Consumer Credit Portfolio on pages 120–129 of this Annual Report for further details.
- (i) Average consumer loans held-for-sale were \$209 million and \$433 million, respectively, for the years ended December 31, 2013 and 2012. These amounts were excluded when calculating net charge-off rates.
- (j)

Consumer, excluding credit card

Portfolio analysis

Consumer loan balances declined during the year ended December 31, 2013, due to paydowns and the charge-off or liquidation of delinquent loans, partially offset by new mortgage and auto originations. Credit performance has improved across most portfolios but residential real estate charge-offs and delinquent loans remain elevated compared with pre-recessionary levels.

The following discussion relates to the specific loan and lending-related categories. PCI loans are generally excluded from individual loan product discussions and are addressed separately below. For further information about the Firm's consumer portfolio, including information about delinquencies, loan modifications and other credit quality indicators, see Note 14 on pages 258–283 of this Annual Report.

Home equity: The home equity portfolio at December 31, 2013, was \$57.9 billion, compared with \$67.4 billion at December 31, 2012. The decrease in this portfolio primarily reflected loan paydowns and charge-offs. Early-stage delinquencies showed improvement from December 31, 2012, for both senior and junior lien home equity loans. Late-stage delinquencies also improved from December 31, 2012, but continue to be elevated as improvement in the number of loans becoming severely delinquent was offset by higher average carrying value on these loans, reflecting improving collateral values. Senior lien nonaccrual loans were flat compared with the prior year while junior lien nonaccrual loans decreased in 2013. Net charge-offs for both senior and junior lien home equity loans declined when compared with the prior year as a result of improvement in delinquencies and home prices, as well as the impact of prior year incremental charge-offs reported in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy.

Approximately 20% of the Firm's home equity portfolio consists of home equity loans ("HELOANs") and the remainder consists of home equity lines of credit ("HELOCs"). HELOANs are generally fixed-rate, closed-end, amortizing loans, with terms ranging from 3–30 years. Approximately half of the HELOANs are senior liens and the remainder are junior liens. In general, HELOCs originated by the Firm are revolving loans for a 10-year period, after which time the HELOC recasts into a loan with a 20-year amortization period. At the time of origination, the borrower typically selects one of two minimum payment

options that will generally remain in effect during the revolving period: a monthly payment of 1% of the outstanding balance, or interest-only payments based on a variable index (typically Prime). HELOCs originated by Washington Mutual were generally revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term.

The unpaid principal balance of non-PCI HELOCs outstanding was \$50 billion at December 31, 2013. Based on the contractual terms of the loans, \$30 billion of the non-PCI HELOCs outstanding are scheduled to recast at which time the borrower must begin to make fully amortizing payments, of which, \$7 billion, \$8 billion and \$7 billion are

scheduled to recast in 2015, 2016 and 2017, respectively. However, of the \$30 billion in non-PCI HELOCs scheduled to recast, approximately \$14 billion are currently expected to recast, with the remaining \$16 billion representing loans to borrowers who are expected to prepay (including borrowers who appear to have the ability to refinance based on the borrower's LTV ratio and FICO score) or are loans that are expected to charge-off. The Firm has considered this payment recast risk in its allowance for loan losses based upon the estimated amount of payment shock (i.e., the excess of the fully-amortizing payment over the interest-only payment in effect prior to recast) expected to occur at the payment recast date, along with the corresponding estimated probability of default and loss severity assumptions. Certain factors, such as future developments in both unemployment and home prices, could have a significant impact on the expected and/or actual performance of these loans.

The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are exhibiting a material deterioration in their credit risk profile or when the collateral does not support the loan amount. The Firm will continue to evaluate both the near-term and longer-term repricing and recast risks inherent in its HELOC portfolio to ensure that changes in the Firm's estimate of incurred losses are appropriately considered in the allowance for loan losses and that the Firm's account management practices are appropriate given the portfolio's risk profile.

At December 31, 2013, the Firm estimated that its home equity portfolio contained approximately \$2.3 billion of current junior lien loans where the borrower has a first mortgage loan that is either delinquent or has been modified ("high-risk seconds"), compared with \$3.1 billion

at December 31, 2012. Such loans are considered to pose a higher risk of default than that of junior lien loans for which the senior lien is neither delinquent nor modified. The Firm estimates the balance of its total exposure to high-risk seconds on a quarterly basis using internal data and loan level credit bureau data (which typically provides the delinquency status of the senior lien). The estimated balance of these high-risk seconds may vary from quarter to quarter for reasons such as the movement of related senior liens into and out of the 30+ day delinquency bucket.

Current high risk junior liens

December 31, (in billions)	2013	2012
Junior liens subordinate to:		
Modified current senior lien	\$0.9	\$1.1
Senior lien 30 – 89 days delinquent	0.6	0.9
Senior lien 90 days or more delinquent <sup>(a)</sup>	0.8	1.1
Total current high risk junior liens	\$2.3	\$3.1

Junior liens subordinate to senior liens that are 90 days or more past due are classified as nonaccrual loans. At both (a) December 31, 2013 and 2012, excluded approximately \$100 million of junior liens that are performing but not current, which were also placed on nonaccrual in accordance with the regulatory guidance.

Of the estimated \$2.3 billion of high-risk junior liens at December 31, 2013, the Firm owns approximately 5% and services approximately 25% of the related senior lien loans to the same borrowers. The performance of the Firm's junior lien loans is generally consistent regardless of whether the Firm owns, services or does not own or service the senior lien. The increased probability of default associated with these higher-risk junior lien loans was considered in estimating the allowance for loan losses.

Mortgage: Mortgage loans at December 31, 2013, including prime, subprime and loans held-for-sale, were \$94.9 billion, compared with \$84.5 billion at December 31, 2012. The mortgage portfolio increased in 2013 as retained prime mortgage originations, which represent loans with high credit quality, were greater than paydowns and the charge-off or liquidation of delinquent loans. Net charge-offs decreased from the prior year reflecting continued home price improvement and favorable delinquency trends. Delinquency levels remain elevated compared with pre-recessionary levels.

Prime mortgages, including option adjustable-rate mortgages (“ARMs”) and loans held-for-sale, were \$87.8 billion at December 31, 2013, compared with \$76.3 billion at December 31, 2012. Prime mortgage loans increased as retained originations exceeded paydowns, the run-off of option ARM loans and the charge-off or liquidation of delinquent loans. Excluding loans insured by U.S. government agencies, both early-stage and late-stage delinquencies showed improvement from December 31, 2012. Nonaccrual loans decreased from the prior year but remain elevated as a result of elongated foreclosure processing timelines. Net charge-offs continued to improve, as a result of improvement in delinquencies and home prices.

At December 31, 2013 and 2012, the Firm's prime mortgage portfolio included \$14.3 billion and \$15.6 billion, respectively, of mortgage loans insured and/or guaranteed by U.S. government agencies, of which \$9.6 billion and \$11.8 billion, respectively, were 30 days or more past due, including \$8.4 billion and \$10.6 billion, respectively, which were 90 days or more past due. Following the Firm's settlement regarding loans insured under federal mortgage insurance programs overseen by FHA, HUD, and VA, the Firm will continue to monitor exposure on future claim payments for government insured loans; however, any financial impact related to exposure on future claims is not expected to be significant.

At December 31, 2013 and 2012, the Firm's prime mortgage portfolio included \$15.6 billion and \$16.0 billion, respectively, of interest-only loans, which represented 18% and 21% of the prime mortgage portfolio, respectively. These loans have an interest-only payment period generally followed by an adjustable-rate or fixed-rate fully amortizing payment to maturity and are typically originated as higher-balance loans to higher-income borrowers. The decrease in this portfolio was primarily due to voluntary prepayments, as borrowers are generally refinancing into lower rate products. To date, losses on this portfolio generally have been consistent with the broader prime mortgage portfolio and the Firm's expectations. The Firm continues to monitor the risks associated with these loans.

Non-PCI option ARM loans acquired by the Firm as part of the Washington Mutual transaction, which are included in the prime mortgage portfolio, were \$5.6 billion and \$6.5 billion and represented 6% and 9% of the prime mortgage portfolio at December 31, 2013 and 2012, respectively. The decrease in option ARM loans resulted from portfolio runoff. As of December 31, 2013, approximately 4% of option ARM borrowers were delinquent. Substantially all of the remaining borrowers were making amortizing payments, although such payments are not necessarily fully amortizing and may be subject to risk of payment shock due to future payment recast. The Firm estimates the following balances of option ARM loans will undergo a payment recast that results in a payment increase: \$807 million in 2014, \$675 million in 2015 and \$164 million in 2016. As the Firm's option ARM loans, other than those held in the PCI portfolio, are primarily loans with lower LTV ratios and higher borrower FICO scores, it is possible that many of these borrowers will be able to refinance into a lower rate product, which would reduce this payment recast risk. To date, losses realized on option ARM loans that have undergone payment recast have been immaterial and consistent with the Firm's expectations.

Subprime mortgages at December 31, 2013, were \$7.1 billion, compared with \$8.3 billion at December 31, 2012. The decrease was due to portfolio runoff. Early-stage and late-stage delinquencies as well as nonaccrual loans have improved from December 31, 2012, but remain at elevated

## Management's discussion and analysis

levels. Net charge-offs continued to improve as a result of improvement in delinquencies and home prices.

Auto: Auto loans at December 31, 2013, were \$52.8 billion, compared with \$49.9 billion at December 31, 2012. Loan balances increased due to new originations, partially offset by paydowns and payoffs. Delinquencies and nonaccrual loans improved compared with December 31, 2012. Net charge-offs decreased from the prior year due to prior year incremental charge-offs reported in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy. Loss levels are considered low as a result of favorable trends in both loss frequency and loss severity, mainly due to enhanced underwriting standards and a strong used car market. The auto loan portfolio reflected a high concentration of prime-quality credits.

Business banking: Business banking loans at December 31, 2013, were \$19.0 billion, compared with \$18.9 billion at December 31, 2012. Business Banking loans primarily include loans that are collateralized, often with personal loan guarantees, and may also include Small Business Administration guarantees. Nonaccrual loans showed improvement from December 31, 2012. Net charge-offs declined for the year ended December 31, 2013, compared with the year ended December 31, 2012.

Student and other: Student and other loans at December 31, 2013, were \$11.6 billion, compared with \$12.2 billion at December 31, 2012. The decrease was primarily due to runoff of the student loan portfolio. Other loans primarily include other secured and unsecured consumer loans. Nonaccrual loans increased compared with December 31, 2012, while net charge-offs decreased for the year ended December 31, 2013, compared with the prior year.

Purchased credit-impaired loans: PCI loans at December 31, 2013, were \$53.1 billion, compared with \$59.7 billion at December 31, 2012. This portfolio represents loans acquired in the Washington Mutual transaction, which were recorded at fair value at the time of acquisition. PCI HELOCs originated by Washington Mutual were generally revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term. Substantially all undrawn HELOCs within the revolving period have been blocked.

As of December 31, 2013, approximately 19% of the option ARM PCI loans were delinquent and approximately 54% have been modified into fixed-rate, fully amortizing loans. Substantially all of the remaining loans are making amortizing payments, although such payments are not necessarily fully amortizing. This latter group of loans are subject to the risk of payment shock due to future payment recast.

Default rates generally increase on option ARM loans when payment recast results in a payment increase. The expected increase in default rates is considered in the Firm's

quarterly impairment assessment. The cumulative amount of unpaid interest added to the unpaid principal balance of the option ARM PCI pool was \$724 million and \$879 million at December 31, 2013, and December 31, 2012, respectively. The Firm estimates the following balances of option ARM PCI loans will undergo a payment recast that results in a payment increase: \$487 million in 2014, \$810 million in 2015 and \$710 million in 2016.

The following table provides a summary of lifetime principal loss estimates included in both the nonaccretable difference and the allowance for loan losses.

## Summary of lifetime principal loss estimates

December 31, (in billions)	Lifetime loss estimates <sup>(a)</sup>		LTD liquidation losses <sup>(b)</sup>	
	2013	2012	2013	2012
Home equity	\$14.7	\$14.9	\$12.1	\$11.5
Prime mortgage	3.8	4.2	3.3	2.9
Subprime mortgage	3.3	3.6	2.6	2.2
Option ARMs	10.2	11.3	8.8	8.0
Total	\$32.0	\$34.0	\$26.8	\$24.6

Includes the original nonaccretable difference established in purchase accounting of \$30.5 billion for principal losses only plus additional principal losses recognized subsequent to acquisition through the provision and allowance for loan losses. The remaining nonaccretable difference for principal losses only was \$3.8 billion and \$5.8 billion at December 31, 2013 and 2012, respectively.

Life-to-date (“LTD”) liquidation losses represent both realization of loss upon loan resolution and any principal (b) forgiven upon modification. LTD liquidation losses included \$53 million of write-offs of prime mortgages for the year ended December 31, 2013.

Lifetime principal loss estimates declined from December 31, 2012, to December 31, 2013, reflecting improvement in home prices and delinquencies. The decline in lifetime principal loss estimates during the year ended December 31, 2013, resulted in a \$1.5 billion reduction of the PCI allowance for loan losses (\$1.0 billion related to option ARM loans, \$200 million to subprime mortgage, \$150 million to home equity loans and \$150 million to prime mortgage). In addition, for the year ended December 31, 2013, PCI write-offs of \$53 million were recorded against the prime mortgage allowance for loan losses. For further information about the Firm’s PCI loans, including write-offs, see Note 14 on pages 258–283 of this Annual Report.

As a result of reserve actions and PCI prime mortgage write-offs, the allowance for loan loss for the PCI portfolio declined from \$5.7 billion at December 31, 2012, to \$4.2 billion at December 31, 2013. The allowance for loan losses decreased from \$1.5 billion to \$494 million for the option ARM portfolio, from \$1.9 billion to \$1.7 billion for prime mortgage, from \$380 million to \$180 million for subprime mortgage and from \$1.9 billion to \$1.8 billion for the home equity portfolio from December 31, 2012 to December 31, 2013.

#### Geographic composition of residential real estate loans

At December 31, 2013, California had the greatest concentration of residential real estate loans with 25% of the total retained residential real estate loan portfolio, excluding mortgage loans insured by U.S. government agencies and PCI loans, compared with 24% at December 31, 2012. Of these loans, \$85.9 billion, or 62%, were concentrated in California, New York, Illinois, Florida and Texas at December 31, 2013, compared with \$82.4 billion, or 60%, at December 31, 2012. The unpaid principal balance of PCI loans concentrated in these five states represented 74% of total PCI loans at December 31, 2013, compared with 73% at December 31, 2012.

#### Current estimated LTVs of residential real estate loans

The current estimated average LTV ratio for residential real estate loans retained, excluding mortgage loans insured by U.S. government agencies and PCI loans, was 75% at December 31, 2013, compared with 81% at December 31, 2012. Of these loans, 9% had a current estimated LTV ratio greater than 100%, and 2% had a current estimated LTV ratio greater than 125% at December 31, 2013, compared with 20% and 8%, respectively, at December 31, 2012.

Although home prices continue to recover, the decline in home prices since 2007 has had a significant impact on the collateral values underlying the Firm's residential real estate loan portfolio. In general, the delinquency rate for loans with high LTV ratios is greater than the delinquency rate for loans in which the borrower has equity in the collateral. While a large portion of the loans with current estimated LTV ratios greater than 100% continue to pay and are current, the continued willingness and ability of these borrowers to pay remains a risk.

## Management's discussion and analysis

The following table for PCI loans presents the current estimated LTV ratios, as well as the ratios of the carrying value of the underlying loans to the current estimated collateral value. Because such loans were initially measured at fair value, the ratios of the carrying value to the current estimated collateral value will be lower than the current estimated LTV ratios, which are based on the unpaid principal balances. The estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting ratios are necessarily imprecise and should therefore be viewed as estimates.

## LTV ratios and ratios of carrying values to current estimated collateral values – PCI loans

December 31, (in millions, except ratios)	2013				2012				
	Unpaid principal balance	Current estimated LTV ratio <sup>(a)</sup>	Net carrying value <sup>(c)</sup>	Ratio of net carrying value to current estimated collateral value <sup>(c)</sup>	Unpaid principal balance	Current estimated LTV ratio <sup>(a)</sup>	Net carrying value <sup>(c)</sup>	Ratio of net carrying value to current estimated collateral value <sup>(c)</sup>	
Home equity	\$19,830	90	% <sup>(b)</sup> \$17,169	78	% \$22,343	111	% <sup>(b)</sup> \$19,063	95	%
Prime mortgage	11,876	83	10,312	72	13,884	104	11,745	88	
Subprime mortgage	5,471	91	3,995	66	6,326	107	4,246	72	
Option ARMs	19,223	82	17,421	74	22,591	101	18,972	85	

Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current <sup>(a)</sup> property values are estimated at least quarterly based on home valuation models that utilize nationally recognized home price index valuation estimates; such models incorporate actual data to the extent available and forecasted data where actual data is not available.

Represents current estimated combined LTV for junior home equity liens, which considers all available lien <sup>(b)</sup> positions, as well as unused lines, related to the property. All other products are presented without consideration of subordinate liens on the property.

Net carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition and is also net of the allowance for loan losses at December 31, 2013 and 2012 of \$1.8 <sup>(c)</sup> billion and \$1.9 billion for home equity, \$1.7 billion and \$1.9 billion for prime mortgage, \$494 million and \$1.5 billion for option ARMs, and \$180 million and \$380 million for subprime mortgage, respectively.

The current estimated average LTV ratios were 85% and 103% for California and Florida PCI loans, respectively, at December 31, 2013, compared with 110% and 125%, respectively, at December 31, 2012. Average LTV ratios have declined consistent with recent improvement in home prices. Although home prices have improved, home prices in California and Florida are still lower than at the peak of the housing market; this continues to negatively contribute to current estimated average LTV ratios and the ratio of net carrying value to current estimated collateral value for loans in the PCI portfolio. Of the total PCI portfolio, 26% had a current estimated LTV ratio greater than 100%, and 7% had a current LTV ratio of greater than 125% at December 31, 2013, compared with 55% and 24%, respectively, at December 31, 2012.

While the current estimated collateral value is greater than the net carrying value of PCI loans, the ultimate performance of this portfolio is highly dependent on borrowers' behavior and ongoing ability and willingness to continue to make payments on homes with negative equity, as well as on the cost of alternative housing. For further information on the geographic composition and current estimated LTVs of residential real estate – non-PCI and PCI loans, see Note 14 on pages 258–283 of this Annual Report.

## Loan modification activities – residential real estate loans

For both the Firm's on-balance sheet loans and loans serviced for others, more than 1.5 million mortgage modifications have been offered to borrowers and approximately 734,000 have been approved since the beginning of 2009. Of these, more than 725,000 have achieved permanent modification as of December 31,

2013. Of the remaining modifications offered, 9% are in a trial period or still being reviewed for a modification, while 91% have dropped out of the modification program or otherwise were deemed not eligible for final modification. The Firm is participating in the U.S. Treasury's Making Home Affordable ("MHA") programs and is continuing to offer its other loss-mitigation programs to financially distressed borrowers who do not qualify for the U.S. Treasury's programs. The MHA programs include the Home Affordable Modification Program ("HAMP") and the Second Lien Modification Program ("2MP"). The Firm's other loss-mitigation programs for troubled borrowers who do not qualify for HAMP include the traditional modification programs offered by the GSEs and other governmental agencies, as well as the Firm's proprietary modification programs, which include concessions similar to those offered under HAMP and 2MP but with expanded eligibility criteria. In addition, the Firm has offered specific targeted modification programs to higher risk borrowers, many of whom were current on their mortgages prior to modification. For further information about how loans are modified, see Note 14, Loan modifications, on pages 268–273 of this Annual Report. Loan modifications under HAMP and under one of the Firm's proprietary modification programs, which are largely modeled after HAMP, require at least three payments to be made under the new terms during a trial modification period, and must be successfully re-underwritten with income verification before the loan can be permanently modified. In the case of specific targeted modification programs, re-underwriting the loan or a trial modification period is generally not required, unless the targeted loan is

delinquent at the time of modification. When the Firm modifies home equity lines of credit, future lending commitments related to the modified loans are canceled as part of the terms of the modification.

The primary indicator used by management to monitor the success of the modification programs is the rate at which the modified loans redefault. Modification redefault rates are affected by a number of factors, including the type of loan modified, the borrower's overall ability and willingness to repay the modified loan and macroeconomic factors. Reduction in payment size for a borrower has shown to be the most significant driver in improving redefault rates.

The performance of modified loans generally differs by product type and also on whether the underlying loan is in the PCI portfolio, due both to differences in credit quality and in the types of modifications provided. Performance metrics for modifications to the residential real estate portfolio, excluding PCI loans, that have been seasoned more than six months show weighted average redefault rates of 20% for senior lien home equity, 20% for junior lien home equity, 15% for prime mortgages including option ARMs, and 26% for subprime mortgages. The cumulative performance metrics for modifications to the PCI residential real estate portfolio seasoned more than six months show weighted average redefault rates of 20% for home equity, 16% for prime mortgages, 14% for option ARMs and 29% for subprime mortgages. The favorable performance of the PCI option ARM modifications is the result of a targeted proactive program which fixes the borrower's payment at the current level. The cumulative redefault rates reflect the performance of modifications completed under both HAMP and the Firm's proprietary modification programs from October 1, 2009, through December 31, 2013.

Certain loans that were modified under HAMP and the Firm's proprietary modification programs (primarily the Firm's modification program that was modeled after HAMP) have interest rate reset provisions ("step-rate modifications"). Beginning in 2014, interest rates on these loans will generally increase by 1% per year until the rate reaches a specified cap, typically at a prevailing market interest rate for a fixed-rate loan as of the modification date. The carrying value of non-PCI loans modified in step-rate modifications was \$5 billion at December 31, 2013, with \$1 billion and \$2 billion scheduled to experience the initial interest rate increase in 2015 and 2016, respectively. The unpaid principal balance of PCI loans modified in step-rate modifications was \$11 billion at December 31, 2013, with \$2 billion and \$3 billion scheduled to experience the initial interest rate increase in 2015 and 2016, respectively. The impact of these potential interest rate increases is appropriately considered in the Firm's allowance for loan losses. The Firm will continue to monitor this risk exposure to ensure that it is appropriately considered in the Firm's allowance for loan losses.

The following table presents information as of December 31, 2013 and 2012, relating to modified on-balance sheet residential real estate loans for which concessions have been granted to borrowers experiencing financial difficulty. Modifications of PCI loans continue to be accounted for and reported as PCI loans, and the impact of the modification is incorporated into the Firm's quarterly assessment of estimated future cash flows. Modifications of consumer loans other than PCI loans are generally accounted for and reported as troubled debt restructurings ("TDRs"). For further information on TDRs for the years ended December 31, 2013 and 2012, see Note 14 on pages 258–283 of this Annual Report.

#### Modified residential real estate loans

December 31, (in millions)	2013		2012	
	On-balance sheet loans	Nonaccrual on-balance sheet loans <sup>(d)</sup>	On-balance sheet loans	Nonaccrual on-balance sheet loans <sup>(d)</sup>
Modified residential real estate loans, excluding PCI loans <sup>(a)(b)</sup>				
Home equity – senior lien	\$1,146	\$641	\$1,092	\$607
Home equity – junior lien	1,319	666	1,223	599
Prime mortgage, including option ARMs	7,004	1,737	7,118	1,888
Subprime mortgage	3,698	1,127	3,812	1,308

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Total modified residential real estate loans, excluding PCI loans	\$13,167	\$4,171	\$13,245	\$4,402
Modified PCI loans <sup>(c)</sup>				
Home equity	\$2,619	NA	\$2,302	NA
Prime mortgage	6,977	NA	7,228	NA
Subprime mortgage	4,168	NA	4,430	NA
Option ARMs	13,131	NA	14,031	NA
Total modified PCI loans	\$26,895	NA	\$27,991	NA

(a) Amounts represent the carrying value of modified residential real estate loans.

At December 31, 2013 and 2012, \$7.6 billion and \$7.5 billion, respectively, of loans modified subsequent to repurchase from Ginnie Mae in accordance with the standards of the appropriate government agency (i.e., FHA,

(b) VA, RHS) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure. For additional information about sales of loans in securitization transactions with Ginnie Mae, see Note 16 on pages 288–299 of this Annual Report.

(c) Amounts represent the unpaid principal balance of modified PCI loans.

As of December 31, 2013 and 2012, nonaccrual loans included \$3.0 billion and \$2.9 billion, respectively, of TDRs

(d) for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status, see Note 14 on pages 258–283 of this Annual Report.

## Management's discussion and analysis

## Nonperforming assets

The following table presents information as of December 31, 2013 and 2012, about consumer, excluding credit card, nonperforming assets.

Nonperforming assets<sup>(a)</sup>

December 31, (in millions)	2013	2012
Nonaccrual loans <sup>(b)</sup>		
Residential real estate	\$6,864	\$8,460
Other consumer	632	714
Total nonaccrual loans	7,496	9,174
Assets acquired in loan satisfactions		
Real estate owned	614	647
Other	41	37
Total assets acquired in loan satisfactions	655	684
Total nonperforming assets	\$8,151	\$9,858

At December 31, 2013 and 2012, nonperforming assets excluded: (1) mortgage loans insured by U.S. government agencies of \$8.4 billion and \$10.6 billion, respectively, that are 90 or more days past due; (2) real estate owned (a)insured by U.S. government agencies of \$2.0 billion and \$1.6 billion, respectively; and (3) student loans insured by U.S. government agencies under the FFELP of \$428 million and \$525 million, respectively, that are 90 or more days past due. These amounts have been excluded from nonaccrual loans based upon the government guarantee.

Excludes PCI loans that were acquired as part of the Washington Mutual transaction, which are accounted for on a pool basis. Since each pool is accounted for as a single asset with a single composite interest rate and an aggregate (b)expectation of cash flows, the past-due status of the pools, or that of individual loans within the pools, is not meaningful. Because the Firm is recognizing interest income on each pool of loans, they are all considered to be performing.

Nonaccrual loans: The following table presents changes in the consumer, excluding credit card, nonaccrual loans for the years ended December 31, 2013 and 2012.

## Nonaccrual loans

Year ended December 31,

(in millions)	2013	2012
Beginning balance	\$9,174	\$7,411
Additions	6,618	12,605
Reductions:		
Principal payments and other <sup>(a)</sup>	1,559	1,445
Charge-offs	1,869	2,771
Returned to performing status	3,793	4,738
Foreclosures and other liquidations	1,075	1,888
Total reductions	8,296	10,842
Net additions/(reductions)	(1,678)	) 1,763
Ending balance	\$7,496	\$9,174

(a) Other reductions includes loan sales.

Included \$1.7 billion of Chapter 7 loans at September 30, 2012, and \$1.6 billion as a result of reporting performing (b)junior lien home equity loans that are subordinate to senior liens that are 90 days or more past due as nonaccrual loans based on regulatory guidance at March 31, 2012.

Nonaccrual loans in the residential real estate portfolio totaled \$6.9 billion at December 31, 2013, of which 34% were greater than 150 days past due, compared with \$8.5 billion at December 31, 2012, of which 42% were greater than 150 days past due. In the aggregate, the unpaid principal balance of residential real estate loans greater

than 150 days past due was charged down by approximately 51% and 52% to estimated net realizable value of the collateral at December 31, 2013 and 2012, respectively. The elongated foreclosure processing timelines are expected

to continue to result in elevated levels of nonaccrual loans in the residential real estate portfolios.

At December 31, 2012, the Firm reported, in accordance with regulatory guidance, \$1.7 billion of residential real estate and auto loans that were discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower (“Chapter 7 loans”) as collateral-dependent nonaccrual TDRs, regardless of their delinquency status. Pursuant to that guidance, these Chapter 7 loans were charged off to the net realizable value of the collateral, resulting in \$800 million of charge-offs for the year ended December 31, 2012. The Firm expects to recover a significant amount of these losses over time as principal payments are received. The Firm also began reporting performing junior liens that are subordinate to senior liens that are 90 days or more past due as nonaccrual loans in the first quarter of 2012, based upon regulatory guidance. Nonaccrual loans included \$3.0 billion of loans at December 31, 2012 based upon the regulatory guidance noted above. The prior year was not restated for the policy changes.

Real estate owned (“REO”): REO assets are managed for prompt sale and disposition at the best possible economic value. REO assets are those individual properties where the Firm receives the property in satisfaction of a debt (e.g., by taking legal title or physical possession). The Firm generally recognizes REO assets at the completion of the foreclosure process or upon execution of a deed in lieu of foreclosure with the borrower. REO assets, excluding those insured by U.S. government agencies, decreased by \$33 million from \$647 million at December 31, 2012, to \$614 million at December 31, 2013.

At December 31, 2013 and 2012, the Firm had non-PCI residential real estate loans, excluding those insured by the U.S. government agencies, with a carrying value of \$2.1 billion and \$3.4 billion, respectively; not included in REO, that were in the process of active or suspended foreclosure. The Firm also had PCI residential real estate loans that were in the process of active or suspended foreclosure at December 31, 2013 and 2012, with an unpaid principal balance of \$4.8 billion and \$8.2 billion, respectively.

#### Credit Card

Total credit card loans were \$127.8 billion at December 31, 2013, a decrease of \$202 million from December 31, 2012. The 30+ day delinquency rate decreased to 1.67% at December 31, 2013, from 2.10% at December 31, 2012. For the years ended December 31, 2013 and 2012, the net charge-off rates were 3.14% and 3.95% respectively. Charge-offs have improved compared with a year ago as a result of continued improvement in delinquent loans. The credit card portfolio continues to reflect a well-seasoned,

largely rewards-based portfolio that has good U.S. geographic diversification. The greatest geographic concentration of credit card retained loans is in California, which represented 13% of total retained loans at both December 31, 2013 and 2012. Loan outstanding concentration for the top five states of California, New York, Texas, Illinois and Florida consisted of \$52.7 billion in receivables, or 41% of the retained loan portfolio, at December 31, 2013, compared with \$52.3 billion, or 41%, at December 31, 2012.

#### Geographic composition of Credit Card loans

##### Modifications of credit card loans

At December 31, 2013 and 2012, the Firm had \$3.1 billion and \$4.8 billion, respectively, of credit card loans outstanding that have been modified in TDRs. These balances included both credit card loans with modified payment terms and credit card loans that reverted back to their pre-modification payment terms because the cardholder did not comply with the modified payment terms. The decrease in modified credit card loans outstanding from December 31, 2012, was attributable to a reduction in new modifications as well as ongoing payments and charge-offs on previously modified credit card loans.

Consistent with the Firm's policy, all credit card loans typically remain on accrual status until charged-off. However, the Firm establishes an allowance, which is offset against loans and charged to interest income, for the estimated uncollectible portion of accrued interest and fee income.

For additional information about loan modification programs to borrowers, see Note 14 on pages 258–283 of this Annual Report.

## Management's discussion and analysis

## WHOLESALE CREDIT PORTFOLIO

The wholesale credit environment remained favorable throughout 2013 driving an increase in commercial client activity. Discipline in underwriting across all areas of lending continues to remain a key point of focus, consistent with evolving market conditions and the Firm's risk management activities. The wholesale portfolio is actively managed, in part by conducting ongoing, in-depth reviews of credit quality and of industry, product and client concentrations. During the year, wholesale criticized assets and nonperforming assets decreased from higher levels experienced in 2012, including a reduction in nonaccrual loans by 39%.

As of December 31, 2013, wholesale exposure (primarily CIB, CB and AM) increased by \$13.7 billion from December 31, 2012, primarily driven by increases of \$11.4 billion in lending-related commitments and \$8.4 billion in loans reflecting increased client activity primarily in CB and AM. These increases were partially offset by a \$9.2 billion decrease in derivative receivables. Derivative receivables decreased predominantly due to reductions in interest rate derivatives driven by an increase in interest rates and reductions in commodity derivatives due to market movements. The decreases were partially offset by an increase in equity derivatives driven by a rise in equity markets.

## Wholesale credit portfolio

December 31, (in millions)	Credit exposure		Nonperforming <sup>(d)</sup>	
	2013	2012	2013	2012
Loans retained	\$308,263	\$306,222	\$821	\$1,434
Loans held-for-sale	11,290	4,406	26	18
Loans at fair value <sup>(a)</sup>	2,011	2,555	197	265
Loans – reported	321,564	313,183	1,044	1,717
Derivative receivables	65,759	74,983	415	239
Receivables from customers and other <sup>(b)</sup>	26,744	23,648	—	—
Total wholesale credit-related assets	414,067	411,814	1,459	1,956
Lending-related commitments	446,232	434,814	206	355
Total wholesale credit exposure	\$860,299	\$846,628	\$1,665	\$2,311
Credit Portfolio Management derivatives notional, net <sup>(c)</sup>	\$(27,996)	\$(27,447)	\$(5)	\$(25)
Liquid securities and other cash collateral held against derivatives	(14,435)	(15,201)	NA	NA

(a) During 2013, certain loans that resulted from restructurings that were previously classified as performing were reclassified as nonperforming loans. Prior periods were revised to conform with the current presentation.

(b) Receivables from customers and other primarily includes margin loans to prime and retail brokerage customers; these are classified in accrued interest and accounts receivable on the Consolidated Balance Sheets.

(c) Represents the net notional amount of protection purchased and sold through credit derivatives used to manage both performing and nonperforming wholesale credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. Excludes the synthetic credit portfolio. For additional information, see Credit derivatives on pages 137–138, and Note 6 on pages 220–233 of this Annual Report.

(d) Excludes assets acquired in loan satisfactions.

The following table presents summaries of the maturity and ratings profiles of the wholesale credit portfolio as of December 31, 2013 and 2012. The ratings scale is based on the Firm's internal risk ratings, which generally correspond to the ratings as defined by S&P and Moody's.

## Wholesale credit exposure – maturity and ratings profile

December 31, 2013 (in millions, except ratios)	Maturity profile <sup>(e)</sup>			Total	Ratings profile			Total % of IG
	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years		Investment-grade AAA/Aaa to BBB-/Baa3	Noninvestment-grade BB+/Ba1 & below	Total	
Loans retained	\$108,392	\$124,111	\$75,760	\$308,263	\$226,070	\$ 82,193	\$308,263	73 %
Derivative receivables				65,759			65,759	
Less: Liquid securities and other cash collateral held against derivatives				(14,435 )			(14,435 )	
Total derivative receivables, net of all collateral	13,550	15,935	21,839	51,324	44,677	6,647	51,324	87
Lending-related commitments	179,301	255,426	11,505	446,232	353,974	92,258	446,232	79
Subtotal	301,243	395,472	109,104	805,819	624,721	181,098	805,819	78
Loans held-for-sale and loans at fair value <sup>(a)</sup>				13,301			13,301	
Receivables from customers and other				26,744			26,744	
Total exposure – net of liquid securities and other cash collateral held against derivatives				\$845,864			\$845,864	
Credit Portfolio Management derivatives net notional by reference entity ratings profile <sup>(b)(c)(d)</sup>	\$(1,149 )	\$(19,516 )	\$(7,331 )	\$(27,996 )	\$(24,649 )	\$ (3,347 )	\$(27,996 )	88 %

December 31, 2012 (in millions, except ratios)	Maturity profile <sup>(e)</sup>			Total	Ratings profile			Total % of IG
	Due in 1 year or less	Due after 1 year through 5 years	Due after 5 years		Investment-grade AAA/Aaa to BBB-/Baa3	Noninvestment-grade BB+/Ba1 & below	Total	
Loans retained	\$115,227	\$117,673	\$73,322	\$306,222	\$214,446	\$ 91,776	\$306,222	70 %
Derivative receivables				74,983			74,983	
Less: Liquid securities and other cash collateral held against derivatives				(15,201 )			(15,201 )	
Total derivative receivables, net of all collateral	13,344	17,310	29,128	59,782	50,069	9,713	59,782	84
	164,327	261,261	9,226	434,814	347,316	87,498	434,814	80

Lending-related commitments								
Subtotal	292,898	396,244	111,676	800,818	611,831	188,987	800,818	76
Loans held-for-sale and loans at fair value <sup>(a)</sup>				6,961			6,961	
Receivables from customers and other				23,648			23,648	
Total exposure – net of liquid securities and other cash collateral held against derivatives				\$831,427			\$831,427	
Credit Portfolio Management derivatives net notional by reference entity ratings profile <sup>(b)(c)(d)</sup>	\$(1,579 )	\$(16,475 )	\$(9,393 )	\$(27,447 )	\$(24,622 )	\$( 2,825 )	\$(27,447 )	90 %

(a) Represents loans held-for-sale primarily related to syndicated loans and loans transferred from the retained portfolio, and loans at fair value.

(b) These derivatives do not qualify for hedge accounting under U.S. GAAP. Excludes the synthetic credit portfolio.

(c) The notional amounts are presented on a net basis by underlying reference entity and the ratings profile shown is based on the ratings of the reference entity on which protection has been purchased.

(d) Predominantly all of the credit derivatives entered into by the Firm where it has purchased protection, including Credit Portfolio Management derivatives, are executed with investment grade counterparties.

(e) The maturity profile of retained loans, lending-related commitments and derivative receivables is based on remaining contractual maturity. Derivatives contracts that are in a receivable position at December 31, 2013, may become a payable prior to maturity based on their cash flow profile or changes in market conditions. Prior to this Annual Report, the maturity profile of derivative receivables was based on the maturity profile of average exposure (see pages 135–136 of this Annual Report for more detail); prior period amounts have been revised to conform to the current presentation.

#### Wholesale credit exposure – selected industry exposures

The Firm focuses on the management and diversification of its industry exposures, paying particular attention to industries with actual or potential credit concerns. Exposures deemed criticized align with the U.S. banking regulators' definition of criticized exposures, which consist of the special mention, substandard and doubtful categories. The total criticized component of the portfolio, excluding loans held-for-sale and loans at fair value, decreased by 22% to \$12.2 billion at December 31, 2013, from \$15.6 billion at December 31, 2012, primarily due to repayments and sales.

## Management's discussion and analysis

Below are summaries of the top 25 industry exposures as of December 31, 2013 and 2012. For additional information on industry concentrations, see Note 5 on page 219 of this Annual Report.

As of or for the year ended December 31, 2013 (in millions)	Noninvestment-grade <sup>(e)</sup>					Selected metrics			Liquid securities and other cash collateral held against derivative receivables
	Credit exposure <sup>(d)</sup>	Investment-grade	Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs (recoveries)	Credit derivatives <sup>(f)</sup>	
<b>Top 25 industries<sup>(a)</sup></b>									
Real Estate	\$87,102	\$62,964	\$21,505	\$2,286	\$347	\$178	\$6	\$(66)	\$(125)
Banks & Finance Cos	66,881	56,675	9,707	431	68	14	(22)	(2,692)	(6,227)
Oil & Gas	46,934	34,708	11,779	436	11	34	13	(227)	(67)
Healthcare	45,910	37,635	7,952	317	6	49	3	(198)	(195)
State & Municipal Govt <sup>(b)</sup>	35,666	34,563	826	157	120	40	1	(161)	(144)
Consumer Products	34,145	21,100	12,505	537	3	4	11	(149)	(1)
Asset Managers	33,506	26,991	6,477	38	—	217	(7)	(5)	(3,191)
Utilities	28,983	25,521	3,045	411	6	2	28	(445)	(306)
Retail & Consumer Services	25,068	16,101	8,453	492	22	6	—	(91)	—
Technology	21,403	13,787	6,771	825	20	—	—	(512)	—
Central Govt	21,049	20,633	345	71	—	—	—	(10,088)	(1,541)
Machinery & Equipment Mfg	19,078	11,154	7,549	368	7	20	(18)	(257)	(8)
Metals/Mining	17,434	9,266	7,508	594	66	1	16	(621)	(36)
Business Services	14,601	7,838	6,447	286	30	9	10	(10)	(2)
Transportation	13,975	9,683	4,165	100	27	10	8	(68)	—
Telecom Services	13,906	9,130	4,284	482	10	—	7	(272)	(8)
Media	13,858	7,783	5,658	315	102	6	36	(26)	(5)
Insurance	13,761	10,681	2,757	84	239	—	(2)	(98)	(1,935)
Building Materials/Construction	12,901	5,701	6,354	839	7	15	3	(132)	—
Automotive	12,532	7,881	4,490	159	2	3	(3)	(472)	—
Chemicals/Plastics	10,637	7,189	3,211	222	15	—	—	(13)	(83)
Securities Firms & Exchanges	10,035	7,781	2,233	14	7	1	(68)	(4,169)	(175)
Agriculture/Paper Mfg	7,387	4,238	3,064	82	3	31	—	(4)	(4)
Aerospace/Defense	6,873	5,447	1,426	—	—	—	—	(142)	(1)
Leisure	5,331	2,950	1,797	495	89	5	—	(10)	(14)
All other <sup>(c)</sup>	201,298	180,460	19,911	692	235	1,249	(6)	(7,068)	(367)
Subtotal	\$820,254	\$637,860	\$170,219	\$10,733	\$1,442	\$1,894	\$16	\$(27,996)	\$(14,435)
Loans held-for-sale and loans at fair value	13,301								
Receivables from customers and other	26,744								

Total \$ 860,299

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As of or for the year ended December 31, 2012 (in millions)	Noninvestment-grade <sup>(e)</sup>					Selected metrics			Liquid securities and other cash collateral held against derivative receivables
	Credit exposure <sup>(d)</sup>	Investment-grade	Noncriticized	Criticized performing	Criticized nonperforming	30 days or more past due and accruing loans	Net charge-offs (recoveries)	Credit derivatives <sup>(f)</sup>	
Top 25 industries <sup>(a)</sup>									
Real Estate	\$76,198	\$50,103	\$21,503	\$4,067	\$525	\$391	\$54	\$(41)	\$(509)
Banks & Finance Cos	73,318	55,805	16,928	578	7	20	(34)	(3,524)	(6,027)
Oil & Gas	42,563	31,258	11,012	270	23	9	—	(155)	(101)
Healthcare	48,487	41,146	6,761	569	11	38	9	(238)	(459)
State & Municipal Govt <sup>(b)</sup>	41,821	40,562	1,093	52	114	28	2	(186)	(221)
Consumer Products	32,778	21,428	10,473	868	9	2	(16)	(275)	(12)
Asset Managers	31,474	26,283	4,987	204	—	46	—	—	(2,714)
Utilities	29,533	24,917	4,257	175	184	2	15	(315)	(368)
Retail & Consumer Services	25,597	16,100	8,763	700	34	20	(11)	(37)	(1)
Technology	18,488	12,089	5,683	696	20	—	1	(226)	—
Central Govt	21,223	20,678	484	61	—	—	—	(11,620)	(1,154)
Machinery & Equipment Mfg	18,504	10,228	7,827	444	5	—	2	(23)	—
Metals/Mining	20,958	12,912	7,608	406	32	8	(1)	(409)	(126)
Business Services	13,577	7,172	6,132	232	41	9	23	(10)	—
Transportation	19,827	15,128	4,353	283	63	5	2	(82)	(1)
Telecom Services	12,239	7,792	3,244	1,200	3	5	1	(229)	—
Media	16,007	7,473	7,754	517	263	2	(218)	(93)	(8)
Insurance	14,446	12,156	2,119	171	—	2	(2)	(143)	(1,729)
Building Materials/Construction	12,377	5,690	4,172	791	4	8	1	(114)	(11)
Automotive	11,511	6,447	5,892	101	—	—	—	(530)	—
Chemicals/Plastics	11,591	7,234	4,172	169	16	18	2	(55)	(74)
Securities Firms & Exchanges	5,756	4,096	1,612	46	2	—	—	(171)	(183)
Agriculture/Paper Mfg	7,729	5,029	2,657	42	1	5	—	—	—
Aerospace/Defense	6,702	5,518	1,150	33	1	—	—	(141)	—
Leisure	7,748	3,160	3,724	551	313	—	(13)	(63)	(24)
All other <sup>(c)</sup>	195,567	174,264	21,353	384	357	1,478	5	(8,767)	(1,479)
Subtotal	\$816,019	\$624,668	\$175,713	\$13,610	\$2,028	\$2,096	\$(178)	\$(27,447)	\$(15,201)
Loans held-for-sale and loans at fair value	6,961								
Receivables from customers and other	23,648								

Total \$ 846,628

(a) The industry rankings presented in the table as of December 31, 2012, are based on the industry rankings of the corresponding exposures at December 31, 2013, not actual rankings of such exposures at December 31, 2012.

In addition to the credit risk exposure to states and municipal governments (both U.S. and non-U.S.) at December 31, 2013 and 2012, noted above, the Firm held \$7.9 billion and \$18.2 billion, respectively, of trading securities and \$30.4 billion and \$21.7 billion, respectively, of AFS and HTM securities issued by U.S. state and municipal governments. For further information, see Note 3 and Note 12 on pages 195–215 and 249–254, respectively, of this Annual Report.

All other includes: individuals, private education and civic organizations; SPEs; and holding companies, representing approximately 64%, 22% and 5%, respectively, at December 31, 2013, and 57%, 28% and 7%, respectively, at December 31, 2012.

(d) Credit exposure is net of risk participations and excludes the benefit of “Credit Portfolio Management derivatives net notional” held against derivative receivables or loans and “Liquid securities and other cash collateral held against derivative receivables”.

(e) Exposures deemed criticized correspond to special mention, substandard and doubtful categories as defined by US bank regulatory agencies.

(f) Represents the net notional amounts of protection purchased and sold through credit derivatives used to manage the credit exposures; these derivatives do not qualify for hedge accounting under U.S. GAAP. The all other category includes purchased credit protection on certain credit indices. Credit Portfolio Management derivatives excludes the synthetic credit portfolio.

## Management's discussion and analysis

Presented below is a discussion of several industries to which the Firm has significant exposure and continues to monitor because of actual or potential credit concerns. For additional information, refer to the tables on the previous pages.

**Real estate:** Exposure to this industry increased by \$10.9 billion or 14%, in 2013 to \$87.1 billion. The increase was largely driven by growth in multifamily exposure in the CB. The credit quality of this industry improved as the investment-grade portion of the exposures to this industry increased by 26% from 2012. The ratio of nonaccrual retained loans to total retained loans decreased to 0.50% at December 31, 2013 from 0.86% at December 31, 2012. For further information on commercial real estate loans, see Note 14 on pages 258–283 of this Annual Report.

**State and municipal governments:** Exposure to this sector decreased by \$6.2 billion in 2013 to \$35.7 billion. Lending-related commitments comprise approximately 66% of the exposure to this sector, generally in the form of liquidity and standby letter of credit facilities backing bonds and commercial paper. The credit quality of the portfolio remains high as 97% of the portfolio was rated investment-grade, unchanged from 2012. The Firm continues to actively monitor this exposure in light of the challenging environment faced by certain state and municipal governments. For further discussion of commitments for bond liquidity and standby letters of credit, see Note 29 on pages 318–324 of this Annual Report.

**Loans**

In the normal course of its wholesale business, the Firm provides loans to a variety of customers, ranging from large corporate and institutional clients to high-net-worth individuals. For further discussion on loans, including information on credit quality indicators, see Note 14 on pages 258–283 of this Annual Report.

The Firm actively manages its wholesale credit exposure. One way of managing credit risk is through secondary market sales of loans and lending-related commitments. During 2013 and 2012, the Firm sold \$16.3 billion and \$8.4 billion, respectively, of loans and lending-related commitments.

The following table presents the change in the nonaccrual loan portfolio for the years ended December 31, 2013 and 2012. Nonaccrual wholesale loans decreased by \$673 million from December 31, 2012, largely reflecting paydowns.

**Wholesale nonaccrual loan activity**

Year ended December 31, (in millions)	2013	2012
Beginning balance	\$1,717	\$2,581
Additions <sup>(a)</sup>	1,293	1,920
Reductions:		
Paydowns and other	1,075	1,784
Gross charge-offs	241	335
Returned to performing status	279	240
Sales	371	425
Total reductions	1,966	2,784
Net reductions	(673)	(864)
Ending balance	\$1,044	\$1,717

(a) During 2013, certain loans that resulted from restructurings that were previously classified as performing were reclassified as nonperforming loans. Prior periods were revised to conform with the current presentation.

The following table presents net charge-offs/recoveries, which are defined as gross charge-offs less recoveries, for the years ended December 31, 2013 and 2012. The amounts in the table below do not include gains or losses from sales of nonaccrual loans.

**Wholesale net charge-offs/(recoveries)**

Year ended December 31, (in millions, except ratios)	2013	2012
Loans – reported		
Average loans retained	\$307,340	\$291,980
Gross charge-Offs	241	346
Gross recoveries	(225)	(524)

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Net charge-offs/(recoveries)	16	(178	)
Net charge-off/(recovery) rate	0.01	%(0.06	)%

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#### Receivables from customers

Receivables from customers primarily represent margin loans to prime and retail brokerage clients that are collateralized through a pledge of assets maintained in clients' brokerage accounts that are subject to daily minimum collateral requirements. In the event that the collateral value decreases, a maintenance margin call is made to the client to provide additional collateral into the account. If additional collateral is not provided by the client, the client's position may be liquidated by the Firm to meet the minimum collateral requirements.

#### Lending-related commitments

JPMorgan Chase uses lending-related financial instruments, such as commitments (including revolving credit facilities) and guarantees, to meet the financing needs of its customers. The contractual amounts of these financial instruments represent the maximum possible credit risk should the counterparties draw down on these commitments or the Firm fulfills its obligations under these guarantees, and the counterparties subsequently fails to perform according to the terms of these contracts.

In the Firm's view, the total contractual amount of these wholesale lending-related commitments is not representative of the Firm's actual future credit exposure or funding requirements. In determining the amount of credit risk exposure the Firm has to wholesale lending-related commitments, which is used as the basis for allocating credit risk capital to these commitments, the Firm has established a "loan-equivalent" amount for each commitment; this amount represents the portion of the unused commitment or other contingent exposure that is expected, based on average portfolio historical experience, to become drawn upon in an event of a default by an obligor. The loan-equivalent amount of the Firm's lending-related commitments was \$218.9 billion and \$223.7 billion as of December 31, 2013 and 2012, respectively.

#### Clearing services

The Firm provides clearing services for clients entering into securities and derivative transactions. Through the provision of these services the Firm is exposed to the risk of non-performance by its clients and may be required to share in losses incurred by central counterparties ("CCPs"). Where possible, the Firm seeks to mitigate its credit risk to its clients through the collection of adequate margin at inception and throughout the life of the transactions and can also cease provision of clearing services if clients do not adhere to their obligations under the clearing agreement. For further discussion of Clearing services, see Note 29 on 318–324, of this Annual Report.

#### Derivative contracts

In the normal course of business, the Firm uses derivative instruments predominantly for market-making activities. Derivatives enable customers to manage exposures to fluctuations in interest rates, currencies and other markets. The Firm also uses derivative instruments to manage its own credit exposure. The nature of the counterparty and the settlement mechanism of the derivative affect the credit risk to which the Firm is exposed. For over-the-counter ("OTC") derivatives the Firm is exposed to the credit risk of the derivative counterparty. For exchange traded derivatives ("ETD") such as futures and options, and "cleared" over-the-counter ("OTC-cleared") derivatives, the firm is generally exposed to the credit risk of the relevant CCP. Where possible, the Firm seeks to mitigate its credit risk exposures arising on derivatives transactions through the use of legally enforceable master netting arrangements and collateral agreements. For further discussion of derivative contracts, counterparties and settlement types, see Note 6 on pages 220–233 of this Annual Report.

The following table summarizes the net derivative receivables for the periods presented.

#### Derivative receivables

December 31, (in millions)	Derivative receivables	
	2013	2012
Interest rate	\$25,782	\$39,205
Credit derivatives	1,516	1,735
Foreign exchange	16,790	14,142
Equity	12,227	9,266
Commodity	9,444	10,635
Total, net of cash collateral	65,759	74,983

Liquid securities and other cash collateral held against derivative receivables	(14,435	) (15,201	)
Total, net of all collateral	\$51,324	\$59,782	

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## Management's discussion and analysis

Derivative receivables reported on the Consolidated Balance Sheets were \$65.8 billion and \$75.0 billion at December 31, 2013 and 2012, respectively. These amounts represent the fair value of the derivative contracts, after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm. However, in management's view, the appropriate measure of current credit risk should also take into consideration additional liquid securities (primarily U.S. government and agency securities and other G7 government bonds) and other cash collateral held by the Firm aggregating \$14.4 billion and \$15.2 billion at December 31, 2013 and 2012, respectively, that may be used as security when the fair value of the client's exposure is in the Firm's favor.

In addition to the collateral described in the preceding paragraph, the Firm also holds additional collateral (primarily: cash; G7 government securities; other liquid government-agency and guaranteed securities; and corporate debt and equity securities) delivered by clients at the initiation of transactions, as well as collateral related to contracts that have a non-daily call frequency and collateral that the Firm has agreed to return but has not yet settled as of the reporting date. Though this collateral does not reduce the balances and is not included in the table above, it is available as security against potential exposure that could arise should the fair value of the client's derivative transactions move in the Firm's favor. As of December 31, 2013 and 2012, the Firm held \$29.0 billion, of this additional collateral. The derivative receivables fair value, net of all collateral, also does not include other credit enhancements, such as letters of credit. For additional information on the Firm's use of collateral agreements, see Note 6 on pages 220–233 of this Annual Report.

While useful as a current view of credit exposure, the net fair value of the derivative receivables does not capture the potential future variability of that credit exposure. To capture the potential future variability of credit exposure, the Firm calculates, on a client-by-client basis, three measures of potential derivatives-related credit loss: Peak, Derivative Risk Equivalent ("DRE"), and Average exposure ("AVG"). These measures all incorporate netting and collateral benefits, where applicable.

Peak exposure to a counterparty is an extreme measure of exposure calculated at a 97.5% confidence level. DRE exposure is a measure that expresses the risk of derivative exposure on a basis intended to be equivalent to the risk of loan exposures. The measurement is done by equating the unexpected loss in a derivative counterparty exposure (which takes into consideration both the loss volatility and the credit rating of the counterparty) with the unexpected loss in a loan exposure (which takes into consideration only the credit rating of the counterparty). DRE is a less extreme measure of potential credit loss than Peak and is the primary measure used by the Firm for credit approval of derivative transactions.

Finally, AVG is a measure of the expected fair value of the Firm's derivative receivables at future time periods, including the benefit of collateral. AVG exposure over the total life of the derivative contract is used as the primary metric for pricing purposes and is used to calculate credit capital and the CVA, as further described below. The three year AVG exposure was \$35.4 billion and \$42.3 billion at December 31, 2013 and 2012, respectively, compared with derivative receivables, net of all collateral, of \$51.3 billion and \$59.8 billion at December 31, 2013 and 2012, respectively.

The fair value of the Firm's derivative receivables incorporates an adjustment, the CVA, to reflect the credit quality of counterparties. The CVA is based on the Firm's AVG to a counterparty and the counterparty's credit spread in the credit derivatives market. The primary components of changes in CVA are credit spreads, new deal activity or unwinds, and changes in the underlying market environment. The Firm believes that active risk management is essential to controlling the dynamic credit risk in the derivatives portfolio. In addition, the Firm's risk management process takes into consideration the potential impact of wrong-way risk, which is broadly defined as the potential for increased correlation between the Firm's exposure to a counterparty (AVG) and the counterparty's credit quality. Many factors may influence the nature and magnitude of these correlations over time. To the extent that these correlations are identified, the Firm may adjust the CVA associated with that counterparty's AVG. The Firm risk manages exposure to changes in CVA by entering into credit derivative transactions, as well as interest rate, foreign exchange, equity and commodity derivative transactions.

The accompanying graph shows exposure profiles to derivatives over the next 10 years as calculated by the DRE and AVG metrics. The two measures generally show that exposure will decline after the first year, if no new trades are

added to the portfolio.

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The following table summarizes the ratings profile by derivative counterparty of the Firm's derivative receivables, including credit derivatives, net of other liquid securities collateral, for the dates indicated.

## Ratings profile of derivative receivables

Rating equivalent December 31, (in millions, except ratios)	2013		2012		
	Exposure net of all collateral	% of exposure net of all collateral	Exposure net of all collateral	% of exposure net of all collateral	
AAA/Aaa to AA-/Aa3	\$12,453	24	% \$19,964	34	%
A+/A1 to A-/A3	17,243	34	12,039	20	
BBB+/Baa1 to BBB-/Baa3	14,981	29	18,066	30	
BB+/Ba1 to B-/B3	5,820	11	8,434	14	
CCC+/Caa1 and below	827	2	1,279	2	
Total	\$51,324	100	% \$59,782	100	%

As noted above, the Firm uses collateral agreements to mitigate counterparty credit risk. The percentage of the Firm's derivatives transactions subject to collateral agreements – excluding foreign exchange spot trades, which are not typically covered by collateral agreements due to their short maturity – was 86% as of December 31, 2013, largely unchanged compared with December 31, 2012.

## Credit derivatives

The Firm uses credit derivatives for two primary purposes: first, in its capacity as a market-maker; and second, as an end-user, to manage the Firm's own credit risk associated with various exposures.

For a detailed description of credit derivatives, see Credit derivatives in Note 6 on pages 220–233 of this Annual Report.

## Credit portfolio management activities

Included in end-user activities are credit derivatives used to mitigate the credit risk associated with traditional lending activities (loans and unfunded commitments) and derivatives counterparty exposure in the Firm's wholesale businesses (collectively, "credit portfolio management" activities). Information on credit portfolio management activities is provided in the table below. For further information on derivatives used in credit portfolio management activities, see Credit derivatives in Note 6 on pages 220–233 of this Annual Report.

The Firm also uses credit derivatives as an end-user to manage other exposures, including credit risk arising from certain AFS securities and from certain securities held in the Firm's market-making businesses. These credit derivatives, as well as the synthetic credit portfolio, are not included in credit portfolio management activities; for further information on these credit derivatives as well as credit derivatives used in the Firm's capacity as a market maker in credit derivatives, see Credit derivatives in Note 6 on pages 231–233 of this Annual Report.

## Credit derivatives used in credit portfolio management activities

December 31, (in millions)	Notional amount of protection purchased and sold <sup>(a)</sup>	
	2013	2012
Credit derivatives used to manage:		
Loans and lending-related commitments	\$2,764	\$2,166
Derivative receivables	25,328	25,347
Total net protection purchased	28,092	27,513
Total net protection sold	96	66
Credit portfolio management derivatives notional, net	\$27,996	\$27,447

(a) Amounts are presented net, considering the Firm's net protection purchased or sold with respect to each underlying reference entity or index.



## Management's discussion and analysis

The credit derivatives used in credit portfolio management activities do not qualify for hedge accounting under U.S. GAAP; these derivatives are reported at fair value, with gains and losses recognized in principal transactions revenue. In contrast, the loans and lending-related commitments being risk-managed are accounted for on an accrual basis. This asymmetry in accounting treatment, between loans and lending-related commitments and the credit derivatives used in credit portfolio management activities, causes earnings volatility that is not representative, in the Firm's view, of the true changes in value of the Firm's overall credit exposure.

The effectiveness of the Firm's credit default swap ("CDS") protection as a hedge of the Firm's exposures may vary depending on a number of factors, including the named reference entity (i.e., the Firm may experience losses on specific exposures that are different than the named reference entities in the purchased CDS), and the contractual terms of the CDS (which may have a defined credit event that does not align with an actual loss realized by the Firm) and the maturity of the Firm's CDS protection (which in some cases may be shorter than the Firm's exposures). However, the Firm generally seeks to purchase credit protection with a maturity date that is the same or similar to the maturity date of the exposure for which the protection was purchased, and remaining differences in maturity are actively monitored and managed by the Firm.

## Credit portfolio hedges

The following table sets out the fair value related to the Firm's credit derivatives used in credit portfolio management activities, the fair value related to the CVA (which reflects the credit quality of derivatives counterparty exposure), as well as certain other hedges used in the risk management of CVA. These results can vary from period-to-period due to market conditions that affect specific positions in the portfolio.

## Net gains and losses on credit portfolio hedges

Year ended December 31, (in millions)	2013		2012		2011	
Hedges of loans and lending-related commitments	\$(142	)	\$(163	)	\$(32	)
CVA and hedges of CVA	(130	)	127		(769	)
Net gains/(losses)	\$(272	)	\$(36	)	\$(801	)

## COMMUNITY REINVESTMENT ACT EXPOSURE

The Community Reinvestment Act ("CRA") encourages banks to meet the credit needs of borrowers in all segments of their communities, including neighborhoods with low or moderate incomes. The Firm is a national leader in community development by providing loans, investments and community development services in communities across the United States.

At December 31, 2013 and 2012, the Firm's CRA loan portfolio was approximately \$18 billion and \$16 billion, respectively. At December 31, 2013 and 2012, 50% and

62%, respectively, of the CRA portfolio were residential mortgage loans; 26% and 13%, respectively, were commercial real estate loans; 16% and 18%, respectively, were business banking loans; and 8% and 7%, respectively, were other loans. CRA nonaccrual loans were 3% and 4%, respectively, of the Firm's total nonaccrual loans. For the years ended December 31, 2013 and 2012, net charge-offs in the CRA portfolio were 1% and 3%, respectively, of the Firm's net charge-offs in both years.

**ALLOWANCE FOR CREDIT LOSSES**

JPMorgan Chase's allowance for loan losses covers the consumer (primarily scored) portfolio; and wholesale (risk-rated) portfolio. The allowance represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. Management also determines an allowance for wholesale and certain consumer lending-related commitments.

The allowance for loan losses includes an asset-specific component, a formula-based component, and a component related to PCI loans. For a further discussion of the components of the allowance for credit losses and related management judgments, see Critical Accounting Estimates Used by the Firm on pages 174–178 and Note 15 on pages 284–287 of this Annual Report.

At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm, and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2013, JPMorgan Chase deemed the allowance for credit losses to be appropriate and sufficient to absorb probable credit losses inherent in the portfolio.

The allowance for credit losses was \$17.0 billion at December 31, 2013, a decrease of \$5.6 billion from \$22.6 billion at December 31, 2012. The decrease in the allowance for loan losses was due to a \$5.5 billion reduction in the consumer portfolio allowance reflecting lower estimated losses due to the impact of improved home prices on the residential real estate portfolio and improved delinquency trends in the residential real estate and credit card portfolios. However, relatively high unemployment, uncertainties regarding the ultimate success of loan modifications, and the risk attributes of certain loans within the portfolio (e.g., loans with high LTV ratios, junior lien loans that are subordinate to a delinquent or modified senior lien, HELOCs with future payment recast) continued to contribute to uncertainty regarding the performance of the residential real estate portfolio; these uncertainties were considered in estimating the allowance for loan losses.

The consumer, excluding credit card, allowance for loan losses decreased \$3.8 billion from December 31, 2012, of which \$2.3 billion was from the real estate portfolio non credit-impaired allowance and \$1.6 billion from the PCI allowance. The decrease in the allowance was largely due to the impact of improved home prices as well as improved delinquency trends. For additional information about delinquencies and nonaccrual loans in the consumer, excluding credit card, loan portfolio, see Consumer Credit Portfolio on pages 120–129 and Note 14 on pages 258–283 of this Annual Report.

The credit card allowance for loan losses decreased by \$1.7 billion from December 31, 2012. The decrease included reductions in both the asset-specific and formula-based allowance. The reduction in the asset-specific allowance, which relates to loans restructured in TDRs, largely reflects the changing profile of the TDR portfolio. The volume of new TDRs, which have higher loss rates due to expected redefaults, continues to decrease, and the loss rate on existing TDRs is also decreasing over time as previously restructured loans continue to perform. The reduction in the formula-based allowance was primarily driven by the continuing trend of improving delinquencies and a reduction in bankruptcies. For additional information about delinquencies in the credit card loan portfolio, see Consumer Credit Portfolio on pages 120–129 and Note 14 on pages 258–283 of this Annual Report.

The wholesale allowance was relatively unchanged reflecting a favorable credit environment and stable credit quality trends.

The allowance for lending-related commitments for both the consumer, excluding credit card, and wholesale portfolios, which is reported in other liabilities, was \$705 million and \$668 million at December 31, 2013, and December 31, 2012, respectively.

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Management's discussion and analysis

Summary of changes in the allowance for credit losses

Year ended December 31, (in millions, except ratios)	2013				2012			
	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
Allowance for loan losses								
Beginning balance at January 1,	\$12,292	\$5,501	\$4,143	\$21,936	\$16,294	\$6,999	\$4,316	\$27,609
Gross charge-offs	2,754	4,472	241	7,467	4,805	<sup>(d)</sup> 5,755	346	10,906
Gross recoveries	(847 )	(593 )	(225 )	(1,665 )	(508 )	(811 )	(524 )	(1,843 )
Net charge-offs/(recoveries)	1,907	3,879	16	5,802	4,297	<sup>(d)</sup> 4,944	(178 )	9,063
Write-offs of PCI loans <sup>(a)</sup>	53	—	—	53	—	—	—	—
Provision for loan losses	(1,872 )	2,179	(119 )	188	302	3,444	(359 )	3,387
Other	(4 )	(6 )	5	(5 )	(7 )	2	8	3
Ending balance at December 31,	\$8,456	\$3,795	\$4,013	\$16,264	\$12,292	\$5,501	\$4,143	\$21,936
Impairment methodology								
Asset-specific <sup>(b)</sup>	\$601	\$971	\$181	\$1,753	\$729	\$1,681	\$319	\$2,729
Formula-based	3,697	2,824	3,832	10,353	5,852	3,820	3,824	13,496
PCI	4,158	—	—	4,158	5,711	—	—	5,711
Total allowance for loan losses	\$8,456	\$3,795	\$4,013	\$16,264	\$12,292	\$5,501	\$4,143	\$21,936
Allowance for lending-related commitments								
Beginning balance at January 1,	\$7	\$—	\$661	\$668	\$7	\$—	\$666	\$673
Provision for lending-related commitments	1	—	36	37	—	—	(2 )	(2 )
Other	—	—	—	—	—	—	(3 )	(3 )
Ending balance at December 31,	\$8	\$—	\$697	\$705	\$7	\$—	\$661	\$668
Impairment methodology								
Asset-specific	\$—	\$—	\$60	\$60	\$—	\$—	\$97	\$97
Formula-based	8	—	637	645	7	—	564	571
Total allowance for lending-related commitments	\$8	\$—	\$697	\$705	\$7	\$—	\$661	\$668
Total allowance for credit losses	\$8,464	\$3,795	\$4,710	\$16,969	\$12,299	\$5,501	\$4,804	\$22,604
Memo:	\$288,449	\$127,465	\$308,263	\$724,177	\$292,620	\$127,993	\$306,222	\$726,835

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Retained loans, end of period									
Retained loans, average	289,294	123,518	307,340	720,152	300,024	125,031	291,980	717,035	
PCI loans, end of period	53,055	—	6	53,061	59,737	—	19	59,756	
Credit ratios									
Allowance for loan losses to retained loans	2.93	%2.98	%1.30	%2.25	% 4.20	% 4.30	%1.35	% 3.02	%
Allowance for loan losses to retained nonaccrual loans <sup>(c)</sup>	113	NM	489	196	134	NM	289	207	
Allowance for loan losses to retained nonaccrual loans excluding credit card	113	NM	489	150	134	NM	289	155	
Net charge-off/(recovery) rates	0.66	3.14	0.01	0.81	1.43	<sup>(d)</sup> 3.95	(0.06 )	1.26	
Credit ratios, excluding residential real estate PCI loans									
Allowance for loan losses to retained loans	1.83	2.98	1.30	1.80	2.83	4.30	1.35	2.43	
Allowance for loan losses to retained nonaccrual loans <sup>(c)</sup>	57	NM	489	146	72	NM	289	153	
Allowance for loan losses to retained nonaccrual loans excluding credit card <sup>(b)</sup>	57	NM	489	100	72	NM	289	101	
Net charge-off/(recovery) rates	0.82	%3.14	%0.01	%0.87	% 1.81	% <sup>(d)</sup> 3.95	%(0.06 )	%1.38	%

Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed (a) estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. Any write-offs of PCI loans are recognized when the underlying loan is removed from a pool (e.g., upon liquidation).

(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.

(c) The Firm's policy is generally to exempt credit card loans from being placed on nonaccrual status as permitted by regulatory guidance.

Net charge-offs and net charge-off rates for the year ended December 31, 2012, included \$800 million of (d) charge-offs of Chapter 7 loans. See Consumer Credit Portfolio on pages 120–129 of this Annual Report for further details.

## Provision for credit losses

For the year ended December 31, 2013, the provision for credit losses was \$225 million, down by 93% from 2012. The provision for the year ended December 31, 2013 included a \$5.6 billion reduction in the allowance for loan losses, due to the impact of improved home prices on the residential real estate portfolio and improved delinquency trends in the residential real estate and credit card portfolios.

Total consumer provision for credit losses was \$308 million in 2013, compared with \$3.7 billion in 2012. The decline in the total consumer provision was attributable to continued reductions in the allowance for loan losses, resulting from the impact of improved home prices on the residential real

estate portfolio, and improved delinquency trends in the residential real estate and credit card portfolios, as well as lower net charge-offs, partially due to the prior year incremental charge-offs of \$800 million recorded in accordance with regulatory guidance on certain loans discharged under Chapter 7 bankruptcy.

In 2013 the wholesale provision for credit losses was a benefit of \$83 million, compared with a benefit of \$361 million in 2012. The current periods' wholesale provision for credit losses reflected a favorable credit environment and stable credit quality trends. For further information on the provision for credit losses, see the Consolidated Results of Operations on pages 71–74 of this Annual Report.

Year ended December 31, (in millions)	Provision for loan losses			Provision for lending-related commitments			Total provision for credit losses		
	2013	2012	2011	2013	2012	2011	2013	2012	2011
Consumer, excluding credit card	\$(1,872)	\$302	\$4,670	\$1	\$—	\$2	\$(1,871)	\$302	\$4,672
Credit card	2,179	3,444	2,925	—	—	—	2,179	3,444	2,925
Total consumer	307	3,746	7,595	1	—	2	308	3,746	7,597
Wholesale	(119)	(359)	17	36	(2)	(40)	(83)	(361)	(23)
Total provision for credit losses	\$188	\$3,387	\$7,612	\$37	\$(2)	\$(38)	\$225	\$3,385	\$7,574

Management's discussion and analysis

**MARKET RISK MANAGEMENT**

Market risk is the potential for adverse changes in the value of the Firm's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity prices, commodity prices, implied volatilities or credit spreads.

**Market risk management**

Market Risk is an independent risk management function that works in close partnership with the lines of business, including Treasury and CIO within Corporate/Private Equity, to identify and monitor market risks throughout the Firm and to define market risk policies and procedures. The Market Risk function reports to the Firm's CRO.

Market Risk seeks to control risk, facilitate efficient risk/return decisions, reduce volatility in operating performance and provide transparency into the Firm's market risk profile for senior management, the Board of Directors and regulators. Market Risk is responsible for the following functions:

- Establishment of a market risk policy framework
- Independent measurement, monitoring and control of line of business and firmwide market risk
- Definition, approval and monitoring of limits
- Performance of stress testing and qualitative risk assessments

**Risk identification and classification**

Each line of business is responsible for the management of the market risks within its units. The independent risk management group responsible for overseeing each line of business is charged with ensuring that all material market risks are appropriately identified, measured, monitored and managed in accordance with the risk policy framework set out by Market Risk.

**Risk measurement**

**Tools used to measure risk**

Because no single measure can reflect all aspects of market risk, the Firm uses various metrics, both statistical and nonstatistical, including:

- VaR
- Economic-value stress testing
- Nonstatistical risk measures
- Loss advisories
- Profit and loss drawdowns
- Risk identification for large exposures ("RIFLEs")
- Earnings-at-risk

The following table summarizes by LOB the predominant business activities that give rise to market risks, and the market risk management tools utilized to manage those risks; CB is not presented in the table below as it does not give rise to significant market risk.

Risk identification and classification for business activities

LOB	Predominant business activities and related market risks	Positions included in Risk Management VaR	Positions included in other risk measures (Not included in Risk Management VaR) <sup>(a)(b)</sup>
CIB	<ul style="list-style-type: none"> <li>• Makes markets and services its clients' activity in products across fixed income, foreign exchange, equities and commodities</li> <li>• Market risk arising from market making and other derivatives activities which may lead to a potential decline in net income as a result of changes in market prices; e.g. rates and credit spreads</li> </ul>	<ul style="list-style-type: none"> <li>• Trading assets/liabilities - debt and equity instruments, and derivatives</li> <li>• Certain securities purchased under resale agreements and securities borrowed</li> <li>• Certain securities loaned or sold under repurchase agreements</li> <li>• Structured notes, see Note 4 on pages 215-218 of this Annual Report</li> <li>• Derivative CVA</li> <li>• Hedges of the retained loan portfolio and CVA, classified as derivatives</li> </ul>	<ul style="list-style-type: none"> <li>• Principal investing activities</li> <li>• Retained loan portfolio</li> <li>• Deposits</li> </ul>
CCB	<ul style="list-style-type: none"> <li>• Origination and servicing of mortgage loans</li> <li>• Complex, non-linear interest rate risks, as well as basis risk</li> <li>• Non-linear risk arises primarily from prepayment options embedded in mortgages and changes in the probability of newly originated mortgage commitments actually closing</li> <li>• Basis risk results from differences in the relative movements of the rate indices underlying mortgage exposure and other interest rates</li> </ul>	<p>Mortgage Banking</p> <ul style="list-style-type: none"> <li>• Mortgage pipeline loans, classified as derivatives</li> <li>• Warehouse loans, classified as trading assets - debt instruments</li> <li>• MSR's</li> <li>• Hedges of the MSR's and loans, classified as derivatives</li> <li>• Interest only securities, classified as trading assets and related hedges classified as derivatives</li> </ul>	<ul style="list-style-type: none"> <li>• Retained loan portfolio</li> <li>• Deposits</li> </ul>
Corporate/Private equity	<ul style="list-style-type: none"> <li>• Predominantly responsible for managing the Firm's liquidity, funding, structural interest rate and foreign exchange risks arising from activities undertaken by the Firm's four major reportable business segments, as well as executing the Firm's capital plan</li> </ul>	<p>Treasury and CIO</p> <ul style="list-style-type: none"> <li>• Primarily derivative positions measured at fair value through earnings, classified as derivatives</li> </ul>	<ul style="list-style-type: none"> <li>• Private Equity</li> <li>• Investment securities portfolio and related hedges</li> <li>• Deposits</li> <li>• Long-term debt and related hedges</li> </ul>

- |    |   |  |
|----|---|--|
| AM | <ul style="list-style-type: none"> <li>• Market risk arising from the Firm’s initial capital investments in products, such as mutual funds, which are managed by AM</li> <li>• Hedges of seed capital investments, classified as derivatives</li> </ul> | <ul style="list-style-type: none"> <li>• Initial seed capital investments</li> <li>• Capital invested alongside third-party investors, typically in privately distributed collective vehicles managed by AM (i.e., Co-Investments)</li> <li>• Retained loan portfolio</li> <li>• Deposits</li> </ul> |
|----|---|--|

Additional market risk positions result from debit valuation adjustments (“DVA”) taken on structured notes and (a) derivative liabilities to reflect the credit quality of the Firm. Neither DVA nor the additional market risk positions resulting from it are included in VaR.

During the fourth quarter of 2013, the Firm implemented a funding valuation adjustment (“FVA”) framework in order to incorporate the impact of funding into its valuation estimates for OTC derivatives and structured (b) notes. FVA gives rise to additional market risk positions, and is not currently included in VaR. Effective in the first quarter of 2014, the FVA market risk exposure and its associated hedges will be included in CIB’s average VaR.

## Management's discussion and analysis

## Value-at-risk

JPMorgan Chase utilizes VaR, a statistical risk measure, to estimate the potential loss from adverse market moves in a normal market environment consistent with the day-to-day risk decisions made by the lines of business.

The Firm has one overarching VaR model framework, Risk Management VaR, used for risk management purposes across the Firm, which utilizes historical simulation based on data for the previous 12 months. The framework's approach assumes that historical changes in market values are representative of the distribution of potential outcomes in the immediate future. The Firm believes the use of Risk Management VaR provides a stable measure of VaR that closely aligns to the day-to-day risk management decisions made by the lines of business and provides necessary/appropriate information to respond to risk events on a daily basis.

Risk Management VaR is calculated assuming a one-day holding period and an expected tail-loss methodology which approximates a 95% confidence level. This means that, assuming current changes in market values are consistent with the historical changes used in the simulation, the Firm would expect to incur VaR "band breaks," defined as losses greater than that predicted by VaR estimates, not more than five times every 100 trading days. The number of VaR band breaks observed can differ from the statistically expected number of band breaks if the current level of market volatility is materially different from the level of market volatility during the twelve months of historical data used in the VaR calculation.

Underlying the overall VaR model framework are individual VaR models that simulate historical market returns for individual products and/or risk factors. To capture material market risks as part of the Firm's risk management framework, comprehensive VaR model calculations are performed daily for businesses whose activities give rise to market risk. These VaR models are granular and incorporate numerous risk factors and inputs to simulate daily changes in market values over the historical period; inputs are selected based on the risk profile of each portfolio as sensitivities and historical time series used to generate daily market values may be different across product types or risk management systems. The VaR model results across all portfolios are aggregated at the Firm level.

Data sources used in VaR models may be the same as those used for financial statement valuations. However, in cases where market prices are not observable, or where proxies are used in VaR historical time series, the sources may differ. In addition, the daily market data used in VaR models may be different than the independent third-party data collected for VCG price testing in their monthly valuation process (see pages 196–200 of this Annual Report for further information on the Firm's valuation process.) VaR model calculations require more timely (i.e., daily) data and a consistent source for valuation and therefore it is not

practical to use the data collected in the VCG monthly valuation process.

VaR provides a consistent framework to measure risk profiles and levels of diversification across product types and is used for aggregating risks across businesses and monitoring limits. These VaR results are reported to senior management, the Board of Directors and regulators.

Since VaR is based on historical data, it is an imperfect measure of market risk exposure and potential losses, and it is not used to estimate the impact of stressed market conditions or to manage any impact from potential stress events. In addition, based on their reliance on available historical data, limited time horizons, and other factors, VaR measures are inherently limited in their ability to measure certain risks and to predict losses, particularly those associated with market illiquidity and sudden or severe shifts in market conditions. As VaR cannot be used to determine future losses in the Firm's market risk positions, the Firm considers other metrics, such as economic-value stress testing and other techniques, as described further below, to capture and manage its market risk positions under stressed scenarios.

For certain products, specific risk parameters are not captured in VaR due to the lack of inherent liquidity and availability of appropriate historical data. The Firm uses proxies to estimate the VaR for these and other products when daily time series are not available. It is likely that using an actual price-based time series for these products, if available, would affect the VaR results presented. The Firm uses alternative methods to capture and measure those risk parameters that are not otherwise captured in VaR, including economic-value stress testing, nonstatistical measures and risk identification for large exposures as described further below.

The Firm's VaR model calculations are continuously evaluated and enhanced in response to changes in the composition of the Firm's portfolios, changes in market conditions, improvements in the Firm's modeling techniques

and other factors. Such changes will also affect historical comparisons of VaR results. Model changes go through a review and approval process by the Model Review Group prior to implementation into the operating environment. For further information, see Model risk on page 153 of this Annual Report.

Separately, the Firm calculates a daily aggregated VaR in accordance with regulatory rules (“Regulatory VaR”), which is used to derive the Firm’s regulatory VaR-based capital requirements under the Basel 2.5 Market Risk Rule (“Basel 2.5”). This Regulatory VaR model framework currently assumes a ten business-day holding period and an expected tail loss methodology which approximates a 99% confidence level. Regulatory VaR is applied to “covered” positions as defined by Basel 2.5, which may be different than the positions included in the Firm’s Risk Management VaR. For example, credit derivative hedges of accrual loans

are included in the Firm's Risk Management VaR, while Regulatory VaR excludes these credit derivative hedges. For additional information on Regulatory VaR and the other components of market risk regulatory capital (e.g. VaR-based measure, stressed VaR-based measure and the respective backtesting) for the Firm, see JPMorgan Chase's

"Regulatory Capital Disclosures – Market Risk Pillar 3 Report" which are available on the Firm's website (<http://investor.shareholder.com/jpmorganchase/basel.cfm>) and Capital Management on pages 160–167 of this Annual Report.

The table below shows the results of the Firm's Risk Management VaR measure using a 95% confidence level.

Total VaR

As of or for the year ended December 31, (in millions)	2013			2012			At December 31,	
	Avg.	Min	Max	Avg.	Min	Max	2013	2012
CIB trading VaR by risk type								
Fixed income	\$43 <sup>(a)</sup>	\$23	\$62	\$83 <sup>(a)</sup>	\$47	\$131	\$36 <sup>(a)</sup>	\$69 <sup>(a)</sup>
Foreign exchange	7	5	11	10	6	22	9	8
Equities	13	9	21	21	12	35	14	22
Commodities and other	14	11	18	15	11	27	13	15
Diversification benefit to CIB trading VaR	(34) <sup>(b)</sup>	NM <sup>(c)</sup>	NM <sup>(c)</sup>	(45) <sup>(b)</sup>	NM <sup>(c)</sup>	NM <sup>(c)</sup>	(36) <sup>(b)</sup>	(39) <sup>(b)</sup>
CIB trading VaR	43	21	66	84	50	128	36	75
Credit portfolio VaR	13	10	18	25	16	42	11	18
Diversification benefit to CIB VaR	(9) <sup>(b)</sup>	NM <sup>(c)</sup>	NM <sup>(c)</sup>	(13) <sup>(b)</sup>	NM <sup>(c)</sup>	NM <sup>(c)</sup>	(5) <sup>(b)</sup>	(9) <sup>(b)</sup>
CIB VaR	47 <sup>(a)(e)</sup>	25	74	96 <sup>(a)(e)</sup>	58	142	42 <sup>(a)(e)</sup>	84 <sup>(a)(e)</sup>
Mortgage Banking VaR	12	4	24	17	8	43	5	24
Treasury and CIO VaR <sup>(f)</sup>	6 <sup>(a)</sup>	3	14	92 <sup>(d)</sup>	5 <sup>(d)</sup>	196 <sup>(d)</sup>	4 <sup>(d)</sup>	6
Asset Management VaR	4	2	5	2	— <sup>(g)</sup>	5	3	2
Diversification benefit to other VaR	(8) <sup>(b)</sup>	NM <sup>(c)</sup>	NM <sup>(c)</sup>	(10) <sup>(b)</sup>	NM <sup>(c)</sup>	NM <sup>(c)</sup>	(5) <sup>(b)</sup>	(7) <sup>(b)</sup>
Other VaR	14	6	28	101	18	204	7	25
Diversification benefit to CIB and other VaR	(9) <sup>(b)</sup>	NM <sup>(c)</sup>	NM <sup>(c)</sup>	(45) <sup>(b)</sup>	NM <sup>(c)</sup>	NM <sup>(c)</sup>	(5) <sup>(b)</sup>	(11) <sup>(b)</sup>
Total VaR	\$52	\$29	\$87	\$152	\$93	\$254	\$44	\$98

On July 2, 2012, CIO transferred its synthetic credit portfolio, other than a portion aggregating approximately \$12 (a) billion notional, to CIB; CIO's retained portfolio was effectively closed out during the three months ended September 30, 2012.

Average portfolio VaR and period-end portfolio VaR were less than the sum of the VaR of the components (b) described above, which is due to portfolio diversification. The diversification effect reflects the fact that risks are not perfectly correlated.

(c) Designated as not meaningful ("NM"), because the minimum and maximum may occur on different days for distinct risk components, and hence it is not meaningful to compute a portfolio-diversification effect.

(d) The Firm restated its 2012 first quarter financial statements regarding the CIO synthetic credit portfolio. The CIO VaR amounts for 2012 were not recalculated to reflect the restatement.

(e) Effective in the fourth quarter of 2012, CIB's VaR includes the VaR of the former reportable business segments, Investment Bank and Treasury & Securities Services ("TSS"), which were combined to form the CIB business segment as a result of the reorganization of the Firm's business segments. TSS VaR was not material and was

previously classified within Other VaR. Prior period VaR disclosures were not revised as a result of the business segment reorganization.

(f) The Treasury and CIO VaR includes Treasury VaR as of the third quarter of 2013.

(g) The minimum Asset Management VaR for 2012 was immaterial.

As presented in the table above, average Total VaR and average CIB VaR decreased during 2013 compared with 2012. These decreases were primarily driven by reduced risk in the synthetic credit portfolio and lower market volatility across multiple asset classes.

During the third quarter of 2012, the Firm applied a new VaR model to calculate VaR for CIO's synthetic credit portfolio that had been transferred to the CIB on July 2, 2012. In the first quarter of 2013, in order to achieve consistency among like products within CIB and in conjunction with the implementation of Basel 2.5 requirements, the Firm moved CIO's synthetic credit portfolio to an existing VaR model within the CIB. This change had an insignificant impact to the average fixed income VaR and average total CIB trading and credit portfolio VaR, and it had no impact to the average Total VaR compared with the model used in the third and fourth quarters of 2012.

Average Treasury and CIO VaR for the year ended December 31, 2013, decreased from 2012, predominantly reflecting the reduction in and transfer of risk from CIO's synthetic credit portfolio to the CIB on July 2, 2012. The index credit derivative positions retained by CIO were effectively closed out during the three months ended September 30, 2012.

Average Mortgage Banking VaR for the year ended December 31, 2013, decreased from 2012. The decrease is attributable to reduced risk across the Mortgage Production and Mortgage Servicing businesses.

The Firm's average Total VaR diversification benefit was \$9 million or 15% of the sum for 2013, compared with \$45 million or 23% of the sum for 2012. In general, over the course of the year, VaR exposure can vary significantly as positions change, market volatility fluctuates and diversification benefits change.

Management's discussion and analysis

VaR back-testing

The Firm evaluates the effectiveness of its VaR methodology by back-testing, which compares the daily Risk Management VaR results with the daily gains and losses recognized on market-risk related revenue.

Effective during the fourth quarter of 2013, the Firm revised its definition of market risk-related gains and losses to be consistent with the definition used by the banking regulators under Basel 2.5. Under this definition market risk-related gains and losses are defined as: profits and losses on the Firm's Risk Management positions, excluding fees, commissions, fair value adjustments, net interest income, and gains and losses arising from intraday trading.

The following chart compares the daily market risk-related gains and losses on the Firm's Risk Management positions for the year ended December 31, 2013, under the revised definition. As the chart presents market risk-related gains and losses related to those positions included in the Firm's Risk Management VaR, the results in the table below differ from the results of backtesting disclosed in the Firm's Basel 2.5 report, which are based on Regulatory VaR. The chart shows that for the year ended December 31, 2013, the Firm observed two VaR band breaks and posted gains on 177 of the 260 days in this period.

Prior to the fourth quarter of 2013, the Firm disclosed a histogram which presented the results of daily backtesting against its daily market risk-related gains and losses for positions included in the Firm's Risk Management VaR calculation. Under this previous presentation, the market risk related revenue was defined as the change in value of: principal transactions revenue for CIB, and Treasury and CIO; trading-related net interest income for CIB, Treasury and CIO, and Mortgage Production and Mortgage Servicing in CCB; CIB brokerage commissions, underwriting fees or

other revenue; revenue from syndicated lending facilities that the Firm intends to distribute; mortgage fees and related income for the Firm's mortgage pipeline and warehouse loans, MSRs, and all related hedges; and market-risk related revenue from Asset Management hedges; gains and losses from DVA were excluded. Under this prior measure there were no VaR band breaks nor any trading loss days for the year ended December 31, 2013.

#### Other risk measures

##### Economic-value stress testing

Along with VaR, stress testing is an important tool in measuring and controlling risk. While VaR reflects the risk of loss due to adverse changes in markets using recent historical market behavior as an indicator of losses, stress testing is intended to capture the Firm's exposure to unlikely but plausible events in abnormal markets. The Firm runs weekly stress tests on market-related risks across the lines of business using multiple scenarios that assume significant changes in risk factors such as credit spreads, equity prices, interest rates, currency rates or commodity prices. The framework uses a grid-based approach, which calculates multiple magnitudes of stress for both market rallies and market sell-offs for each risk factor. Stress-test results, trends and explanations based on current market risk positions are reported to the Firm's senior management and to the lines of business to allow them to better understand the sensitivity of positions to certain defined events and to enable them to manage their risks with more transparency. Stress scenarios are defined and reviewed by Market Risk, and significant changes are reviewed by the relevant Risk Committees. While most of the scenarios estimate losses based on significant market moves, such as an equity market collapse or credit crisis, the Firm also develops scenarios to quantify risk arising from specific portfolios or concentrations of risks, which attempt to capture certain idiosyncratic market movements. Scenarios may be redefined on an ongoing basis to reflect current market conditions. Ad hoc scenarios are run in response to specific market events or concerns. Furthermore, the Firm's stress testing framework is utilized in calculating results under scenarios mandated by the Federal Reserve's CCAR and ICAAP ("Internal Capital Adequacy Assessment Process") processes.

##### Nonstatistical risk measures

Nonstatistical risk measures include sensitivities to variables used to value positions, such as credit spread sensitivities, interest rate basis point values and market values. These measures provide granular information on the Firm's market risk exposure. They are aggregated by line-of-business and by risk type, and are used for tactical control and monitoring limits.

##### Loss advisories and profit and loss drawdowns

Loss advisories and profit and loss drawdowns are tools used to highlight trading losses above certain levels of risk tolerance. Profit and loss drawdowns are defined as the decline in net profit and loss since the year-to-date peak revenue level.

##### Risk identification for large exposures

Individuals who manage risk positions consider potential material losses that could arise from specific, unusual events, such as a potential change in tax legislation, or a particular combination of unusual market moves. This information allows the Firm to monitor further earnings vulnerability that is not adequately covered by standard risk measures.

##### Earnings-at-risk

The VaR and stress-test measures described above illustrate the total economic sensitivity of the Firm's Consolidated Balance Sheets to changes in market variables. The effect of interest rate exposure on reported net income is also important as interest rate risk represents one of the Firm's significant market risks. Interest rate risk arises not only from trading activities but also from the Firm's traditional banking activities, which include extension of loans and credit facilities, taking deposits and issuing debt. The CIO, Treasury and Corporate ("CTC") Risk Committee establishes the Firm's structural interest rate risk policies and market risk limits, which are subject to approval by the Risk Policy Committee of the Firm's Board of Directors. CIO, working in partnership with the lines of business, calculates the Firm's structural interest rate risk profile and reviews it with senior management including the CTC Risk Committee and the Firm's ALCO.

Structural interest rate risk can occur due to a variety of factors, including:

- Differences in the timing among the maturity or repricing of assets, liabilities and off-balance sheet instruments.
- Differences in the amounts of assets, liabilities and off-balance sheet instruments that are repricing at the same time.
- Differences in the amounts by which short-term and long-term market interest rates change (for example, changes in the slope of the yield curve).

The impact of changes in the maturity of various assets, liabilities or off-balance sheet instruments as interest rates change.

The Firm manages interest rate exposure related to its assets and liabilities on a consolidated, corporate-wide basis. Business units transfer their interest rate risk to Treasury through a transfer-pricing system, which takes into account the elements of interest rate exposure that can be risk-managed in financial markets. These elements include asset and liability balances and contractual rates of interest, contractual principal payment schedules, expected prepayment experience, interest rate reset dates and maturities, rate indices used for repricing, and any interest rate ceilings or floors for adjustable rate products. All transfer-pricing assumptions are dynamically reviewed.

Oversight of structural interest rate risk is managed through a dedicated risk function reporting to the CTC CRO. This risk function is responsible for providing independent oversight,

## Management's discussion and analysis

creating governance over assumptions and establishing and monitoring limits for structural interest rate risk.

The Firm manages structural interest rate risk generally through its investment securities portfolio and related derivatives. The Firm evaluates its structural interest rate risk exposure through earnings-at-risk, which measures the extent to which changes in interest rates will affect the Firm's core net interest income (see page 83 of this Annual Report for further discussion of core net interest income) and interest rate-sensitive fees. Earnings-at-risk excludes the impact of trading activities and MSR, as these sensitivities are captured under VaR.

The Firm conducts simulations of changes in structural interest rate-sensitive revenue under a variety of interest rate scenarios. Earnings-at-risk scenarios estimate the potential change in this revenue, and the corresponding impact to the Firm's pretax core net interest income, over the following 12 months, utilizing multiple assumptions as described below. These scenarios highlight exposures to changes in interest rates, pricing sensitivities on deposits, optionality and changes in product mix. The scenarios include forecasted balance sheet changes, as well as prepayment and reinvestment behavior. Mortgage prepayment assumptions are based on current interest rates compared with underlying contractual rates, the time since origination, and other factors which are updated periodically based on historical experience.

JPMorgan Chase's 12-month pretax core net interest income sensitivity profiles.

(Excludes the impact of trading activities and MSRs)

(in millions)	Instantaneous change in rates <sup>(a)</sup>			
	+200 bps	+100 bps	-100 bps	-200 bps
December 31, 2013	\$4,718	\$2,518	NM	(b) NM (b)
December 31, 2012	3,886	2,145	NM	(b) NM (b)

(a) Instantaneous changes in interest rates present a limited view of risk, and so alternative scenarios are also reviewed.

(b) Downward 100- and 200-basis-points parallel shocks result in a federal funds target rate of zero and negative three- and six-month treasury rates. The earnings-at-risk results of such a low-probability scenario are not meaningful.

The change in earnings-at-risk from December 31, 2012, resulted from higher expected deposit balances, partially offset by repositioning the investment securities portfolio. The Firm's benefit to rising rates is largely a result of reinvesting at higher yields and assets re-pricing at a faster pace than deposits.

Additionally, another interest rate scenario used by the Firm — involving a steeper yield curve with long-term rates rising by 100 basis points and short-term rates staying at current levels — results in a 12-month pretax core net interest income benefit of \$407 million. The increase in core net interest income under this scenario reflects the Firm reinvesting at the higher long-term rates, with funding costs remaining unchanged.

## Risk monitoring and control

## Limits

Market risk is controlled primarily through a series of limits set in the context of the market environment and business strategy. In setting limits, the Firm takes into consideration factors such as market volatility, product liquidity and accommodation of client business and management experience. The Firm maintains different levels of limits.

Corporate level limits include VaR and stress limits. Similarly, line of business limits include VaR and stress limits and may be supplemented by loss advisories, nonstatistical measurements and profit and loss drawdowns. Limits may also be allocated within the lines of business, as well at the portfolio level.

Limits are established by Market Risk in agreement with the lines of business. Limits are reviewed regularly by Market Risk and updated as appropriate, with any changes approved by lines of business management and Market Risk. Senior management, including the Firm's Chief Executive Officer and Chief Risk Officer, are responsible for reviewing and approving certain of these risk limits on an ongoing basis. All limits that have not been reviewed within specified time periods by Market Risk are escalated to senior management. The lines of business are responsible for adhering to established limits against which exposures are monitored and reported.

Limit breaches are required to be reported in a timely manner by Risk Management to limit approvers, Market Risk and senior management. In the event of a breach, Market Risk consults with Firm senior management and lines of business senior management to determine the appropriate course of action required to return to compliance, which may include a reduction in risk in order to remedy the excess. Any Firm or line of business-level limits that are in

excess for three business days or longer, or that are over limit by more than 30%, are escalated to senior management and the Firmwide Risk Committee.

## COUNTRY RISK MANAGEMENT

Country risk is the risk that a sovereign event or action alters the value or terms of contractual obligations of obligors, counterparties and issuers, or adversely impacts markets related to a country. The Firm has a comprehensive country risk management framework for assessing country risks, determining risk tolerance, and measuring and monitoring direct country exposures in the Firm. The Country Risk Management group is responsible for developing guidelines and policy for managing country risk in both emerging and developed countries. The Country Risk Management group actively monitors the various portfolios giving rise to country risk to ensure the Firm's country risk exposures are diversified and that exposure levels are appropriate given the Firm's strategy and risk tolerance relative to a country.

### Country risk organization

The Country Risk Management group is an independent risk management function which works in close partnership with other risk functions to identify and monitor country risk within the Firm. The Firmwide Risk Executive for Country Risk reports to the Firm's CRO.

Country Risk Management is responsible for the following functions:

- Developing guidelines and policies consistent with a comprehensive country risk framework
- Assigning sovereign ratings and assessing country risks
- Measuring and monitoring country risk exposure and stress across the Firm
- Managing country limits and reporting trends and limit breaches to senior management
- Developing surveillance tools for early identification of potential country risk concerns
- Providing country risk scenario analysis

### Country risk identification and measurement

The Firm is exposed to country risk through its lending, investing, and market-making activities, whether cross-border or locally funded. Country exposure includes activity with both government and private-sector entities in a country. Under the Firm's internal country risk management approach, country exposure is reported based on the country where the majority of the assets of the obligor, counterparty, issuer or guarantor are located or where the majority of its revenue is derived, which may be different than the domicile (legal residence) or country of incorporation of the obligor, counterparty, issuer or guarantor. Country exposures are generally measured by considering the Firm's risk to an immediate default of the counterparty or obligor, with zero recovery. Assumptions are sometimes required in determining the measurement and allocation of country exposure, particularly in the case of certain tranching credit derivatives. Different measurement approaches or assumptions would affect the amount of reported country exposure.

Under the Firm's internal country risk measurement framework:

• Lending exposures are measured at the total committed amount (funded and unfunded), net of the allowance for credit losses and cash and marketable securities collateral received

• Securities financing exposures are measured at their receivable balance, net of collateral received

• Debt and equity securities are measured at the fair value of all positions, including both long and short positions

• Counterparty exposure on derivative receivables, including credit derivative receivables, is measured at the derivative's fair value, net of the fair value of the related collateral

Credit derivatives protection purchased and sold is reported based on the underlying reference entity and is measured at the notional amount of protection purchased or sold, net of the fair value of the recognized derivative receivable or payable. Credit derivatives protection purchased and sold in the Firm's market-making activities is presented on a net basis, as such activities often result in selling and purchasing protection related to the same underlying reference entity; this reflects the manner in which the Firm manages these exposures

The Firm also has indirect exposures to country risk (for example, related to the collateral received on securities financing receivables or related to client clearing activities). These indirect exposures are managed in the normal course of business through the Firm's credit, market, and operational risk governance, rather than through Country Risk Management.

The Firm's internal country risk reporting differs from the reporting provided under FFIEC bank regulatory requirements as there are significant differences in reporting methodology. For further information on the FFIEC's

reporting methodology, see Cross-border outstandings on page 357 of the 2013 Form 10-K.

## Management's discussion and analysis

## Country risk stress testing

The country risk stress framework aims to identify potential losses arising from a country crisis by capturing the impact of large asset price movements in a country based on market shocks combined with counterparty specific assumptions. Country Risk Management periodically defines and runs ad hoc stress scenarios for individual countries in response to specific market events and sector performance concerns.

## Country risk monitoring and control

The Country Risk Management Group establishes guidelines for sovereign ratings reviews and limit management. Country stress and nominal exposures are measured under a comprehensive country limit framework. Country ratings and limits activity are actively monitored and reported on a regular basis. Country limit requirements are reviewed and approved by senior management as often as necessary, but at least annually. In addition, the Country Risk Management group uses surveillance tools for early identification of potential country risk concerns, such as signaling models and ratings indicators.

## Country risk reporting

The following table presents the Firm's top 20 exposures by country (excluding the U.S.). The selection of countries is based solely on the Firm's largest total exposures by country, based on the Firm's internal country risk management approach, and does not represent the Firm's view of any actual or potentially adverse credit conditions.

## Top 20 country exposures

	December 31, 2013			
(in billions)	Lending <sup>(a)</sup>	Trading and investing <sup>(b)(c)</sup>	Other <sup>(d)</sup>	Total exposure
United Kingdom	\$34.4	\$43.5	\$1.4	\$79.3
Germany	13.0	29.1	0.2	42.3
Netherlands	5.3	25.5	2.6	33.4
France	13.9	17.0	—	30.9
Switzerland	19.9	1.7	0.6	22.2
Canada	13.8	5.4	0.2	19.4
Australia	7.4	11.3	—	18.7
China	11.1	3.9	0.7	15.7
Brazil	5.7	5.6	—	11.3
India	6.8	3.8	0.1	10.7
Hong Kong	3.8	3.5	1.7	9.0
Korea	4.8	2.9	—	7.7
Italy	3.4	4.0	—	7.4
Singapore	3.4	2.0	1.3	6.7
Mexico	2.3	4.4	—	6.7
Japan	3.9	2.6	—	6.5
Sweden	1.8	4.0	0.1	5.9
Russia	4.7	0.7	—	5.4
Spain	3.2	1.3	—	4.5
Malaysia	2.4	1.5	0.6	4.5

Lending includes loans and accrued interest receivable, net of collateral and the allowance for loan losses, deposits with banks, acceptances, other monetary assets, issued letters of credit net of participations, and undrawn commitments to extend credit. Excludes intra-day and operating exposures, such as from settlement and clearing activities.

(b) Includes market-making inventory, securities held in AFS accounts and hedging.

(c)

Includes single-name and index and tranching credit derivatives for which one or more of the underlying reference entities is in a country listed in the above table.

(d) Includes capital invested in local entities and physical commodity inventory.

## Selected European exposure

Notwithstanding the economic and fiscal situation in Europe showing signs of stabilization, with Spain and Ireland exiting their bail out programs and some encouraging progress on financial reform, the Firm continues to closely monitor its exposures in Spain, Italy, Ireland, Portugal and Greece. Management believes its exposure to these five countries is modest relative to the Firm's aggregate exposures. The Firm continues to conduct business and support client activity in these countries and, therefore, the Firm's aggregate net exposures and sector distribution may vary over time. In addition, the net exposures may be affected by changes in market conditions, including the effects of interest rates and credit spreads on market valuations.

The following table presents the Firm's direct exposure to Spain, Italy, Ireland, Portugal and Greece at December 31, 2013, as measured under the Firm's internal country risk management approach. For individual exposures, corporate clients represent approximately 93% of the Firm's non-sovereign exposure in these five countries, and substantially all of the remaining 7% of the non-sovereign exposure is to the banking sector.

December 31, 2013 (in billions)	Lending net of Allowance <sup>(a)</sup>	AFS securities	Trading <sup>(b)</sup>	Derivative collateral <sup>(c)</sup>	Portfolio hedging <sup>(d)</sup>	Total exposure
<b>Spain</b>						
Sovereign	\$—	\$0.5	\$(0.2)	\$—	\$(0.2)	\$0.1
Non-sovereign	3.2	—	3.3	(1.9)	(0.2)	4.4
Total Spain exposure	\$3.2	\$0.5	\$3.1	\$(1.9)	\$(0.4)	\$4.5
<b>Italy</b>						
Sovereign	\$—	\$—	\$8.0	\$(1.0)	\$(4.3)	\$2.7
Non-sovereign	3.4	—	3.0	(1.1)	(0.6)	4.7
Total Italy exposure	\$3.4	\$—	\$11.0	\$(2.1)	\$(4.9)	\$7.4
<b>Ireland</b>						
Sovereign	\$—	\$—	\$—	\$—	\$(0.1)	\$(0.1)
Non-sovereign	0.2	—	0.5	(0.1)	—	0.6
Total Ireland exposure	\$0.2	\$—	\$0.5	\$(0.1)	\$(0.1)	\$0.5
<b>Portugal</b>						
Sovereign	\$—	\$—	\$0.1	\$—	\$—	\$0.1
Non-sovereign	0.5	—	0.9	(0.4)	(0.1)	0.9
Total Portugal exposure	\$0.5	\$—	\$1.0	\$(0.4)	\$(0.1)	\$1.0
<b>Greece</b>						
Sovereign	\$—	\$—	\$0.1	\$—	\$—	\$0.1
Non-sovereign	0.1	—	0.5	(0.5)	—	0.1
Total Greece exposure	\$0.1	\$—	\$0.6	\$(0.5)	—	\$0.2
<b>Total exposure</b>	<b>\$7.4</b>	<b>\$0.5</b>	<b>\$16.2</b>	<b>\$(5.0)</b>	<b>\$(5.5)</b>	<b>\$13.6</b>

Lending includes loans and accrued interest receivable, deposits with banks, acceptances, other monetary assets, issued letters of credit net of participations, and undrawn commitments to extend credit. Excludes intra-day and operating exposures, such as from settlement and clearing activities. Amounts are presented net of the allowance (a) for credit losses of \$100 million (Spain), \$43 million (Italy), \$6 million (Ireland), \$19 million (Portugal), and \$13 million (Greece) specifically attributable to these countries. Includes \$3.0 billion of unfunded lending exposure at December 31, 2013. These exposures consist typically of committed, but unused corporate credit agreements, with market-based lending terms and covenants.

(b) Primarily includes: \$13.9 billion of counterparty exposure on derivative and securities financings, \$1.6 billion of issuer exposure on debt and equity securities. Securities financings of approximately \$25.2 billion were

collateralized with approximately \$27.5 billion of cash and marketable securities as of December 31, 2013.

(c) Includes cash and marketable securities pledged to the Firm, of which approximately 95% of the collateral was cash at December 31, 2013.

(d) Reflects net protection purchased through the Firm's credit portfolio management activities, which are managed separately from its market-making activities. Predominantly includes single-name CDS and also includes index credit derivatives and short bond positions.

## Management's discussion and analysis

## Effect of credit derivatives on selected European exposures

Country exposures in the Selected European exposure table above have been reduced by purchasing protection through single name, index, and tranching credit derivatives. The following table presents the effect of purchased and sold credit derivatives on the trading and portfolio hedging activities in the Selected European exposure table.

December 31, 2013 (in billions)	Trading			Portfolio hedging		
	Purchased	Sold	Net	Purchased	Sold	Net
Spain	\$(92.5 )	\$92.3	\$(0.2 )	\$(7.8 )	\$7.4	\$(0.4 )
Italy	(139.7 )	140.9	1.2	(23.6 )	18.7	(4.9 )
Ireland	(7.2 )	7.1	(0.1 )	(0.7 )	0.6	(0.1 )
Portugal	(32.9 )	33.2	0.3	(2.8 )	2.7	(0.1 )
Greece	(7.7 )	7.7	—	(0.7 )	0.7	—
Total	\$(280.0 )	\$281.2	\$1.2	\$(35.6 )	\$30.1	\$(5.5 )

Under the Firm's internal country risk management approach, credit derivatives are generally reported based on the country where the majority of the assets of the reference entity are located. Exposures are measured assuming that all of the reference entities in a particular country default simultaneously with zero recovery. For example, single-name and index credit derivatives are measured at the notional amount, net of the fair value of the derivative receivable or payable. Exposures for index credit derivatives, which may include several underlying reference entities, are determined by evaluating the relevant country for each of the reference entities underlying the named index, and allocating the applicable amount of the notional and fair value of the index credit derivative to each of the relevant countries. Tranching credit derivatives are measured at the modeled change in value of the derivative assuming the simultaneous default of all underlying reference entities in a specific country; this approach considers the tranching nature of the derivative (i.e., that some tranches are subordinate to others) and the Firm's own position in the structure. The "Total" line in the table above represents the simple sum of the individual countries. Changes in the Firm's methodology or assumptions would produce different results.

The credit derivatives reflected in the "Portfolio hedging" column are predominantly single-name CDS used in the Firm's credit portfolio management activities, which are intended to mitigate the credit risk associated with traditional lending activities and derivative counterparty

exposure. The effectiveness of the Firm's CDS protection as a hedge of the Firm's exposures may vary depending upon a number of factors, including the maturity of the Firm's CDS protection, the named reference entity, and the contractual terms of the CDS. For further information about credit derivatives see Credit derivatives on pages 137–138, and Note 6 on pages 220–233 of this Annual Report.

The Firm's net presentation of purchased and sold credit derivatives reflects the manner in which this exposure is managed, and reflects, in the Firm's view, the substantial mitigation of market and counterparty credit risk in its credit derivative activities. Market risk is substantially mitigated because market-making activities, and to a lesser extent, hedging activities, often result in selling and purchasing protection related to the same underlying reference entity. For example, for each of the five named countries as of December 31, 2013, the protection sold by the Firm was more than 94% offset by protection purchased on the identical reference entity.

In addition, counterparty credit risk has also been substantially mitigated by the master netting and collateral agreements in place for these credit derivatives. As of December 31, 2013, 100% of the purchased protection presented in the table above is purchased under contracts that require posting of cash collateral; 88% is purchased from investment-grade counterparties domiciled outside of the selected European countries; and 68% of the protection purchased offsets protection sold on the identical reference entity, with the identical counterparty subject to a master netting agreement.



## MODEL RISK MANAGEMENT

### Model risk

The Firm uses models, for many purposes, but primarily for the measurement, monitoring and management of risk positions. Valuation models are employed by the Firm to value certain financial instruments which cannot otherwise be valued using quoted prices. These valuation models may also be employed as inputs to risk management models, including VaR and economic stress models. The Firm also makes use of models for a number of other purposes, including the calculation of regulatory capital requirements and estimating the allowance for credit losses. Models are owned by various functions within the Firm based on the specific purposes of such models. For example, VaR models and certain regulatory capital models are owned by the line-of-business aligned risk management functions. Owners of models are responsible for the development, implementation and testing of their models, as well as referral of models to the Model Risk function (within the Model Risk and Development unit) for review and approval. Once models have been approved, model owners are responsible for the maintenance of a robust operating environment and must monitor and evaluate the performance of the models on an ongoing basis. Model owners may seek to enhance models in response to changes in the portfolios and for changes in product and market developments, as well as to capture improvements in available modeling techniques and systems capabilities. The Model Risk function is part of the Firm's Model Risk and Development unit, which in turn reports to the Chief Risk Officer. The Model Risk function is independent of the model owners and reviews and approves a wide range of models, including risk management, valuation and certain regulatory capital models used by the Firm. Models are tiered based on an internal standard according to their complexity, the exposure associated with the model and the Firm's reliance on the model. This tiering is subject to the approval of the Model Risk function. A model review conducted by the Model Risk function considers the model's

suitability for the specific uses to which it will be put. The factors considered in reviewing a model include whether the model accurately reflects the characteristics of the product and its significant risks, the selection and reliability of model inputs, consistency with models for similar products, the appropriateness of any model-related adjustments, and sensitivity to input parameters and assumptions that cannot be observed from the market. When reviewing a model, the Model Risk function analyzes and challenges the model methodology and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes. Model reviews are approved by the appropriate level of management within the Model Risk function based on the relevant tier of the model.

Under the Firm's model risk policy, new models, as well as material changes to existing models, are reviewed and approved by the Model Risk function prior to implementation in the operating environment.

In the event that the Model Risk function does not approve a model, the model owner is required to remediate the model within a time period agreed upon with the Model Risk function. The model owner is also required to resubmit the model for review to the Model Risk function and to take appropriate actions to mitigate the model risk if it is to be used in the interim. These actions will depend on the model and may include, for example, limitation of trading activity. The Firm may also implement other appropriate risk measurement tools to augment the model that is subject to remediation.

Exceptions to the Firm's model risk policy may be granted by the head of the Model Risk function to allow a model to be used prior to review or approval.

For a summary of valuations based on models, see Critical Accounting Estimates Used by the Firm on pages 176–177 and Note 3 on pages 195–215 of this Annual Report.



Management's discussion and analysis

**PRINCIPAL RISK MANAGEMENT**

Principal investments are predominantly privately-held financial assets and instruments, typically representing an ownership or junior capital position, that have unique risks due to their illiquidity or for which there is less observable market or valuation data. Such investing activities, including private equity investments, mezzanine financing, and tax-oriented investments are typically intended to be held over extended investment periods and, accordingly, the Firm has no expectation for short-term gain with respect to these investments.

The Firm's approach to managing principal risk is consistent with the Firm's general risk governance structure. A firm-wide risk policy framework exists for all principal investing activities. All investments are approved by investment committees that include executives who are independent from the investing businesses. An independent valuation function is responsible for reviewing the appropriateness of the carrying values of principal investments, in accordance with relevant accounting, valuation and risk policies. Targeted levels for total and annual investments are established in order to manage the overall size of the portfolios. Industry, geographic, and position level

concentration limits are in place and intended to ensure diversification of the portfolios. The Firm also conducts stress testing on these portfolios using specific scenarios that estimate losses based on significant market moves and/or other risk events.

The Firm's principal investments are managed under various lines of business and are captured within the respective LOB's financial results. Principal investments cover multiple asset classes and occur either as a standalone investing businesses or as part of a broader business platform. Asset classes include private equity, tax equity investments including affordable housing, and mezzanine/junior debt investments. The majority of the Firm's private equity is reported separately under Corporate/Private Equity (for detailed information, see Private Equity portfolio on page 111 of this Annual Report).

## OPERATIONAL RISK MANAGEMENT

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or external events.

### Overview

Operational risk is inherent in each of the Firm's businesses and support activities. Operational risk can manifest itself in various ways, including errors, fraudulent acts, business interruptions, inappropriate behavior of employees, or vendors that do not perform in accordance with their arrangements. These events could result in financial losses, including litigation and regulatory fines, as well as other damage to the Firm, including reputational harm. To monitor and control operational risk, the Firm maintains an overall framework that includes oversight and governance, policies and procedures, consistent practices across the lines of business, and enterprise risk management tools intended to provide a sound and well-controlled operational environment.

The framework clarifies:

### Roles and Responsibilities

Ownership of the risk by the businesses and functional areas

Monitoring and validation by business control officers

Oversight by independent risk management

Governance through business risk and control committees

### Risk Categories

Independent review by Internal Audit

Tools to measure, monitor, and mitigate risk

The goal is to keep operational risk at appropriate levels, in light of the Firm's financial strength, the characteristics of its businesses, the markets in which it operates, and the competitive and regulatory environment to which it is subject. In order to strengthen the focus on the Firm's control environment and drive consistent practices across businesses and functional areas, the Firm established a Firmwide Oversight and Control Group during 2012. Oversight and Control is comprised of dedicated control officers within each of the lines of business and Corporate functional areas, as well as a central oversight team. The group is charged with enhancing the Firm's controls by looking within and across the lines of business and Corporate functional areas to identify and control issues. The group enables the Firm to detect control problems more quickly, escalate issues promptly and get the right people involved to understand common themes and interdependencies among the various parts of the Firm. The group works closely with the Firm's other control-related functions, including Compliance, Legal, Internal Audit and Risk Management, to effectively remediate identified control issues across all affected areas of the Firm. As a result, the group facilitates the effective execution of the

Firm's control framework and helps support operational risk management across the Firm.

Risk Management is responsible for defining the Operational Risk Management Framework and providing independent oversight of the framework across the Firm.

### Operational risk management framework

The Firm's approach to operational risk management is intended to identify potential issues and mitigate losses by supplementing traditional control-based approaches to operational risk with risk measures, tools and disciplines that are risk-specific, consistently applied and utilized firmwide. Key themes are transparency of information, escalation of key issues and accountability for issue resolution.

In addition to the standard Basel risk event categories, the Firm has developed the operational risk categorization taxonomy below for purposes of identification, monitoring, reporting and analysis:

Fraud risk

Market practices

Client management

Processing error

Financial reporting error

Information risk

Technology risk (including cybersecurity risk)

Third-party risk

Disruption and safety risk

Employee risk

Risk management error (including model risk)

Oversight and governance errors

Key components of the Operational Risk Management Framework include:

Risk governance

The Firmwide Control Committee (“FCC”) provides a forum for senior management to review and discuss firmwide operational risks including existing and emerging issues as well as operational risk metrics, management and execution. The FCC serves as an escalation point for significant issues raised from LOB and Functional Control Committees, particularly those with potential enterprise-wide impact. The FCC (as well as the LOB and Functional Control Committees) oversees the risk and control environment, which includes reviewing the identification, management and monitoring of operational risk, control issues, remediation actions and enterprise-wide trends. The FCC escalates significant issues to the FRC.

## Management's discussion and analysis

### Risk identification assessment

In order to evaluate and monitor operational risk, businesses and functions utilize the Firm's standard risk and control self-assessment ("RCSA") process and supporting architecture. The RCSA process requires management to identify material inherent operational risks, assess the design and operating effectiveness of relevant controls designed to mitigate such risks, and evaluate residual risk.

Action plans are developed for control issues that are identified, and businesses are held accountable for tracking and resolving issues on a timely basis.

### Risk monitoring

The Firm has a process for monitoring operational risk event data, which permits analysis of errors and losses as well as trends. Such analysis, performed both at a line of business level and by risk-event type, enables identification of the causes associated with risk events faced by the businesses. Where available, the internal data can be supplemented with external data for comparative analysis with industry patterns.

### Risk reporting and analysis

Operational risk management reports provide information, including actual operational loss levels, self-assessment results and the status of issue resolution to the lines of business and senior management. The purpose of these reports is to enable management to maintain operational risk at appropriate levels within each line of business, to escalate issues and to provide consistent data aggregation across the Firm's businesses and functions.

### Risk measurement

Operational risk is measured using a statistical model based on the loss distribution approach. The operational risk capital model uses actual losses, a comprehensive inventory of forward looking potential loss scenarios and adjustments to reflect changes in the quality of the control environment in determining firmwide operational risk capital. This methodology is designed to comply with the Advanced Measurement rules under the Basel framework. For additional information on operational risk capital, see Regulatory Capital on pages 161–165 of this Annual Report.

### Operational risk management system

The Firm's operational risk framework is supported by Phoenix, an internally designed operational risk system, which integrates the individual components of the operational risk management framework into a unified, web-based tool. Phoenix enhances the capture, reporting and analysis of operational risk data by enabling risk identification, measurement, monitoring, reporting and analysis to be done in an integrated manner across the Firm.

### Audit alignment

Internal Audit utilizes a risk-based program of audit coverage to provide an independent assessment of the design and effectiveness of key controls over the Firm's operations, regulatory compliance and reporting. This includes reviewing the operational risk framework, the effectiveness of the business self-assessment process, and the loss data-collection and reporting activities.

### Insurance

One of the ways operational loss is mitigated is through insurance maintained by the Firm. The Firm purchases insurance to be in compliance with local laws and regulations (e.g., workers compensation), as well as to serve other needs (e.g., property loss and public liability). Insurance may also be required by third parties with whom the Firm does business. The insurance purchased is reviewed and approved by senior management.

### Cybersecurity

The Firm devotes significant resources to maintain and regularly update its systems and processes that are designed to protect the security of the Firm's computer systems, software, networks and other technology assets against attempts by third parties to obtain unauthorized access to confidential information, destroy data, disrupt or degrade service, sabotage systems or cause other damage. The Firm and several other U.S. financial institutions continue to experience significant distributed denial-of-service attacks from technically sophisticated and well-resourced third parties which are intended to disrupt online banking services. The Firm is also regularly targeted by third-parties using malicious code and viruses, and has also experienced other attempts to breach the security of the Firm's systems and data which, in certain instances, have resulted in unauthorized access to customer account data. The Firm has established, and continues to establish, defenses on an ongoing basis to mitigate these attacks, and these cyberattacks have not, to date,

resulted in any material disruption of the Firm's operations, material harm to the Firm's customers, and have not had a material adverse effect on the Firm's results of operations.

Third parties with which the Firm does business or that facilitate the Firm's business activities (e.g., vendors, exchanges, clearing houses, central depositories, and financial intermediaries) could also be sources of cybersecurity risk to the Firm, including with respect to breakdowns or failures of their systems, misconduct by the employees of such parties, or cyberattacks which could affect their ability to deliver a product or service to the Firm or result in lost or compromised information of the Firm or its clients.

The Firm is working with appropriate government agencies and other businesses, including the Firm's third-party service providers, to continue to enhance defenses and improve resiliency to cybersecurity threats.

#### Business resiliency

JPMorgan Chase's global resiliency and crisis management program is intended to ensure that the Firm has the ability to recover its critical business functions and supporting assets (i.e., staff, technology and facilities) in the event of a business interruption, and to remain in compliance with global laws and regulations as they relate to resiliency risk. The program includes corporate governance, awareness and training, as well as strategic and tactical initiatives to ensure that risks are properly identified, assessed, and managed.

The Firm's Global Resiliency team has established comprehensive and qualitative tracking and reporting of resiliency plans in order to proactively anticipate and manage various potential disruptive circumstances such as severe weather, technology and communications outages, flooding, mass transit shutdowns and terrorist threats,

among others. The resiliency measures utilized by the Firm include backup infrastructure for data centers, a geographically distributed workforce, dedicated recovery facilities, ensuring technological capabilities to support remote work capacity for displaced staff and accommodation of employees at alternate locations. JPMorgan Chase continues to coordinate its global resiliency program across the Firm and mitigate business continuity risks by reviewing and testing recovery procedures. The strength and proficiency of the Firm's global resiliency program has played an integral role in maintaining the Firm's business operations during and quickly after various events that have resulted in business interruptions, such as Superstorm Sandy and Hurricane Isaac in the U.S., monsoon rains in the Philippines, tsunamis in Asia, and earthquakes in Latin America.

## Management's discussion and analysis

## LEGAL RISK, REGULATORY RISK, AND COMPLIANCE RISK MANAGEMENT

The Firm's success depends not only on its prudent management of the liquidity, capital, credit, market, principal and operational risks that are part of its business risks, but equally on the recognition among its many constituents — customers and clients, employees, investors, government officials, regulators, as well as the general public — that the Firm adheres consistently to a set of core values that drive the way the Firm conducts business. The Firm has established policies and procedures, and has in place various oversight functions intended to promote its core values and the Firm's culture of "doing the right thing" by doing "first class business in a first class way".

The Firm has in place a Code of Conduct (the "Code"), and each employee is given annual training in respect of the Code and is required annually to affirm his or her compliance with the Code. The Code sets forth the Firm's core principles and fundamental values, including that no employee should ever sacrifice integrity — or give the impression that he or she has — even if one thinks it would help the Firm's business. The Code requires prompt reporting of any known or suspected violation of the Code, any internal Firm policy, or any law or regulation applicable to the Firm's business. It also requires the reporting of any illegal conduct, or conduct that violates the underlying principles of the Code, by any of the Firm's customers, suppliers, contract workers, business partners, or agents. Specified employees are specially trained and designated as "code specialists" who act as a resource to employees on Code of Conduct matters. In addition, concerns may be reported anonymously and the Firm prohibits retaliation against employees for the good faith reporting of any actual or suspected violations of the Code.

Management of conflicts of interest is essential to the maintenance of the Firm's client relationships, and its reputation. Each of the various committees of senior management that oversee and approve transactions and activities undertaken by the Firm are responsible for considering any potential conflicts that may arise from such transactions or activities. In addition, the Firm's Conflicts Office examines the Firm's wholesale transactions that may have the potential to create conflicts of interest for the Firm.

The risk of legal or regulatory fines or sanctions or of financial damage or loss due to the failure to comply with laws, rules, and regulations, is a primary focus of the Legal, Compliance and Oversight and Controls functions. In recent years, the Firm has experienced heightened scrutiny by its regulators of its compliance with regulations, and with respect to its controls and operational processes. The Firm expects such regulatory scrutiny will continue, and that regulators will increasingly use formal actions (such as Consent Orders) instead of informal supervisory actions (such as "Matters Requiring Attention"), resulting in findings of violations of law and impositions of fines and penalties. In addition to providing legal services and advice to the Firm, and communicating and helping businesses adjust to the legal and regulatory changes facing the businesses, including the heightened scrutiny and expectations of its regulators, the global Legal function is responsible for partnering with the businesses to fully understand and assess the businesses' adherence to laws and regulations, as well as potential exposures on key litigation and transactional matters.

Global Compliance Risk Management is responsible for identifying and advising on compliance risks, establishing policies and procedures intended to mitigate and control compliance risks, implementing training and communication forums to provide appropriate oversight and coordination of compliance risks, overseeing remediation of compliance risks and issues, and independently monitoring and testing the Firm's compliance risk controls.

Legal and Compliance, together with the Oversight and Control function, share responsibility with the businesses for identifying legal, compliance and regulatory issues, escalating these issues through the Firm's risk governance structures, and, as necessary, in assisting the businesses in their remediation efforts. For information about the Oversight & Control function, see Enterprise-Wide Risk Management on pages 113–173.

## FIDUCIARY RISK MANAGEMENT

Fiduciary risk is the risk of failing to exercise the applicable standard of loyalty and care, or to act in the best interests of clients or to treat all clients fairly as required under applicable law or regulation, potentially resulting in regulatory action, reputational harm or financial liability.

Depending on the fiduciary activity and capacity in which the Firm is acting, federal and state statutes, common law and regulations require the Firm to adhere to specific duties in which the Firm must always place the client's interests above its own.

### Fiduciary risk governance

Fiduciary Risk Management is the responsibility of the relevant LOB risk committees. Senior business, legal, risk and compliance management, who have particular responsibility for fiduciary issues, work with the relevant LOB risk committees with the goal of ensuring that businesses providing investment, trusts and estates, or other fiduciary products or services that give rise to fiduciary duties to clients, perform at the appropriate standard relative to their fiduciary relationship with a client. Each LOB and its respective risk and governance committees are responsible for the oversight and management of the fiduciary risks in their businesses. Of particular focus are the policies and practices that address a business' responsibilities to a client, including performance and service requirements and expectations; client suitability determinations; and disclosure obligations and communications. In this way, the relevant LOB risk committees provide oversight of the Firm's efforts to monitor, measure and control the performance and risks that may arise in the delivery of products or services to clients that give rise to such fiduciary duties, as well as those stemming from any of the Firm's fiduciary responsibilities under the Firm's various employee benefit plans. During 2013 the Firm created the Firmwide Fiduciary Risk Committee ("FFRC"). The FFRC provides a forum for discussing the risks inherent in the Firm's fiduciary activities. The Committee is responsible for a cross-LOB process to support the consistent identification, escalation and reporting of fiduciary risk issues firmwide. Issues from the FFRC may be escalated to the Firmwide Risk Committee.

## REPUTATION RISK MANAGEMENT

Maintenance of the Firm's reputation is the responsibility of each individual employee of the Firm. The Firm's Reputation Risk policy explicitly vests each employee with the responsibility to consider the reputation of the Firm, rather than business benefits and regulatory requirements alone, in deciding whether to pursue any new product, transaction, client, or any other activity. Since the types of events that could harm the Firm's reputation are so varied across the Firm's lines of business, each line of business has a separate reputation risk governance infrastructure in place, which comprises three key elements: clear, documented escalation criteria appropriate to the business footprint; a designated primary discussion forum – in most cases, one or more dedicated reputation risk committees; and a list of designated contacts. Line of business reputation risk governance is overseen by a Firmwide Reputation Risk Governance function, which provides oversight of the governance infrastructure and process to support the consistent identification, escalation, management and reporting of reputation risk issues firmwide.

Management's discussion and analysis

CAPITAL MANAGEMENT

A strong capital position is essential to the Firm's business strategy and competitive position. The Firm's capital strategy focuses on long-term stability, which enables the Firm to build and invest in market-leading businesses, even in a highly stressed environment. Prior to making any decisions on future business activities, senior management considers the implications on the Firm's capital. In addition to considering the Firm's earnings outlook, senior management evaluates all sources and uses of capital with a view to preserving the Firm's capital strength. Maintaining a strong balance sheet to manage through economic volatility is considered a strategic imperative by the Firm's Board of Directors, CEO and Operating Committee. The Firm's balance sheet philosophy focuses on risk-adjusted returns, strong capital and reserves, and robust liquidity.

The Firm's capital management objectives are to hold capital sufficient to:

- Cover all material risks underlying the Firm's business activities;
- Maintain "well-capitalized" status under regulatory requirements;
- Maintain debt ratings that enable the Firm to optimize its funding mix and liquidity sources while minimizing costs;
- Retain flexibility to take advantage of future investment opportunities;
- Maintain sufficient capital in order to continue to build and invest in its businesses through the cycle and in stressed environments; and
- Distribute excess capital to shareholders while balancing other stated objectives.

These objectives are achieved through ongoing monitoring of the Firm's capital position, regular stress testing, and a capital governance framework. Capital management is intended to be flexible in order to react to a range of potential events. JPMorgan Chase has firmwide and LOB processes for ongoing monitoring and active management of its capital position.

Capital strategy and governance

The Firm's CEO and Operating Committee establish principles and guidelines for capital planning, capital issuance, usage and distributions; and, establish capital targets and minimums for the level and composition of capital in both business-as-usual and highly-stressed environments.

The Firm's capital targets and minimums are calibrated to the U.S. Basel III requirements. The Firm's target Tier 1 common ratio under the Basel III Advanced approach, on a fully phased-in basis, is 10%+. This long-term Tier 1 common ratio target level will enable the Firm to retain market access, continue the Firm's strategy to invest in and grow its businesses; and, maintain flexibility to distribute excess capital. The Firm intends to manage its capital so that it achieves the required capital levels and composition

during the transition from Basel I to Basel III, in line with, or ahead of, the required timetable.

The Firm's senior management recognizes the importance of a capital management function that supports strategic decision-making. The Firm has established the Capital Governance Committee and the Regulatory Capital Management Office ("RCMO") as key components in support of this objective. The Capital Governance Committee is responsible for reviewing the Firm's Capital Management Policy and the principles underlying capital issuance and distribution alternatives. The Committee is also responsible for governing the capital adequacy assessment process, including overall design, assumptions and risk streams, and ensuring that capital stress test programs are designed to adequately capture the idiosyncratic risks across the Firm's businesses. The RCMO is responsible for reviewing, approving and monitoring the implementation of the Firm's capital policies and strategies, as well as its capital adequacy assessment process. The Board of Director's Risk Policy Committee assesses the Firm's capital adequacy process and its components. This review encompasses determining the effectiveness of the capital adequacy process, the appropriateness of the risk tolerance levels, and the strength of the control infrastructure. For additional discussion on the Board's Risk Policy Committee, see Risk Management on pages 113–173 of this Annual Report.

Internal Capital Adequacy Assessment Process

Semiannually, the Firm completes the Internal Capital Adequacy Assessment Process ("ICAAP"), which provides management with a view of the impact of severe and unexpected events on earnings, balance sheet positions, reserves and capital. The Firm's ICAAP integrates stress testing protocols with capital planning.

The process assesses the potential impact of alternative economic and business scenarios on the Firm's earnings and capital. Economic scenarios, and the parameters underlying those scenarios, are defined centrally and applied uniformly across the businesses. These scenarios are articulated in terms of macroeconomic factors, which are key drivers of business results; global market shocks, which generate short-term but severe trading losses; and idiosyncratic operational risk events. The scenarios are intended to capture and stress key vulnerabilities and idiosyncratic risks facing the Firm. However, when defining a broad range of scenarios, realized events can always be worse. Accordingly, management considers additional stresses outside these scenarios, as necessary. ICAAP results are reviewed by management and the Board of Directors.

Comprehensive Capital Analysis and Review ("CCAR")

The Federal Reserve requires large bank holding companies, including the Firm, to submit a capital plan on an annual basis. The Federal Reserve uses the CCAR and Dodd-Frank Act Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") stress test processes

to ensure that large bank holding companies have sufficient capital during periods of economic and financial stress, and have robust, forward-looking capital assessment and planning processes in place that address each bank holding company's unique risks to enable them to have the ability to absorb losses under certain stress scenarios. Through the CCAR, the Federal Reserve evaluates each bank holding company's capital adequacy and internal capital adequacy assessment processes, as well as its plans to make capital distributions, such as dividend payments or stock repurchases.

The Firm's CCAR process is integrated into and employs the same methodologies utilized in the Firm's ICAAP process. On January 7, 2013, the Firm submitted its capital plan to the Federal Reserve under the Federal Reserve's 2013 CCAR process. On March 14, 2013, the Federal Reserve informed the Firm that it did not object to the Firm's 2013 capital plan, but asked the Firm to submit an additional capital plan.

On September 18, 2013, the Firm submitted the additional capital plan which addressed the weaknesses the Federal Reserve had identified in the Firm's original 2013 submission. On December 2, 2013, the Federal Reserve informed the Firm it did not object to the Firm's 2013 capital plan, as resubmitted.

On January 6, 2014, the Firm submitted its 2014 capital plan to the Federal Reserve under the Federal Reserve's 2014 CCAR process. The Firm expects to receive the Federal Reserve's final response to its plan no later than March 14, 2014.

For additional information on the Firm's capital actions, see Capital actions on pages 166–167, and Notes 22 and 23 on pages 309 and 310, respectively, of this Annual Report.

#### Capital Disciplines

The Firm uses three primary capital disciplines:

Regulatory capital

Economic capital

- Line of business equity

#### Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The Office of the Comptroller of the Currency ("OCC") establishes similar capital requirements and standards for the Firm's national banks, including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A.

In connection with the U.S. Government's Supervisory Capital Assessment Program in 2009 ("SCAP"), U.S. banking regulators developed an additional measure of capital, Tier 1 common, which is defined as Tier 1 capital less elements of Tier 1 capital not in the form of common equity, such as perpetual preferred stock, noncontrolling interests in subsidiaries and trust preferred securities. In 2013, the Federal Reserve employed a minimum 5% Tier 1 common ratio standard for CCAR purposes, in addition to other minimum capital requirements, to assess a bank holding company's capital adequacy. For the 2014 CCAR process, the Federal Reserve has introduced a requirement to include, in addition to the Basel I Tier 1 common standards, a Basel III Tier 1 common test with a minimum of 4% for 2014 projections and 4.5% for 2015 projections.

#### Basel I and Basel 2.5

The minimum U.S. risk-based capital requirements in effect on December 31, 2013, follow the Capital Accord ("Basel I") of the Basel Committee. In June 2012, U.S. federal banking agencies published the final rule that specifies revised market risk regulatory capital requirements ("Basel 2.5"). While the Firm is still subject to the capital requirements of Basel I, Basel 2.5 rules also became effective for the Firm on January 1, 2013. The Basel 2.5 final rule revised the scope of positions subject to the market risk capital requirements and introduced new market risk measures, which resulted in additional capital requirements for covered positions as defined. The implementation of Basel 2.5 in the first quarter of 2013 resulted in an increase of approximately \$150 billion in RWA compared with the Basel I rules at March 31, 2013. The implementation of these rules also resulted in decreases of the Firm's Tier 1 capital, Total capital and Tier 1 common capital ratios by 140 basis points, 160 basis points and 120 basis points, respectively, at March 31,

2013.

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## Management's discussion and analysis

A reconciliation of total stockholders' equity to Tier 1 common, Tier 1 capital and Total qualifying capital is presented in the table below.

## Risk-based capital components and assets

December 31, (in millions)	2013	2012
Total stockholders' equity	\$211,178	\$204,069
Less: Preferred stock	11,158	9,058
Common stockholders' equity	200,020	195,011
Effect of certain items in accumulated other comprehensive income/(loss) excluded from Tier 1 common	(1,337	) (4,198
Less: Goodwill <sup>(a)</sup>	45,320	45,663
Other intangible assets <sup>(a)</sup>	2,012	2,311
Fair value DVA on structured notes and derivative liabilities related to the Firm's credit quality	1,300	1,577
Investments in certain subsidiaries and other	1,164	920
Tier 1 common	148,887	140,342
Preferred stock	11,158	9,058
Qualifying hybrid securities and noncontrolling interests <sup>(b)</sup>	5,618	10,608
Other	—	(6
Total Tier 1 capital	165,663	160,002
Long-term debt and other instruments qualifying as Tier 2	16,695	18,061
Qualifying allowance for credit losses	16,969	15,995
Other	(41	) (22
Total Tier 2 capital	33,623	34,034
Total qualifying capital	\$199,286	\$194,036
Credit risk RWA	\$1,223,147	\$1,156,102
Market risk RWA	\$164,716	\$114,276
Total RWA	\$1,387,863	\$1,270,378
Total adjusted average assets	\$2,343,713	\$2,243,242

(a) Goodwill and other intangible assets are net of any associated deferred tax liabilities.

Primarily includes trust preferred securities of certain business trusts. Under the Basel III interim final rule published by U.S. federal banking agencies in October 2013, trust preferred securities will be phased out from (b) inclusion as Tier 1 capital, but included as Tier 2 capital, beginning in 2014 through the end of 2015 and phased out from inclusion as Tier 2 capital beginning in 2016 through the end of 2021.

## Capital rollforward

The following table presents the changes in Basel I Tier 1 common, Tier 1 capital and Tier 2 capital for the year ended December 31, 2013.

Year ended December 31, (in millions)	2013
Tier 1 common at December 31, 2012	\$140,342
Net income applicable to common equity	17,118
Dividends declared on common stock	(5,585
Net issuance of treasury stock	(2,845
Changes in capital surplus	(776
Effect of certain items in accumulated other comprehensive income/(loss) excluded from Tier 1 common	(40
Qualifying noncontrolling minority interests in consolidated subsidiaries	(47
DVA on structured notes and derivative liabilities	277
Goodwill and other nonqualifying intangibles (net of deferred tax liabilities)	642
Other	(199

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Increase in Tier 1 common	8,545	
Tier 1 common at December 31, 2013	\$148,887	
Tier 1 capital at December 31, 2012	\$160,002	
Change in Tier 1 common	8,545	
Net issuance of noncumulative perpetual preferred stock	2,100	
Redemption of qualifying trust preferred securities	(4,942)	)
Other	(42)	)
Increase in Tier 1 capital	5,661	
Tier 1 capital at December 31, 2013	\$165,663	
Tier 2 capital at December 31, 2012	\$34,034	
Change in long-term debt and other instruments qualifying as Tier 2	(1,366)	)
Change in allowance for credit losses	974	
Other	(19)	)
Decrease in Tier 2 capital	(411)	)
Tier 2 capital at December 31, 2013	\$33,623	
Total capital at December 31, 2013	\$199,286	

## RWA Rollforward

The following table presents the changes in the credit risk and market risk components of RWA under Basel I including Basel 2.5 for the year ended December 31, 2013. The rollforward categories are estimates, based on the predominant driver of the change.

(in billions)	Year ended December 31, 2013		
	Credit risk RWA	Market risk RWA	Total RWA
RWA at December 31, 2012	\$1,156	\$114	\$1,270
Rule changes <sup>(a)</sup>	39	134	
Model & data changes <sup>(b)</sup>	24	1	
Portfolio runoff <sup>(c)</sup>	(11	) (45	)
Movement in portfolio levels <sup>(d)</sup>	15	(39	)
Increase in RWA	67	51	118
RWA at December 31, 2013	\$1,223	\$165	\$1,388

Rule changes refer to movements in RWA as a result of changes in regulations, in particular, Basel 2.5, which (a) resulted in certain positions previously captured under market risk under Basel I being included as noncovered positions under credit risk RWA.

(b) Model & data changes refer to movements in RWA as a result of revised methodologies and/or treatment per regulatory guidance (exclusive of rule changes).

(c) Portfolio runoff for credit risk RWA reflects lower loan balances in Mortgage Banking and for market risk RWA reflects reduced risk from position rollofts, including changes in the synthetic credit portfolio.

(d) Movement in portfolio levels for credit risk RWA refers to changes in book size, composition, quality, as well as market movements; and for market risk RWA, refers to changes in position and market movements.

The following table presents the risk-based capital ratios for JPMorgan Chase at December 31, 2013 and 2012, under Basel I (and, for December 31, 2013, inclusive of Basel 2.5)

## Risk-based capital ratios

December 31,	2013		2012	
Capital ratios				
Tier 1 capital	11.9	%	12.6	%
Total capital	14.4		15.3	
Tier 1 leverage	7.1		7.1	
Tier 1 common <sup>(a)</sup>	10.7		11.0	

(a) The Tier 1 common ratio is Tier 1 common capital divided by RWA.

At December 31, 2013 and 2012, JPMorgan Chase maintained Basel I Tier 1 and Total capital ratios in excess of the well-capitalized standards established by the Federal Reserve. In addition, at December 31, 2013 and 2012, the Firm's Basel I Tier 1 common ratio was significantly above the 2013 5% CCAR standard.

Additional information regarding the Firm's capital ratios and the federal regulatory capital standards to which the Firm is subject is presented in Note 28 on pages 316–318 of this Annual Report and the Supervision and Regulation section of the 2013 10-K. For further information on the Firm's Basel 2.5 measures and additional market risk disclosures, see the Firm's consolidated Basel 2.5 Market Risk Pillar 3 Reports which are available on the Firm's website (<http://investor.shareholder.com/jpmorganchase/basel.cfm>) within 60 days after December 31, 2013.

## Basel II &amp; Basel III

U.S. banking regulators published a final Basel II rule in December 2007, which was intended to be more risk sensitive than Basel I and eventually replace Basel I for large and internationally active U.S. banks, including the Firm. The Firm has been reporting Basel II capital ratios in parallel to the banking agencies since 2008. In October 2013, U.S. federal banking agencies published an interim final rule implementing further revisions to the Capital Accord in the U.S.; such further revisions are commonly referred to as "Basel III." Basel III is comprised of a Standardized Approach and an Advanced Approach. For large and internationally active banks, including the Firm, both the Basel III Standardized and Advanced Approaches became effective commencing January 1, 2014.

For 2014, the Basel III Standardized Approach requires the Firm to calculate its capital ratios using the Basel III definition of capital divided by the Basel I definition of RWA, inclusive of Basel 2.5 for market risk. Commencing January 1, 2015 the Basel III Standardized Approach requires the Firm to calculate the ratios using the Basel III definition of capital divided by the Basel III Standardized RWA, inclusive of Basel 2.5 for market risk.

Prior to full implementation of the Basel III Advanced Approach, the Firm is required to complete a qualification period (“parallel run”) of at least four consecutive quarters (inclusive of quarters in which the Firm reported in parallel under Basel II) during which it needs to demonstrate that it meets the requirements of the rule to the satisfaction of its U.S. banking regulators. Pursuant to the requirements of the Dodd-Frank Act, the Firm, upon exiting the Basel III Advanced Approach parallel run, will be required to calculate regulatory capital ratios under both the Standardized and Advanced Approaches. The Firm’s capital adequacy will be evaluated against the approach that results in the lower ratio.

Basel III revises Basel I and II by, among other things, narrowing the definition of capital, and increasing capital requirements for specific exposures. Basel III introduces a new Tier 1 common ratio requirement which has a phase-in period from 2015 to 2019. By January 1, 2019, the minimum Tier 1 common ratio requirement is 7%, comprised of a minimum ratio of 4.5% plus a 2.5% capital conservation buffer.

Global systemically important banks (“GSIBs”) will also be required to maintain Tier 1 common requirements above the 7% minimum, in amounts ranging from an additional 1% to an additional 2.5%. In November 2013, the Financial Stability Board (“FSB”) indicated that it would require the Firm, as well as one other bank, to hold the additional 2.5% of Tier 1 common; the requirement will be phased in beginning in 2016. The Basel Committee also stated that certain GSIBs could be required to hold as much as an additional 3.5% of Tier 1 common above the 7% minimum if they were to take actions that further increase their systemic importance. Currently, no GSIB (including the

## Management's discussion and analysis

Firm) is required to hold more than the additional 2.5% of Tier 1 common.

In addition, Basel III establishes a 6.5% Tier I common equity standard for the definition of "well capitalized"

under the Prompt Corrective Action ("PCA") requirements of the FDIC Improvement Act ("FDICIA"). The Tier I common equity standard is effective from the first quarter of 2015.

The following chart presents the Basel III minimum risk-based capital ratios during the transitional periods and on a fully phased-in basis. The chart also includes management's target for the Firm's Tier 1 common ratio. It is the Firm's current expectation that its Basel III Tier 1 common ratio will exceed the regulatory minimums, both during the transition period and upon full implementation in 2019 and thereafter.

The Firm estimates that its Tier 1 common ratio under the Basel III Advanced Approach on a fully phased-in basis would be 9.5% as of December 31, 2013, achieving management's previously stated objectives. The Tier 1 common ratio as calculated under the Basel III Standardized Approach is estimated at 9.4% as of December 31, 2013. The Tier 1 common ratio under both Basel I and Basel III are non-GAAP financial measures. However, such measures are used by bank regulators, investors and analysts to assess the Firm's capital position and to compare the Firm's capital to that of other financial services companies.

The following table presents a comparison of the Firm's Tier 1 common under Basel I rules to its estimated Tier 1 common under the Advanced Approach of the Basel III rules, along with the Firm's estimated risk-weighted assets. Key differences in the calculation of RWA between Basel I and Basel III Advanced Approach include: (1) Basel III credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas Basel I RWA is based on fixed supervisory risk-weightings which vary only by counterparty type and asset class; and (2) Basel III includes RWA for operational risk, whereas Basel I does not. Operational risk capital takes into consideration operational losses in the quarter following the period in which those losses were realized, and the calculation generally incorporates such losses irrespective of whether the issues or business activity giving rise to the losses have been remediated or reduced. The Firm's

operational risk capital model continues to be refined in conjunction with the Firm's Basel III Advanced Approach parallel run. As a result of model enhancements in 2013, as well as taking into consideration the legal expenses incurred by the Firm in 2013, the Firm's operational risk capital increased substantially in 2013 over 2012.

Tier 1 common under Basel III includes additional adjustments and deductions not included in Basel I Tier 1 common, such as the inclusion of accumulated other comprehensive income ("AOCI") related to AFS securities and defined benefit pension and other postretirement employee benefit ("OPEB") plans.

December 31, 2013

(in millions, except ratios)

Tier 1 common under Basel I rules	\$148,887	
Adjustments related to AOCI for AFS securities and defined benefit pension and OPEB plans	1,474	
Add back of Basel I deductions <sup>(a)</sup>	1,780	
Deduction for deferred tax asset related to net operating loss and foreign tax credit carryforwards	(741)	)
All other adjustments	(198)	)
Estimated Tier 1 common under Basel III rules	\$151,202	
Estimated risk-weighted assets under Basel III Advanced Approach <sup>(b)</sup>	\$1,590,873	
Estimated Tier 1 common ratio under Basel III Advanced Approach <sup>(c)</sup>	9.5	%

(a) Certain exposures, which are deducted from capital under Basel I, are risk-weighted under Basel III.



- (b) RWA under Basel III Advanced Approach is on a fully phased-in basis. Effective January 1, 2013, market risk RWA requirements under Basel 2.5 became largely consistent across Basel I and Basel III.
- (c) The Tier 1 common ratio under Basel III rules is Tier 1 common divided by RWA under Basel III Advanced Approach.

Additionally, the Firm estimates that its Tier 1 capital ratio under the Basel III Advanced Approach on a fully phased-in basis would be 10.2% as of December 31, 2013. The Tier 1 capital ratio as calculated under the Basel III Standardized Approach on a fully phased-in basis is estimated at 10.1% as of December 31, 2013.

Management's current objective is for the Firm to reach an estimated Basel III Tier I common ratio of 10%+ and a Basel III Tier 1 capital ratio of 11.0%, both by the end of 2014. Tier 1 common capital and the Tier 1 common and Tier 1 capital ratios under Basel III are all non-GAAP financial measures. However, such measures are used by bank regulators, investors and analysts to assess the Firm's capital position and to compare the Firm's capital to that of other financial services companies.

The Basel III interim final rule also includes a requirement for advanced approach banking organizations, including the Firm, to calculate a supplementary leverage ratio ("SLR"). The SLR, a non-GAAP financial measure, is defined as Tier 1 capital under Basel III divided by the Firm's total leverage exposure. Total leverage exposure is calculated by taking the Firm's total average on-balance sheet assets, less amounts permitted to be deducted for Tier 1 capital, and adding certain off-balance sheet exposures, such as undrawn commitments and derivatives future exposure.

Following approval of the Basel III interim final rule, the U.S. banking agencies issued proposed rulemaking relating to the SLR that would require U.S. bank holding companies, including JPMorgan Chase, to have a minimum SLR of at least 5% and insured depository institutions ("IDI"), including JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., to have a minimum SLR of at least 6%. The Firm and its IDI subsidiaries are not required to meet the minimum SLR until January 1, 2018. The Firm estimates, based on its current understanding of the U.S. rules, that if the rules were in effect at December 31, 2013, the Firm's SLR would have been approximately 4.7% and JPMorgan Chase Bank, N.A.'s SLR would have been approximately 4.7%. Management's current objective is to achieve an SLR of 5.5% for the Firm and an SLR of 6% for JPMorgan Chase Bank, N.A. each in advance of the SLR effective date.

On January 12, 2014, the Basel Committee issued a revised framework for the calculation of the denominator of the SLR. The estimated impact of these revisions would have been to reduce each of the Firm's SLR and J.P. Morgan Chase Bank, N.A.'s SLR by 10 basis points as of December 31, 2013.

The Firm's estimates of its Tier 1 common ratio under Basel III and of the Firm's and JPMorgan Chase Bank, N.A.'s SLR reflect its current understanding of the U.S. Basel III rules

based on the current published rules and on the application of such rules to its businesses as currently conducted. The actual impact on the Firm's capital and SLR ratios at the effective date of the rules may differ from the Firm's current estimates depending on changes the Firm may make to its businesses in the future, further implementation guidance from the regulators, and regulatory approval of certain of the Firm's internal risk models (or, alternatively, regulatory disapproval of the Firm's internal risk models that have previously been conditionally approved).

#### Economic risk capital

Economic risk capital is another of the disciplines the Firm uses to assess the capital required to support its businesses. Economic risk capital is a measure of the capital needed to cover JPMorgan Chase's business activities in the event of unexpected losses. The Firm measures economic risk capital using internal risk-assessment methodologies and models based primarily on four risk factors: credit, market, operational and private equity risk and considers factors, assumptions and inputs that differ from those required to be used for regulatory capital requirements. Accordingly economic risk capital provides a complementary measure to regulatory capital. As economic risk capital is a separate component of the capital framework for Advanced Approach banking organizations under Basel III, the Firm is currently in the process of enhancing its economic risk capital framework to address the Basel III interim final rule.

#### Line of business equity

The Firm's framework for allocating capital to its business segments is based on the following objectives:

Integrate firmwide and line of business capital management activities;

Measure performance consistently across all lines of business; and

Provide comparability with peer firms for each of the lines of business

Equity for a line of business represents the amount the Firm believes the business would require if it were operating independently, considering capital levels for similarly rated peers, regulatory capital requirements (as estimated under Basel III) and economic risk measures. Capital is also allocated to each line of business for, among other things, goodwill and other intangibles associated with acquisitions effected by the line of business. ROE is measured and internal targets for expected returns are established as key measures of a business segment's performance.

## Management's discussion and analysis

Line of business equity Year ended December 31, (in billions)	Yearly average		
	2013	2012	2011
Consumer & Community Banking	\$46.0	\$43.0	\$41.0
Corporate & Investment Bank	56.5	47.5	47.0
Commercial Banking	13.5	9.5	8.0
Asset Management	9.0	7.0	6.5
Corporate/Private Equity	71.4	77.4	70.8
Total common stockholders' equity	\$196.4	\$184.4	\$173.3

Effective January 1, 2012, the Firm revised the capital allocated to each of its businesses, reflecting each segment's Basel III Tier 1 common capital requirements.

Effective January 1, 2013, the Firm further refined the capital allocation framework to align it with the revised line of business structure that became effective in the fourth quarter of 2012. The increase in equity levels for the lines of businesses was largely driven by the evolving regulatory requirements and higher capital targets the Firm has established under the Basel III Advanced Approach.

Effective January 1, 2014, the Firm further revised the capital allocated to certain businesses and will continue to assess the level of capital required for each line of business, as well as the assumptions and methodologies used to allocate capital to the business segments. Further refinements may be implemented in future periods.

## Capital actions

## Dividends

On March 18, 2011, the Board of Directors increased the Firm's quarterly common stock dividend from \$0.05 to \$0.25 per share, effective with the dividend paid on April 30, 2011, to shareholders of record on April 6, 2011.

On March 13, 2012, the Board of Directors increased the Firm's quarterly common stock dividend from \$0.25 to \$0.30 per share, effective with the dividend paid on April 30, 2012, to shareholders of record on April 5, 2012.

On May 21, 2013, the Board of Directors increased the Firm's quarterly common stock dividend from \$0.30 to \$0.38 per share, effective with the dividend paid on July 31, 2013, to shareholders of record on July 5, 2013.

The Firm's common stock dividend policy reflects JPMorgan Chase's earnings outlook, desired dividend payout ratio, capital objectives, and alternative investment opportunities.

The Firm's current expectation is to continue to target a payout ratio of approximately 30% of normalized earnings over time.

For information regarding dividend restrictions, see Note 22 and Note 27 on pages 309 and 316, respectively, of this Annual Report.

The following table shows the common dividend payout ratio based on reported net income.

Year ended December 31,	2013		2012		2011	
Common dividend payout ratio	33	%	23	%	22	%

## Preferred stock

On August 27, 2012, the Firm issued \$1.3 billion of fixed-rate noncumulative perpetual preferred stock.

On February 5, 2013 the Firm issued \$900 million of noncumulative preferred stock. On each of April 23, 2013, and July 29, 2013, the Firm issued \$1.5 billion of noncumulative preferred stock.

The Firm redeemed all \$1.8 billion of its outstanding 8.625% noncumulative preferred stock, Series J on September 1, 2013.

On January 22, 2014, January 30, 2014, and February 6, 2014, the Firm issued \$2.0 billion, \$850 million, and \$75 million, respectively, of noncumulative preferred stock. For additional information on the Firm's preferred stock, see Note 22 on page 309 of this Annual Report.

## Redemption of outstanding trust preferred securities

On May 8, 2013, the Firm redeemed approximately \$5.0 billion, or 100% of the liquidation amount, of the following eight series of trust preferred securities: JPMorgan Chase Capital X, XI, XII, XIV, XVI, XIX, XXIV, and BANK ONE Capital VI. For a further discussion of trust preferred securities, see Note 21 on pages 306–308 of this Annual

Report.

Common equity repurchases

On March 13, 2012, the Board of Directors authorized a \$15.0 billion common equity (i.e., common stock and warrants) repurchase program. The amount of equity that may be repurchased is also subject to the amount that is set forth in the Firm's annual capital plan that is submitted to the Federal Reserve as part of the CCAR process. As part of this authorization, and in conjunction with the Firm's 2013 CCAR submission, the Board of Directors authorized the Firm to repurchase up to \$6 billion gross of common equity commencing with the second quarter of 2013 through the end of the first quarter of 2014. From April 1, 2013, through December 31, 2013, the Firm repurchased \$2.2 billion of common equity. The following table shows the Firm's repurchases of common equity for the years ended December 31, 2013, 2012 and 2011, on a trade-date basis. As of December 31, 2013, \$8.6 billion of authorized repurchase capacity remained under the \$15.0 billion repurchase program.

Year ended December 31,

(in millions)

	2013	2012	2011
Total number of shares of common stock repurchased	96	31	229
Aggregate purchase price of common stock repurchases	\$4,789	\$1,329	\$8,827
Total number of warrants repurchased	—	18	10
Aggregate purchase price of warrant repurchases	\$—	\$238	\$122

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity — for example, during internal trading “black-out periods.” All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information. The authorization to repurchase common equity will be utilized at management’s discretion, and the timing of purchases and the exact amount of common equity that may be repurchased is subject to various factors, including market conditions; legal and regulatory considerations affecting the amount and timing of repurchase activity; the Firm’s capital position (taking into account goodwill and intangibles); internal capital generation; and alternative investment opportunities. The repurchase program does not include specific price targets or timetables; may be executed through open market purchases or privately negotiated transactions, or utilizing Rule 10b5-1 programs; and may be suspended at any time.

For additional information regarding repurchases of the Firm’s equity securities, see Part II, Item 5: Market for registrant’s common equity, related stockholder matters and issuer purchases of equity securities on pages 20–21 of JPMorgan Chase’s 2013 Form 10-K.

#### Broker-dealer regulatory capital

JPMorgan Chase’s principal U.S. broker-dealer subsidiaries are J.P. Morgan Securities LLC (“JPMorgan Securities”) and J.P. Morgan Clearing Corp. (“JPMorgan Clearing”). JPMorgan Clearing is a subsidiary of JPMorgan Securities and provides clearing and settlement services. JPMorgan Securities and JPMorgan Clearing are each subject to Rule 15c3-1 under the Securities Exchange Act of 1934 (the “Net Capital Rule”). JPMorgan Securities and JPMorgan Clearing are also each registered as futures commission merchants and subject to Rule 1.17 of the Commodity Futures Trading Commission (“CFTC”).

JPMorgan Securities and JPMorgan Clearing have elected to compute their minimum net capital requirements in accordance with the “Alternative Net Capital Requirements” of the Net Capital Rule. At December 31, 2013, JPMorgan Securities’ net capital, as defined by the Net Capital Rule, was \$12.9 billion, exceeding the minimum requirement by \$10.8 billion, and JPMorgan Clearing’s net capital was \$7.1 billion, exceeding the minimum requirement by \$5.3 billion.

In addition to its minimum net capital requirement, JPMorgan Securities is required to hold tentative net capital in excess of \$1.0 billion and is also required to notify the Securities and Exchange Commission (“SEC”) in the event that tentative net capital is less than \$5.0 billion, in accordance with the market and credit risk standards of Appendix E of the Net Capital Rule. As of December 31, 2013, JPMorgan Securities had tentative net capital in excess of the minimum and notification requirements.

J.P. Morgan Securities plc (formerly J.P. Morgan Securities Ltd.) is a wholly owned subsidiary of JPMorgan Chase Bank, N.A. and is the Firm’s principal operating subsidiary in the U.K. It has authority to engage in banking, investment banking and broker-dealer activities. J.P. Morgan Securities plc is jointly regulated by the U.K. Prudential Regulation Authority (“PRA”) and Financial Conduct Authority (“FCA”) (together, formerly the U.K. Financial Services Authority). During the fourth quarter of 2013, J.P. Morgan Securities plc received a capital contribution of \$3.3 billion from JPMorgan Chase Bank, N.A., which was made to cover the anticipated capital requirements related to the introduction of Basel III rules, to which J.P. Morgan Securities plc is subject beginning January 1, 2014. Following this capital contribution, at December 31, 2013, J.P. Morgan Securities plc had total capital of \$26.5 billion, or a Pillar 1 Total capital ratio of 18.1%, which exceeded the 8% well-capitalized standard applicable to it under Basel 2.5.



Management's discussion and analysis

LIQUIDITY RISK MANAGEMENT

Liquidity risk management is intended to ensure that the Firm has the appropriate amount, composition and tenor of funding and liquidity in support of its assets. The primary objectives of effective liquidity management are to ensure that the Firm's core businesses are able to operate in support of client needs and meet contractual and contingent obligations through normal economic cycles, as well as during market stress events, and to maintain debt ratings that enable the Firm to optimize its funding mix and liquidity sources while minimizing costs.

The Firm manages liquidity and funding using a centralized, global approach in order to optimize liquidity sources and uses for the Firm as a whole, monitor exposures, identify constraints on the transfer of liquidity among legal entities within the Firm, and maintain the appropriate amount of surplus liquidity as part of the Firm's overall balance sheet management strategy.

In the context of the Firm's liquidity management, Treasury is responsible for:

- Measuring, managing, monitoring and reporting the Firm's current and projected liquidity sources and uses;
- Understanding the liquidity characteristics of the Firm's assets and liabilities;
- Defining and monitoring firmwide and legal entity liquidity strategies, policies, guidelines, and contingency funding plans;
- Liquidity stress testing under a variety of adverse scenarios
- Managing funding mix and deployment of excess short-term cash;
- Defining and implementing funds transfer pricing ("FTP") across all lines of business and regions; and
- Defining and addressing the impact of regulatory changes on funding and liquidity.

The Firm has a liquidity risk governance framework to review, approve and monitor the implementation of liquidity risk policies at the firmwide, regional and line of business levels.

Specific risk committees responsible for liquidity risk governance include ALCO as well as lines of business and regional asset and liability management committees, and the CTC Risk Committee. For further discussion of the risk committees, see Enterprise-wide Risk Management on pages 113–173 of this Annual Report. In addition, during 2013, the Firm established an independent liquidity risk oversight function reporting into the CIO, Treasury and Corporate ("CTC") CRO, which provides independent assessments and monitoring of liquidity risk across the Firm.

Management considers the Firm's liquidity position to be strong as of December 31, 2013, and believes that the Firm's unsecured and secured funding capacity is sufficient to meet its on- and off-balance sheet obligations.

LCR and NSFR

In December 2010, the Basel Committee introduced two new measures of liquidity risk: the liquidity coverage ratio ("LCR"), which is intended to measure the amount of "high-quality liquid assets" ("HQLA") held by the Firm in relation to estimated net cash outflows within a 30-day period during an acute stress event; and the net stable funding ratio ("NSFR") which is intended to measure the "available" amount of stable funding relative to the "required" amount of stable funding over a one-year horizon. The standards require that the LCR be no lower than 100% and the NSFR be greater than 100%.

In January 2013, the Basel Committee introduced certain amendments to the formulation of the LCR, and a revised timetable to phase in the standard. The LCR will continue to become effective on January 1, 2015, but the minimum requirement will begin at 60%, increasing in equal annual increments to reach 100% on January 1, 2019. At December 31, 2013, the Firm was compliant with the Basel III LCR. The LCR may fluctuate from period-to-period due to normal flows from client activity.

On October 24, 2013, the U.S. banking regulators released a proposal to implement a U.S. quantitative liquidity requirement consistent with, but more conservative than, Basel III LCR for large banks and bank holding companies ("U.S. LCR"). The proposal also provides for an accelerated transition period compared to that which is currently required under the Basel III LCR rules. At December 31, 2013, the Firm was also compliant with the U.S. LCR based on its current understanding of the proposed rules.

On January 12, 2014, the Basel Committee released proposed revisions to the NSFR. Based on its current understanding of the proposed revisions, the Firm was compliant with the NSFR as of December 31, 2013.

Funding

Sources of funds

The Firm funds its global balance sheet through diverse sources of funding including a stable deposit franchise as well as secured and unsecured funding in the capital markets. The Firm's loan portfolio, aggregating approximately \$722.2 billion, net of allowance, at December 31, 2013, is funded with a portion of the Firm's deposits (aggregating approximately \$1,287.8 billion at December 31, 2013), and through securitizations and, with respect to a portion of the Firm's real estate-related loans, with secured borrowings from the Federal Home Loan Banks. Deposits in excess of the amount utilized to fund loans are primarily invested in the Firm's investment securities portfolio or deployed in cash or other short-term liquid investments based on their interest rate and liquidity

risk characteristics. Capital markets secured financing assets and trading assets are primarily funded by the Firm's capital market secured financing liabilities, trading liabilities and a portion of the Firm's long-term debt and equity. In addition to funding capital markets assets, proceeds from the Firm's debt and equity issuances are used to fund certain loans, and other financial and non-financial assets, or may be invested in the Firm's investment securities portfolio. See the discussion below for additional disclosures relating to Deposits, Short-term funding, and Long-term funding and issuance.

#### Deposits

A key strength of the Firm is its diversified deposit franchise, through each of its lines of business, which provides a stable source of funding and limits reliance on the wholesale funding markets. As of December 31, 2013, the Firm's loans-to-deposits ratio was 57%, compared with 61% at December 31, 2012.

As of December 31, 2013, total deposits for the Firm were \$1,287.8 billion, compared with \$1,193.6 billion at December 31, 2012 (58% and 55% of total liabilities at December 31, 2013 and 2012, respectively). The increase was due to growth in both wholesale and consumer deposits. For further information, see Balance Sheet Analysis on pages 75–76 of this Annual Report.

The Firm typically experiences higher customer deposit inflows at period-ends. Therefore, the Firm believes average deposit balances are more representative of deposit trends. The table below summarizes, by line of business, the period-end and average deposit balances as of and for the years ended December 31, 2013 and 2012.

Deposits As of or for the period ended December 31, (in millions)	Year ended December 31, Average			
	2013	2012	2013	2012
Consumer & Community Banking	\$464,412	\$438,517	\$453,304	\$413,948
Corporate & Investment Bank	446,237	385,560	384,289	353,048
Commercial Banking	206,127	198,383	184,409	181,805
Asset Management	146,183	144,579	139,707	129,208
Corporate/Private Equity	24,806	26,554	27,433	27,874
Total Firm	\$1,287,765	\$1,193,593	\$1,189,142	\$1,105,883

A significant portion of the Firm's deposits are consumer deposits (36% and 37% at December 31, 2013 and 2012, respectively), which are considered particularly stable as they are less sensitive to interest rate changes or market volatility. Additionally, the majority of the Firm's institutional deposits are also considered to be stable sources of funding since they are generated from customers that maintain operating service relationships with the Firm. For further discussions of deposit and liability balance trends, see the discussion of the results for the Firm's business segments and the Balance Sheet Analysis on pages 86–111 and 75–76, respectively, of this Annual Report.

## Management's discussion and analysis

The following table summarizes short-term and long-term funding, excluding deposits, as of December 31, 2013 and 2012, and average balances for the years ended December 31, 2013 and 2012. For additional information, see the Balance Sheet Analysis on pages 75–76 and Note 21 on pages 306–308 of this Annual Report.

## Sources of funds (excluding deposits)

As of or for the year ended December 31, (in millions)	2013	2012	Average	
			2013	2012
Commercial paper:				
Wholesale funding	\$17,249	\$15,589	\$17,785	\$14,302
Client cash management	40,599	39,778	35,932	36,478
Total commercial paper	\$57,848	\$55,367	\$53,717	\$50,780
Other borrowed funds	\$27,994	\$26,636	\$30,449	\$24,174
Securities loaned or sold under agreements to repurchase:				
Securities sold under agreements to repurchase	\$155,808	\$212,278	\$207,106	\$219,625
Securities loaned	19,509	23,125	26,068	20,763
Total securities loaned or sold under agreements to repurchase <sup>(a)(b)(c)</sup>	\$175,317	\$235,403	\$233,174	\$240,388
Total senior notes	\$135,754	\$130,297	\$137,662	\$141,936
Trust preferred securities	5,445	10,399	7,178	15,814
Subordinated debt	29,578	29,731	27,955	29,410
Structured notes	28,603	30,194	29,517	31,330
Total long-term unsecured funding	\$199,380	\$200,621	\$202,312	\$218,490
Credit card securitization	\$26,580	\$30,123	\$27,834	\$29,249
Other securitizations <sup>(d)</sup>	3,253	3,680	3,501	3,974
FHLB advances	61,876	42,045	55,487	20,415
Other long-term secured funding <sup>(e)</sup>	6,633	6,358	6,284	6,757
Total long-term secured funding	\$98,342	\$82,206	\$93,106	\$60,395
Preferred stock <sup>(f)</sup>	\$11,158	\$9,058	\$10,960	\$8,236
Common stockholders' equity <sup>(f)</sup>	\$200,020	\$195,011	\$196,409	\$184,352

(a) Excludes federal funds purchased.

Excluded long-term structured repurchase agreements of \$4.6 billion and \$3.3 billion as of December 31, 2013 and (b) 2012, respectively, and average balance of \$4.2 billion and \$7.0 billion for the years ended December 31, 2013 and 2012, respectively.

Excluded long-term securities loaned of \$483 million and \$457 million as of December 31, 2013 and 2012, (c) respectively, and average balance of \$414 million and \$113 million for the years ended December 31, 2013 and 2012, respectively.

Other securitizations includes securitizations of residential mortgages and student loans. The Firm's wholesale (d) businesses also securitize loans for client-driven transactions; those client-driven loan securitizations are not considered to be a source of funding for the Firm and are not included in the table.

(e) Includes long-term structured notes which are secured.

For additional information on preferred stock and common stockholders' equity see Capital Management on pages (f) 160–167, Consolidated Statements of Changes in Stockholders' Equity on page 187, Note 22 on page 309 and Note 23 on page 310 of this Annual Report.

## Short-term funding

A significant portion of the Firm's total commercial paper liabilities, approximately 70% as of December 31, 2013, are not sourced from wholesale funding markets, but were originated from deposits that customers choose to sweep into commercial paper liabilities as a cash management program offered to customers of the Firm.

The Firm's sources of short-term secured funding primarily consist of securities loaned or sold under agreements to repurchase. Securities loaned or sold under agreements to repurchase are secured predominantly by high-quality securities collateral, including government-issued debt, agency debt and agency MBS, and constitute a significant

portion of the federal funds purchased and securities loaned or sold under purchase agreements. The amounts of securities loaned or sold under agreements to repurchase at December 31, 2013, decreased predominantly due to a change in the mix of the Firm's funding sources. The balances associated with securities loaned or sold under agreements to repurchase fluctuate over time due to customers' investment and financing activities; the Firm's demand for financing; the ongoing management of the mix of the Firm's liabilities, including its secured and unsecured financing (for both the investment and market-making portfolios); and other market and portfolio factors.

## Long-term funding and issuance

Long-term funding provides additional sources of stable funding and liquidity for the Firm. The Firm's long-term funding plan is driven by expected client activity and the liquidity required to support this activity. Long-term funding objectives include maintaining diversification, maximizing market access and optimizing funding cost, as well as maintaining a certain level of pre-funding at the parent holding company. The Firm evaluates various funding markets, tenors and currencies in creating its optimal long-term funding plan.

The majority of the Firm's long-term unsecured funding is issued by the parent holding company to provide maximum flexibility in support of both bank and nonbank subsidiary funding. The following table summarizes long-term unsecured issuance and maturities or redemption for the years ended December 31, 2013 and 2012. For additional information, see Note 21 on pages 306–308 of this Annual Report.

## Long-term unsecured funding

Year ended December 31, (in millions)	2013	2012
Issuance		
Senior notes issued in the U.S. market	\$19,835	\$15,566
Senior notes issued in non-U.S. markets	8,843	8,341
Total senior notes	28,678	23,907
Trust preferred securities	—	—
Subordinated debt	3,232	—
Structured notes	16,979	15,120
Total long-term unsecured funding – issuance	\$48,889	\$39,027

## Maturities/redemptions

Total senior notes	\$18,418	\$40,244
Trust preferred securities <sup>(a)</sup>	5,052	9,482
Subordinated debt	2,418	1,045
Structured notes	17,785	18,638
Total long-term unsecured funding – maturities/redemptions	\$43,673	\$69,409

On May 8, 2013, the Firm redeemed approximately \$5.0 billion, or 100% of the liquidation amount, of trust (a) preferred securities pursuant to the optional redemption provisions set forth in the documents governing those trust preferred securities.

In addition, from January 1, 2014, through February 19, 2014, the Firm issued \$12.7 billion of senior notes.

The Firm raises secured long-term funding through securitization of consumer credit card loans and advances from the FHLBs. It may also in the future raise long-term funding through securitization of residential mortgages, auto loans and student loans, which will increase funding and investor diversity.

The following table summarizes the securitization issuance and FHLB advances and their respective maturities or redemption for the years ended December 31, 2013 and 2012.

## Long-term secured funding

Year ended December 31, (in millions)	Issuance		Maturities/Redemptions	
	2013	2012	2013	2012
Credit card securitization	\$8,434	\$10,800	\$11,853	\$13,187
Other securitizations <sup>(a)</sup>	—	—	427	487
FHLB advances	23,650	35,350	3,815	11,124
Other long-term secured funding	\$751	\$534	\$159	\$1,785
Total long-term secured funding	\$32,835	\$46,684	\$16,254	\$26,583

(a) Other securitizations includes securitizations of residential mortgages and student loans.

On January 27, 2014, the Firm securitized \$1.8 billion of consumer credit card loans.

The Firm's wholesale businesses also securitize loans for client-driven transactions; those client-driven loan securitizations are not considered to be a source of funding for the Firm and are not included in the table above. For further description of the client-driven loan securitizations, see Note 16 on pages 288–299 of this Annual Report.

#### Parent holding company and subsidiary funding

The parent holding company acts as an important source of funding to its subsidiaries. The Firm's liquidity management is intended to ensure that liquidity at the parent holding company is maintained at levels sufficient to fund the operations of the parent holding company and its subsidiaries for an extended period of time in a stress environment where access to normal funding sources is disrupted.

To effectively monitor the adequacy of liquidity and funding at the parent holding company, the Firm uses three primary measures:

**Number of months of pre-funding:** The Firm targets pre-funding of the parent holding company to ensure that both contractual and non-contractual obligations can be met for at least 18 months assuming no access to wholesale funding markets. However, due to conservative liquidity management actions taken by the Firm, the current pre-funding of such obligations is greater than target.

**Excess cash:** Excess cash is managed to ensure that daily cash requirements can be met in both normal and stressed environments. Excess cash generated by parent holding company issuance activity is placed on deposit with or is advanced to both bank and nonbank subsidiaries or held as liquid collateral purchased through reverse repurchase agreements.

**Stress testing:** The Firm conducts regular stress testing for the parent holding company and major subsidiaries to

## Management's discussion and analysis

ensure sufficient liquidity for the Firm in a stressed environment. The Firm's liquidity management takes into consideration its subsidiaries' ability to generate replacement funding in the event the parent holding company requires repayment of the aforementioned deposits and advances. For further information, see the Stress testing discussion below.

**HQLA**

HQLA is the estimated amount of assets the Firm believes will qualify for inclusion in the Basel III LCR. HQLA primarily consists of cash and certain unencumbered high quality, liquid assets as defined in the rule.

As of December 31, 2013, HQLA was estimated to be approximately \$522 billion, compared with \$341 billion as of December 31, 2012. The increase in HQLA was due to higher cash balances primarily driven by increased deposits and long-term debt issuance, as well as by a reduction in trading assets. HQLA may fluctuate from period-to-period due to normal flows from client activity.

The following table presents the estimated Basel III LCR HQLA broken out by HQLA-eligible cash and HQLA-eligible securities as of December 31, 2013.

(in billions)	December 31, 2013
HQLA <sup>(a)</sup>	
Eligible cash	\$294
Eligible securities	228
Total HQLA	\$522

<sup>(a)</sup> Table represents Basel III LCR HQLA. HQLA under proposed U.S. LCR is estimated to be lower primarily due to exclusions of certain security types based on the Firm's understanding of the proposed rule.

In addition to HQLA, as of December 31, 2013, the Firm has approximately \$282 billion of unencumbered marketable securities, such as equity securities and fixed income debt securities, available to raise liquidity, if required.

Furthermore, the Firm maintains borrowing capacity at various FHLBs, the Federal Reserve Bank discount window and various other central banks as a result of collateral pledged by the Firm to such banks. Although available, the Firm does not view the borrowing capacity at the Federal Reserve Bank discount window and the various other central banks as a primary source of liquidity. As of December 31, 2013, the Firm's remaining borrowing capacity at various FHLBs and the Federal Reserve Bank discount window was approximately \$109 billion. This borrowing capacity excludes the benefit of securities included above in HQLA or other unencumbered securities held at the Federal Reserve Bank discount window for which the Firm has not drawn liquidity.

**Stress testing**

Liquidity stress tests are intended to ensure sufficient liquidity for the Firm under a variety of adverse scenarios. Results of stress tests are therefore considered in the formulation of the Firm's funding plan and assessment of its liquidity position. Liquidity outflow assumptions are modeled across a range of time horizons and varying degrees of market and idiosyncratic stress. Standard stress tests are performed on a regular basis and ad hoc stress tests are performed in response to specific market events or concerns. Stress scenarios are produced for the parent holding company and the Firm's major subsidiaries. In addition, separate regional liquidity stress testing is performed. Liquidity stress tests assume all of the Firm's contractual obligations are met and then take into consideration varying levels of access to unsecured and secured funding markets. Additionally, assumptions with respect to potential non-contractual and contingent outflows include, but are not limited to, the following:

**Deposits**

For bank deposits that have no contractual maturity, the range of potential outflows reflects the type and size of deposit account, and the nature and extent of the Firm's relationship with the depositor.

**Secured funding**

Range of haircuts on collateral based on security type and counterparty.

**Derivatives**

Margin calls by exchanges or clearing houses;

Collateral calls associated with ratings downgrade triggers and variation margin;

Outflows of excess client collateral;

Novation of derivative trades.

• Unfunded commitments

Potential facility drawdowns reflecting the type of commitment and counterparty.

Contingency funding plan

The Firm's contingency funding plan ("CFP"), which is reviewed and approved by ALCO, provides a documented framework for managing both temporary and longer-term unexpected adverse liquidity stress. The CFP incorporates the limits and indicators set by the Liquidity Risk Oversight group. These limits and indicators are reviewed regularly to identify emerging risks or increased vulnerabilities in the Firm's liquidity position. The CFP is also regularly updated to identify alternative contingent liquidity resources that can be accessed under adverse liquidity circumstances.

### Credit ratings

The cost and availability of financing are influenced by credit ratings. Reductions in these ratings could have an adverse effect on the Firm's access to liquidity sources, increase the cost of funds, trigger additional collateral or funding requirements and decrease the number of investors and counterparties willing to lend to the Firm. Additionally, the Firm's funding requirements for VIEs and other third

party commitments may be adversely affected by a decline in credit ratings. For additional information on the impact of a credit ratings downgrade on the funding requirements for VIEs, and on derivatives and collateral agreements, see Special-purpose entities on page 77, and Credit risk, liquidity risk and credit-related contingent features in Note 6 on pages 220–233, of this Annual Report

The credit ratings of the parent holding company and certain of the Firm's significant operating subsidiaries as of December 31, 2013, were as follows.

December 31, 2013	JPMorgan Chase & Co.			JPMorgan Chase Bank, N.A. Chase Bank USA, N.A.			J.P. Morgan Securities LLC		
	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook	Long-term issuer	Short-term issuer	Outlook
Moody's Investor Services	A3	P-2	Stable	Aa3	P-1	Stable	Aa3	P-1	Stable
Standard & Poor's	A	A-1	Negative	A+	A-1	Stable	A+	A-1	Stable
Fitch Ratings	A+	F1	Stable	A+	F1	Stable	A+	F1	Stable

On June 11, 2013, S&P announced a reassessment of the government support assumptions reflected in its holding company ratings of eight systemically important financial institutions, including the Firm. As a result of this reassessment, the outlook for the parent company was revised to negative from stable; the outlook for the Firm's operating subsidiaries remained unchanged at stable.

On November 14, 2013, Moody's downgraded the Firm and several other bank holding companies based on Moody's reassessment of its assumptions relating to implicit government support for such companies. Specifically, Moody's downgraded the senior and subordinated debt ratings of JPMorgan Chase and Co., and the subordinated debt rating of JPMorgan Chase Bank, N.A. and upgraded the long-term issuer rating of JPMorgan Securities. The parent company downgrade also resulted in Moody's downgrade of the parent company's short-term rating. The rating actions did not have a material adverse impact on the Firm's cost of funds or its ability to fund itself.

Additional downgrades of the Firm's long-term ratings by one notch or two notches could result in a further downgrade of the Firm's short-term ratings. If this were to occur, the Firm believes its cost of funds could increase and access to certain funding markets could be reduced. The nature and magnitude of the impact of further ratings downgrades depends on numerous contractual and

behavioral factors (which the Firm believes are incorporated in its liquidity risk and stress testing metrics). The Firm believes it maintains sufficient liquidity to withstand a potential decrease in funding capacity due to further ratings downgrades.

JPMorgan Chase's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings, or stock price.

Critical factors in maintaining high credit ratings include a stable and diverse earnings stream, strong capital ratios, strong credit quality and risk management controls, diverse funding sources, and disciplined liquidity monitoring procedures. Rating agencies continue to evaluate economic and geopolitical trends, regulatory developments, rating uplift assumptions surrounding government support, future profitability, risk management practices, and legal expenses, all of which could lead to adverse ratings actions. Although the Firm closely monitors and endeavors to

manage factors influencing its credit ratings, there is no assurance that its credit ratings will not be further changed in the future.

## Management's discussion and analysis

## CRITICAL ACCOUNTING ESTIMATES USED BY THE FIRM

JPMorgan Chase's accounting policies and use of estimates are integral to understanding its reported results. The Firm's most complex accounting estimates require management's judgment to ascertain the value of assets and liabilities. The Firm has established detailed policies and control procedures intended to ensure that valuation methods, including any judgments made as part of such methods, are well-controlled, independently reviewed and applied consistently from period to period. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. The Firm believes its estimates for determining the value of its assets and liabilities are appropriate. The following is a brief description of the Firm's critical accounting estimates involving significant valuation judgments.

## Allowance for credit losses

JPMorgan Chase's allowance for credit losses covers the retained consumer and wholesale loan portfolios, as well as the Firm's consumer and wholesale lending-related commitments. The allowance for loan losses is intended to adjust the carrying value of the Firm's loan assets to reflect probable credit losses inherent in the loan portfolio as of the balance sheet date. Similarly, the allowance for lending-related commitments is established to cover probable credit losses inherent in the lending-related commitments portfolio as of the balance sheet date.

The allowance for loan losses includes an asset-specific component, a formula-based component, and a component related to PCI loans. The determination of each of these components involves significant judgment on a number of matters, as discussed below. For further discussion of the methodologies used in establishing the Firm's allowance for credit losses, see Note 15 on pages 284–287 of this Annual Report.

## Asset-specific component

The asset-specific allowance for loan losses for each of the Firm's portfolio segments is generally measured as the difference between the recorded investment in the impaired loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Estimating the timing and amounts of future cash flows is highly judgmental as these cash flow projections further rely upon estimates such as redefault rates, loss severities, the amounts and timing of prepayments and other factors that are reflective of current and expected future market conditions. These estimates are, in turn, dependent on factors such as the level of future home prices, the duration of current overall economic conditions, and other macroeconomic and portfolio-specific factors. All of these estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

## Formula-based component - Consumer loans and lending-related commitments, excluding PCI loans

The formula-based allowance for credit losses for the consumer portfolio, including credit card, is calculated by applying statistical credit loss factors to outstanding principal balances over an estimated loss emergence period to arrive at an estimate of incurred credit losses in the portfolio. The loss emergence period represents the time period between the date at which the loss is estimated to have been incurred and the ultimate realization of that loss (through a charge-off). Estimated loss emergence periods may vary by product and may change over time; management applies judgment in estimating loss emergence periods, using available credit information and trends. In addition, management applies judgment to the statistical loss estimates for each loan portfolio category, using delinquency trends and other risk characteristics to estimate the total incurred credit losses in the portfolio. Management uses additional statistical methods and considers portfolio and collateral valuation trends to review the appropriateness of the primary statistical loss estimate.

The statistical calculation is then adjusted to take into consideration model imprecision, external factors and current economic events that have occurred but that are not yet reflected in the factors used to derive the statistical calculation; these adjustments are accomplished in part by analyzing the historical loss experience for each major product segment. However, it is difficult to predict whether historical loss experience is indicative of future loss levels. Management applies judgment in making this adjustment, taking into account uncertainties associated with current macroeconomic and political conditions, quality of underwriting standards, borrower behavior, the potential impact of payment recasts within the HELOC portfolio, and other relevant internal and external factors affecting the credit quality of the portfolio. In certain instances, the interrelationships between these factors create further uncertainties. For example, the performance of a HELOC that experiences a payment recast may be affected by both

the quality of underwriting standards applied in originating the loan and the general economic conditions in effect at the time of the payment recast. For junior lien products, management considers the delinquency and/or modification status of any senior liens in determining the adjustment. The application of different inputs into the statistical calculation, and the assumptions used by management to adjust the statistical calculation, are subject to management judgment, and emphasizing one input or assumption over another, or considering other inputs or assumptions, could affect the estimate of the allowance for loan losses for the consumer credit portfolio.

Overall, the allowance for credit losses for the consumer portfolio, including credit card, is sensitive to changes in the economic environment (e.g., unemployment rates), delinquency rates, the realizable value of collateral (e.g.,

housing prices), FICO scores, borrower behavior and other risk factors. While all of these factors are important determinants of overall allowance levels, changes in the various factors may not occur at the same time or at the same rate, or changes may be directionally inconsistent such that improvement in one factor may offset deterioration in the other. In addition, changes in these factors would not necessarily be consistent across all geographies or product types. Finally, it is difficult to predict the extent to which changes in these factors would ultimately affect the frequency of losses, the severity of losses or both.

#### PCI loans

In connection with the Washington Mutual transaction, JPMorgan Chase acquired certain PCI loans, which are accounted for as described in Note 14 on pages 258–283 of this Annual Report. The allowance for loan losses for the PCI portfolio is based on quarterly estimates of the amount of principal and interest cash flows expected to be collected over the estimated remaining lives of the loans.

These cash flow projections are based on estimates regarding default rates, loss severities, the amounts and timing of prepayments and other factors that are reflective of current and expected future market conditions. These estimates are dependent on assumptions regarding the level of future home price declines, and the duration of current overall economic conditions, among other factors. These estimates and assumptions require significant management judgment and certain assumptions are highly subjective.

#### Formula-based component - Wholesale loans and lending-related commitments

The Firm's methodology for determining the allowance for loan losses and the allowance for lending-related commitments requires the early identification of credits that are deteriorating. The Firm uses a risk-rating system to determine the credit quality of its wholesale loans. Wholesale loans are reviewed for information affecting the obligor's ability to fulfill its obligations. In assessing the risk rating of a particular loan, among the factors considered are the obligor's debt capacity and financial flexibility, the level of the obligor's earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could affect the risk rating assigned by the Firm to that loan.

The Firm applies its judgment to establish loss factors used in calculating the allowances. Wherever possible, the Firm uses independent, verifiable data or the Firm's own historical loss experience in its models for estimating the allowances. Many factors can affect estimates of loss, including volatility of loss given default, probability of default and rating migrations. Consideration is given to the particular source of external data used as well as the time period to which loss data relates (for example, point-in-time loss estimates and estimates that reflect longer views of the credit cycle). Finally, differences in loan characteristics between the Firm's specific loan portfolio and those reflected in the external data could also affect loss estimates. The application of different inputs would change the amount of the allowance for credit losses determined appropriate by the Firm.

Management also applies its judgment to adjust the modeled loss estimates, taking into consideration model imprecision, external factors and economic events that have occurred but are not yet reflected in the loss factors. Historical experience of both loss given default and probability of default are considered when estimating these adjustments. Factors related to concentrated and deteriorating industries also are incorporated where relevant. These estimates are based on management's view of uncertainties that relate to current macroeconomic and political conditions, quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the current portfolio.

#### Allowance for credit losses sensitivity

As noted above, the Firm's allowance for credit losses is sensitive to numerous factors, depending on the portfolio. Changes in economic conditions or in the Firm's assumptions could affect its estimate of probable credit losses inherent in the portfolio at the balance sheet date. For example, deterioration in the following inputs would have the following effects on the Firm's modeled loss estimates as of December 31, 2013, without consideration of any offsetting or correlated effects of other inputs in the Firm's allowance for loan losses:

-

For PCI loans, a combined 5% decline in housing prices and a 1% increase in unemployment from current levels could imply an increase to modeled credit loss estimates of approximately \$1.4 billion.

For the residential real estate portfolio, excluding PCI loans, a combined 5% decline in housing prices and a 1% increase in unemployment from current levels could imply an increase to modeled annual loss estimates of approximately \$300 million.

A 50 basis point deterioration in forecasted credit card loss rates could imply an increase to modeled annualized credit card loan loss estimates of approximately \$600 million.

A one-notch downgrade in the Firm's internal risk ratings for its entire wholesale loan portfolio could imply an increase in the Firm's modeled loss estimates of approximately \$2.1 billion.

## Management's discussion and analysis

The purpose of these sensitivity analyses is to provide an indication of the isolated impacts of hypothetical alternative assumptions on modeled loss estimates. The changes in the inputs presented above are not intended to imply management's expectation of future deterioration of those risk factors.

These analyses are not intended to estimate changes in the overall allowance for loan losses, which would also be influenced by the judgment management applies to the modeled loss estimates to reflect the uncertainty and imprecision of these modeled loss estimates based on then current circumstances and conditions.

It is difficult to estimate how potential changes in specific factors might affect the allowance for credit losses because management considers a variety of factors and inputs in estimating the allowance for credit losses. Changes in these factors and inputs may not occur at the same rate and may not be consistent across all geographies or product types, and changes in factors may be directionally inconsistent, such that improvement in one factor may offset deterioration in other factors. In addition, it is difficult to predict how changes in specific economic conditions or assumptions could affect borrower behavior or other factors considered by management in estimating the allowance for credit losses. Given the process the Firm follows in evaluating the risk factors related to its loans, including risk ratings, home price assumptions, and credit card loss estimates, management believes that its current estimate of the allowance for credit loss is appropriate.

## Fair value of financial instruments, MSRs and commodities inventory

JPMorgan Chase carries a portion of its assets and liabilities at fair value. The majority of such assets and liabilities are measured at fair value on a recurring basis. Certain assets and liabilities are measured at fair value on a nonrecurring basis, including certain mortgage, home equity and other loans, where the carrying value is based on the fair value of the underlying collateral.

## Assets measured at fair value

The following table includes the Firm's assets measured at fair value and the portion of such assets that are classified within level 3 of the valuation hierarchy. For further information, see Note 3 on pages 195–215 of this Annual Report.

December 31, 2013 (in billions, except ratio data)	Total assets at fair value	Total level 3 assets	
Trading debt and equity instruments	\$308.9	\$27.2	
Derivative receivables	65.8	18.6	
Trading assets	374.7	45.8	
AFS securities	330.0	2.3	(a)
Loans	2.0	1.9	
MSRs	9.6	9.6	
Private equity investments	7.5	6.5	
Other	36.5	3.2	
Total assets measured at fair value on a recurring basis	760.3	69.3	
Total assets measured at fair value on a nonrecurring basis	6.2	5.8	
Total assets measured at fair value	\$766.5	\$75.1	
Total Firm assets	\$2,415.7		
Level 3 assets as a percentage of total Firm assets		3.1	% (a)
Level 3 assets as a percentage of total Firm assets at fair value		9.8	% (a)

Reflects \$27.4 billion of collateralized loan obligations ("CLOs") transferred from level 3 to level 2 during the year (a) ended December 31, 2013. For further discussion of the transfers, see Note 3 on pages 195–215 of this Annual Report.

## Valuation

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. The Firm has established well-documented processes for determining fair value; for further details see Note 3 on pages 195–215 of this Annual Report. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available for an instrument or a

similar instrument, fair value is generally based on models that consider relevant transaction characteristics (such as maturity) and use as inputs market-based or independently sourced parameters.

Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the valuation hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, the lack of observability of certain significant inputs requires management to assess all relevant empirical data in deriving valuation inputs — including, for example, transaction details, yield curves, interest rates, prepayment rates, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves. For further discussion of the valuation of level 3 instruments, including unobservable inputs used, see Note 3 on pages 195–215 of this Annual Report.

For instruments classified in levels 2 and 3, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's credit-worthiness, liquidity considerations, unobservable parameters, and for certain portfolios that meet specified criteria, the size of the net open risk position. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole.

During the fourth quarter of 2013 the Firm implemented the FVA framework to incorporate the impact of funding into its valuation estimates for OTC derivatives and structured notes, reflecting an industry migration towards incorporating the market cost of unsecured funding in the valuation of such instruments. Implementation of the FVA framework required a number of important management judgments including: (i) determining when the accumulation of market evidence was sufficiently compelling to implement the FVA framework; (ii) estimating the market clearing price for funding in the relevant market; and (iii) determining the interaction between DVA and FVA, given that DVA already reflects credit spreads, which are a significant component of funding spreads that drive FVA. For further discussion of valuation adjustments applied by the Firm, including FVA, see Note 3 on pages 195–215 of this Annual Report.

Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of methodologies or assumptions different than those used by the Firm could result in a different estimate of fair value at the reporting date. For a detailed discussion of the Firm's valuation process and hierarchy, and its determination of fair value for individual financial instruments, see Note 3 on pages 195–215 of this Annual Report.

#### Goodwill impairment

Under U.S. GAAP, goodwill must be allocated to reporting units and tested for impairment at least annually. The Firm's process and methodology used to conduct goodwill impairment testing is described in Note 17 on pages 299–304 of this Annual Report.

Management applies significant judgment when estimating the fair value of its reporting units. Estimates of fair value are dependent upon estimates of (a) the future earnings potential of the Firm's reporting units, including the estimated effects of regulatory and legislative changes, such as the Dodd-Frank Act, (b) long-term growth rates and (c) the relevant cost of equity. Imprecision in estimating these factors can affect the estimated fair value of the reporting units.

Based upon the updated valuations for all of its reporting units, the Firm concluded that goodwill allocated to its reporting units was not impaired at December 31, 2013, nor was any goodwill written off during 2013. The fair values of almost all of the Firm's reporting units exceeded their carrying values and did not indicate a significant risk of goodwill impairment based on current projections and valuations. For those reporting units where fair value exceeded carrying value, the excess fair value as a percent of carrying value ranged from approximately 15% to 180%.

As of December 31, 2013, the estimated fair value of the Firm's mortgage lending business within CCB did not exceed its carrying value. While the implied fair value of the goodwill allocated to the mortgage lending business exceeded its carrying value as of December 31, 2013, the associated goodwill remains at an elevated risk for goodwill impairment due to its exposure to U.S. consumer credit risk and the effects of economic, regulatory and legislative changes. The assumptions used in the valuation of this business include: (a) estimates of future cash flows for the business (which

are dependent on outstanding loan balances, net interest margin, operating expense, credit losses and the amount of capital necessary to meet regulatory capital requirements), and (b) the cost of equity used to discount those cash flows to a present value. Each of these factors requires significant judgment and the assumptions used are based on management's current best estimate and most current projections, including the anticipated effects of regulatory and legislative changes, derived from the Firm's business forecasting process as reviewed with senior management. The projections for all of the Firm's reporting units are consistent with the short-term assumptions discussed in the Business Outlook on pages 68–69 of this Annual Report, and, in the longer term, incorporate a set of macroeconomic assumptions and the Firm's best estimates of long-term growth and returns of its businesses. Where possible, the Firm uses third-party and peer data to benchmark its assumptions and estimates.

## Management's discussion and analysis

Deterioration in economic market conditions, increased estimates of the effects of recent regulatory or legislative changes, or additional regulatory or legislative changes may result in declines in projected business performance beyond management's current expectations. For example, in the Firm's mortgage lending business, such declines could result from increases in primary mortgage interest rates, lower mortgage origination volume, higher costs to resolve foreclosure-related matters or from deterioration in economic conditions that result in increased credit losses, including decreases in home prices beyond management's current expectations. Declines in business performance, increases in equity capital requirements, or increases in the estimated cost of equity, could cause the estimated fair values of the Firm's reporting units or their associated goodwill to decline, which could result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

For additional information on goodwill, see Note 17 on pages 299–304 of this Annual Report.

## Income taxes

JPMorgan Chase is subject to the income tax laws of the various jurisdictions in which it operates, including U.S. federal, state and local and non-U.S. jurisdictions. These laws are often complex and may be subject to different interpretations. To determine the financial statement impact of accounting for income taxes, including the provision for income tax expense and unrecognized tax benefits, JPMorgan Chase must make assumptions and judgments about how to interpret and apply these complex tax laws to numerous transactions and business events, as well as make judgments regarding the timing of when certain items may affect taxable income in the U.S. and non-U.S. tax jurisdictions.

JPMorgan Chase's interpretations of tax laws around the world are subject to review and examination by the various taxing authorities in the jurisdictions where the Firm operates, and disputes may occur regarding its view on a tax position. These disputes over interpretations with the various taxing authorities may be settled by audit, administrative appeals or adjudication in the court systems of the tax jurisdictions in which the Firm operates. JPMorgan Chase regularly reviews whether it may be assessed additional income taxes as a result of the resolution of these matters, and the Firm records additional reserves as appropriate. In addition, the Firm may revise its estimate of income taxes due to changes in income tax laws, legal interpretations and tax planning strategies. It is possible that revisions in the Firm's estimate of income taxes may materially affect the Firm's results of operations in any reporting period.

The Firm's provision for income taxes is composed of current and deferred taxes. Deferred taxes arise from differences between assets and liabilities measured for financial reporting versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. The Firm has also recognized deferred tax assets in connection with certain net operating losses. The Firm performs regular reviews to ascertain whether deferred tax assets are realizable. These reviews include management's estimates and assumptions regarding future taxable income, which also incorporates various tax planning strategies, including strategies that may be available to utilize net operating losses before they expire. In connection with these reviews, if it is determined that a deferred tax asset is not realizable, a valuation allowance is established. The valuation allowance may be reversed in a subsequent reporting period if the Firm determines that, based on revised estimates of future taxable income or changes in tax planning strategies, it is more likely than not that all or part of the deferred tax asset will become realizable. As of December 31, 2013, management has determined it is more likely than not that the Firm will realize its deferred tax assets, net of the existing valuation allowance.

JPMorgan Chase does not provide U.S. federal income taxes on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. Changes to the income tax rates applicable to these non-U.S. subsidiaries may have a material impact on the effective tax rate in a future period if such changes were to occur.

The Firm adjusts its unrecognized tax benefits as necessary when additional information becomes available. Uncertain tax positions that meet the more-likely-than-not recognition threshold are measured to determine the amount of benefit to recognize. An uncertain tax position is measured at the largest amount of benefit that management believes is more likely than not to be realized upon settlement. It is possible that the reassessment of JPMorgan Chase's unrecognized tax benefits may have a material impact on its effective tax rate in the period in which the reassessment occurs.

For additional information on income taxes, see Note 26 on pages 313–315 of this Annual Report.

Litigation reserves

For a description of the significant estimates and judgments associated with establishing litigation reserves, see Note 31 on pages 326–332 of this Annual Report.

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## ACCOUNTING AND REPORTING DEVELOPMENTS

### Presentation of other comprehensive income

In June 2011, the FASB issued guidance that modifies the presentation of other comprehensive income in the Consolidated Financial Statements. The guidance requires that items of net income, items of other comprehensive income, and total comprehensive income be presented in one continuous statement or in two separate but consecutive statements. The guidance was effective in the first quarter of 2012, and the Firm adopted the new guidance by electing the two-statement approach, effective January 1, 2012. The application of this guidance only affected the presentation of the Consolidated Financial Statements and had no impact on the Firm's Consolidated Balance Sheets or results of operations.

In February 2013, the FASB issued guidance that requires enhanced disclosures of any reclassifications out of accumulated other comprehensive income. The guidance was effective in the first quarter of 2013. The application of this guidance had no impact on the Firm's Consolidated Balance Sheets or results of operations. For further information, see Note 25 on page 312 of this Annual Report.

### Balance sheet netting

In December 2011, the FASB issued guidance that requires enhanced disclosures about certain financial assets and liabilities that are subject to enforceable master netting agreements or similar agreements, or that have otherwise been offset on the balance sheet under certain specific conditions that permit net presentation. In January 2013, the FASB clarified that the scope of this guidance is limited to derivatives, repurchase and reverse repurchase agreements, and securities borrowing and lending transactions. The Firm adopted the new guidance effective the first quarter of 2013. The application of this guidance had no impact on the Firm's Consolidated Balance Sheets or results of operations. For further information, see Notes 1, 6, and 13 on pages 189–191, 220–233, and 255–257, respectively, of this Annual Report.

### Investment companies

In June 2013, the FASB issued guidance that clarifies the characteristics of an investment company and requires new disclosures for investment companies. Under the guidance, a company regulated under the Investment Company Act of

1940 is considered an investment company for accounting purposes. All other companies must meet all of the fundamental characteristics described in the guidance and consider other typical characteristics to qualify as an investment company. An investment company will be required to provide additional disclosures, including the fact that the company is an investment company, information about changes, if any, in a company's status as an investment company, and information about financial support provided or contractually required to be provided by an investment company to any of its investees. The guidance will become effective in the first quarter of 2014. The adoption of the guidance is not expected to have a material impact on the Firm's Consolidated Balance Sheets or results of operations.

### Inclusion of the Fed funds effective swap rate

In July 2013, the FASB issued guidance that amends the acceptable U.S. benchmark interest rates for hedge accounting involving interest rate risk. In addition to interest rates on direct U.S. Treasury obligations and the LIBOR swap rate, the guidance also permits the overnight indexed swap rate ("OIS") to be designated as a benchmark interest rate for hedge accounting purposes. The amendments are effective prospectively for qualifying new or redesignated hedging relationships entered into on or after July 17, 2013. For further information on the Firm's benchmark interest rate hedges, see Note 6 on pages 220–233 of this Annual Report.

### Investments in qualified affordable housing projects

In January 2014, the FASB issued guidance regarding the accounting for investments in affordable housing projects that qualify for the low-income housing tax credit. The guidance replaces the effective yield method and allows companies to make an accounting policy election to amortize the cost of its investments in proportion to the tax benefits received if certain criteria are met, and present the amortization as a component of income tax expense. The guidance will become effective in the first quarter of 2015, with early adoption permitted in the first quarter of 2014. The Firm is currently evaluating this guidance to determine any potential impact on the Firm's Consolidated Financial Statements.



## Management's discussion and analysis

## NONEXCHANGE TRADED COMMODITY DERIVATIVE CONTRACTS AT FAIR VALUE

In the normal course of business, JPMorgan Chase trades nonexchange-traded commodity derivative contracts. To determine the fair value of these contracts, the Firm uses various fair value estimation techniques, primarily based on internal models with significant observable market parameters. The Firm's nonexchange-traded commodity derivative contracts are primarily energy-related.

The following table summarizes the changes in fair value for nonexchange-traded commodity derivative contracts for the year ended December 31, 2013.

Year ended December 31, 2013 (in millions)	Asset position	Liability position
Net fair value of contracts outstanding at January 1, 2013 <sup>(a)</sup>	\$7,934	\$10,745
Effect of legally enforceable master netting agreements <sup>(a)</sup>	20,729	22,392
Gross fair value of contracts outstanding at January 1, 2013	28,663	33,137
Contracts realized or otherwise settled	(21,406	) (23,246
Fair value of new contracts	11,955	12,709
Changes in fair values attributable to changes in valuation techniques and assumptions	—	—
Other changes in fair value	3,998	2,647
Gross fair value of contracts outstanding at December 31, 2013	23,210	25,247
Effect of legally enforceable master netting agreements	(15,082	) (15,318
Net fair value of contracts outstanding at December 31, 2013	\$8,128	\$9,929

(a) The prior period has been revised.

The following table indicates the maturities of nonexchange-traded commodity derivative contracts at December 31, 2013.

December 31, 2013 (in millions)	Asset position	Liability position
Maturity less than 1 year	\$13,750	\$14,766
Maturity 1–3 years	7,155	6,733
Maturity 4–5 years	1,214	1,048
Maturity in excess of 5 years	1,091	2,700
Gross fair value of contracts outstanding at December 31, 2013	23,210	25,247
Effect of legally enforceable master netting agreements	(15,082	) (15,318
Net fair value of contracts outstanding at December 31, 2013	\$8,128	\$9,929

## FORWARD-LOOKING STATEMENTS

From time to time, the Firm has made and will make forward-looking statements. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as “anticipate,” “target,” “expect,” “estimate,” “intend,” “plan,” “goal,” “believe,” or other words of similar meaning. Forward-looking statements provide JPMorgan Chase’s current expectations or forecasts of future events, circumstances, results or aspirations. JPMorgan Chase’s disclosures in this Annual Report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. The Firm also may make forward-looking statements in its other documents filed or furnished with the Securities and Exchange Commission. In addition, the Firm’s senior management may make forward-looking statements orally to analysts, investors, representatives of the media and others.

All forward-looking statements are, by their nature, subject to risks and uncertainties, many of which are beyond the Firm’s control. JPMorgan Chase’s actual future results may differ materially from those set forth in its forward-looking statements. While there is no assurance that any list of risks and uncertainties or risk factors is complete, below are certain factors which could cause actual results to differ from those in the forward-looking statements:

- Local, regional and international business, economic and political conditions and geopolitical events;
- Changes in laws and regulatory requirements, including as a result of recent financial services legislation;
- Changes in trade, monetary and fiscal policies and laws;
- Securities and capital markets behavior, including changes in market liquidity and volatility;
- Changes in investor sentiment or consumer spending or savings behavior;
- Ability of the Firm to manage effectively its capital and liquidity, including approval of its capital plans by banking regulators;
- Changes in credit ratings assigned to the Firm or its subsidiaries;
- Damage to the Firm’s reputation;
- Ability of the Firm to deal effectively with an economic slowdown or other economic or market disruption;
- Technology changes instituted by the Firm, its counterparties or competitors;
- Mergers and acquisitions, including the Firm’s ability to integrate acquisitions;
- Ability of the Firm to develop new products and services, and the extent to which products or services previously sold by the Firm (including but not limited to mortgages and asset-backed securities) require the Firm to incur liabilities or absorb losses not contemplated at their initiation or origination;
- Ability of the Firm to address enhanced regulatory requirements affecting its mortgage business;
- Acceptance of the Firm’s new and existing products and services by the marketplace and the ability of the Firm to increase market share;
- Ability of the Firm to attract and retain employees;
- Ability of the Firm to control expense;
- Competitive pressures;
- Changes in the credit quality of the Firm’s customers and counterparties;
- Adequacy of the Firm’s risk management framework, disclosure controls and procedures and internal control over financial reporting;
- Adverse judicial or regulatory proceedings;
- Changes in applicable accounting policies;
- Ability of the Firm to determine accurate values of certain assets and liabilities;
- Occurrence of natural or man-made disasters or calamities or conflicts, including any effect of any such disasters, calamities or conflicts on the Firm’s power generation facilities and the Firm’s other physical commodity-related activities;
- Ability of the Firm to maintain the security of its financial, accounting, technology, data processing and other operating systems and facilities;
- The other risks and uncertainties detailed in Part I, Item 1A: Risk Factors in the Firm’s Annual Report on Form 10-K for the year ended December 31, 2013.

Any forward-looking statements made by or on behalf of the Firm speak only as of the date they are made, and JPMorgan Chase does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statements were made. The reader should, however, consult any further disclosures of a forward-looking nature the Firm may make in any subsequent Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, or Current Reports on Form 8-K.

Management's report on internal control over financial reporting

Management of JPMorgan Chase & Co. ("JPMorgan Chase" or the "Firm") is responsible for establishing and maintaining adequate internal control over financial reporting. Internal control over financial reporting is a process designed by, or under the supervision of, the Firm's principal executive and principal financial officers, or persons performing similar functions, and effected by JPMorgan Chase's Board of Directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with accounting principles generally accepted in the United States of America. JPMorgan Chase's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records, that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the Firm's assets; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Firm are being made only in accordance with authorizations of JPMorgan Chase's management and directors; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Firm's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate. Management has completed an assessment of the effectiveness of the Firm's internal control over financial reporting as of December 31, 2013. In making the assessment, management used the framework in "Internal Control - Integrated Framework (1992)" promulgated by the Committee of Sponsoring Organizations of the Treadway Commission, commonly referred to as the "COSO" criteria.

Based upon the assessment performed, management concluded that as of December 31, 2013, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO 1992 criteria. Additionally, based upon management's assessment, the Firm determined that there were no material weaknesses in its internal control over financial reporting as of December 31, 2013.

The effectiveness of the Firm's internal control over financial reporting as of December 31, 2013, has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which appears herein.

James Dimon  
Chairman and Chief Executive Officer

Marianne Lake  
Executive Vice President and Chief Financial Officer

February 19, 2014

Report of independent registered public accounting firm

To the Board of Directors and Stockholders of JPMorgan Chase & Co.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows present fairly, in all material respects, the financial position of JPMorgan Chase & Co. and its subsidiaries (the "Firm") at December 31, 2013 and 2012 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2013 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2013 based on criteria established in Internal Control - Integrated Framework (1992) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Firm's management is responsible for these financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying "Management's report on internal control over financial reporting". Our responsibility is to express opinions on these financial statements and on the Firm's internal control over financial reporting based on our integrated audits. We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement and whether effective internal control over financial reporting was maintained in all material respects. Our audits of the financial statements included examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a

material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

February 19, 2014

PricewaterhouseCoopers LLP 300 Madison Avenue New York, NY 10017

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## Consolidated statements of income

Year ended December 31, (in millions, except per share data)	2013	2012	2011
Revenue			
Investment banking fees	\$6,354	\$5,808	\$5,911
Principal transactions	10,141	5,536	10,005
Lending- and deposit-related fees	5,945	6,196	6,458
Asset management, administration and commissions	15,106	13,868	14,094
Securities gains <sup>(a)</sup>	667	2,110	1,593
Mortgage fees and related income	5,205	8,687	2,721
Card income	6,022	5,658	6,158
Other income	3,847	4,258	2,605
Noninterest revenue	53,287	52,121	49,545
Interest income	52,996	56,063	61,293
Interest expense	9,677	11,153	13,604
Net interest income	43,319	44,910	47,689
Total net revenue	96,606	97,031	97,234
Provision for credit losses	225	3,385	7,574
Noninterest expense			
Compensation expense	30,810	30,585	29,037
Occupancy expense	3,693	3,925	3,895
Technology, communications and equipment expense	5,425	5,224	4,947
Professional and outside services	7,641	7,429	7,482
Marketing	2,500	2,577	3,143
Other expense	19,761	14,032	13,559
Amortization of intangibles	637	957	848
Total noninterest expense	70,467	64,729	62,911
Income before income tax expense	25,914	28,917	26,749
Income tax expense	7,991	7,633	7,773
Net income	\$17,923	\$21,284	\$18,976
Net income applicable to common stockholders	\$16,593	\$19,877	\$17,568
Net income per common share data			
Basic earnings per share	\$4.39	\$5.22	\$4.50
Diluted earnings per share	4.35	5.20	4.48

Weighted-average basic shares	3,782.4	3,809.4	3,900.4
Weighted-average diluted shares	3,814.9	3,822.2	3,920.3
Cash dividends declared per common share	\$1.44	\$1.20	\$1.00

(a) The following other-than-temporary impairment losses are included in securities gains for the periods presented.

Year ended December 31, (in millions)	2013	2012	2011
Debt securities the Firm does not intend to sell that have credit losses			
Total other-than-temporary impairment losses	\$(1)	\$(113)	\$(27)
Losses recorded in/(reclassified from) other comprehensive income	—	85	(49)
Total credit losses recognized in income	(1)	(28)	(76)

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Securities the Firm intends to sell	(20	)	(15	)	—	
Total other-than-temporary impairment losses recognized in income	\$(21	)	\$(43	)	\$(76	)

The Notes to Consolidated Financial Statements are an integral part of these statements.

## Consolidated statements of comprehensive income

Year ended December 31, (in millions)	2013	2012	2011
Net income	\$17,923	\$21,284	\$18,976
Other comprehensive income/(loss), after-tax			
Unrealized gains/(losses) on AFS securities	(4,070	) 3,303	1,067
Translation adjustments, net of hedges	(41	) (69	) (279
Cash flow hedges	(259	) 69	(155
Defined benefit pension and OPEB plans	1,467	(145	) (690
Total other comprehensive income/(loss), after-tax	(2,903	) 3,158	(57
Comprehensive income	\$15,020	\$24,442	\$18,919

The Notes to Consolidated Financial Statements are an integral part of these statements.

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Consolidated balance sheets

December 31, (in millions, except share data)	2013	2012
<b>Assets</b>		
Cash and due from banks	\$39,771	\$53,723
Deposits with banks	316,051	121,814
Federal funds sold and securities purchased under resale agreements (included \$25,135 and \$24,258 at fair value)	248,116	296,296
Securities borrowed (included \$3,739 and \$10,177 at fair value)	111,465	119,017
Trading assets (included assets pledged of \$106,299 and \$108,784)	374,664	450,028
Securities (included \$329,977 and \$371,145 at fair value and assets pledged of \$23,446 and \$52,063)	354,003	371,152
Loans (included \$2,011 and \$2,555 at fair value)	738,418	733,796
Allowance for loan losses	(16,264)	(21,936)
Loans, net of allowance for loan losses	722,154	711,860
Accrued interest and accounts receivable	65,160	60,933
Premises and equipment	14,891	14,519
Goodwill	48,081	48,175
Mortgage servicing rights	9,614	7,614
Other intangible assets	1,618	2,235
Other assets (included \$15,187 and \$16,458 at fair value and assets pledged of \$2,066 and \$1,127)	110,101	101,775
<b>Total assets<sup>(a)</sup></b>	<b>\$2,415,689</b>	<b>\$2,359,141</b>
<b>Liabilities</b>		
Deposits (included \$6,624 and \$5,733 at fair value)	\$1,287,765	\$1,193,593
Federal funds purchased and securities loaned or sold under repurchase agreements (included \$5,426 and \$4,388 at fair value)	181,163	240,103
Commercial paper	57,848	55,367
Other borrowed funds (included \$13,306 and \$11,591 at fair value)	27,994	26,636
Trading liabilities	137,744	131,918
Accounts payable and other liabilities (included \$25 and \$36 at fair value)	194,491	195,240
Beneficial interests issued by consolidated variable interest entities (included \$1,996 and \$1,170 at fair value)	49,617	63,191
Long-term debt (included \$28,878 and \$30,788 at fair value)	267,889	249,024
<b>Total liabilities<sup>(a)</sup></b>	<b>2,204,511</b>	<b>2,155,072</b>
<b>Commitments and contingencies (see Notes 29, 30 and 31 of this Annual Report)</b>		
<b>Stockholders' equity</b>		
Preferred stock (\$1 par value; authorized 200,000,000 shares: issued 1,115,750 and 905,750 shares)	11,158	9,058
Common stock (\$1 par value; authorized 9,000,000,000 shares; issued 4,104,933,895 shares)	4,105	4,105
Capital surplus	93,828	94,604
Retained earnings	115,756	104,223
Accumulated other comprehensive income	1,199	4,102
Shares held in RSU Trust, at cost (476,642 and 479,126 shares)	(21)	(21)
Treasury stock, at cost (348,825,583 and 300,981,690 shares)	(14,847)	(12,002)
<b>Total stockholders' equity</b>	<b>211,178</b>	<b>204,069</b>
<b>Total liabilities and stockholders' equity</b>	<b>\$2,415,689</b>	<b>\$2,359,141</b>

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at December 31, 2013 and 2012. The difference between total VIE assets and liabilities represents the Firm's

interests in those entities, which were eliminated in consolidation.

December 31, (in millions)	2013	2012
Assets		
Trading assets	\$6,366	\$11,966
Loans	70,072	82,723
All other assets	2,168	2,090
Total assets	\$78,606	\$96,779
Liabilities		
Beneficial interests issued by consolidated variable interest entities	\$49,617	\$63,191
All other liabilities	1,061	1,244
Total liabilities	\$50,678	\$64,435

The assets of the consolidated VIEs are used to settle the liabilities of those entities. The holders of the beneficial interests do not have recourse to the general credit of JPMorgan Chase. At December 31, 2013 and 2012, the Firm provided limited program-wide credit enhancement of \$2.6 billion and \$3.1 billion, respectively, related to its Firm-administered multi-seller conduits, which are eliminated in consolidation. For further discussion, see Note 16 on pages 288–299 of this Annual Report.

The Notes to Consolidated Financial Statements are an integral part of these statements.

## Consolidated statements of changes in stockholders' equity

Year ended December 31, (in millions, except per share data)	2013	2012	2011
<b>Preferred stock</b>			
Balance at January 1	\$9,058	\$7,800	\$7,800
Issuance of preferred stock	3,900	1,258	—
Redemption of preferred stock	(1,800)	—	—
Balance at December 31	11,158	9,058	7,800
<b>Common stock</b>			
Balance at January 1 and December 31	4,105	4,105	4,105
<b>Capital surplus</b>			
Balance at January 1	94,604	95,602	97,415
Shares issued and commitments to issue common stock for employee stock-based compensation awards, and related tax effects	(752)	(736)	(1,688)
Other	(24)	(262)	(125)
Balance at December 31	93,828	94,604	95,602
<b>Retained earnings</b>			
Balance at January 1	104,223	88,315	73,998
Net income	17,923	21,284	18,976
Dividends declared:			
Preferred stock	(805)	(647)	(629)
Common stock (\$1.44, \$1.20 and \$1.00 per share for 2013, 2012 and 2011, respectively)	(5,585)	(4,729)	(4,030)
Balance at December 31	115,756	104,223	88,315
<b>Accumulated other comprehensive income/(loss)</b>			
Balance at January 1	4,102	944	1,001
Other comprehensive income/(loss)	(2,903)	3,158	(57)
Balance at December 31	1,199	4,102	944
<b>Shares held in RSU Trust, at cost</b>			
Balance at January 1	(21)	(38)	(53)
Reissuance from RSU Trust	—	17	15
Balance at December 31	(21)	(21)	(38)
<b>Treasury stock, at cost</b>			
Balance at January 1	(12,002)	(13,155)	(8,160)
Purchase of treasury stock	(4,789)	(1,415)	(8,741)
Reissuance from treasury stock	1,944	2,574	3,750
Share repurchases related to employee stock-based compensation awards	—	(6)	(4)
Balance at December 31	(14,847)	(12,002)	(13,155)
<b>Total stockholders' equity</b>	<b>\$211,178</b>	<b>\$204,069</b>	<b>\$183,573</b>

The Notes to Consolidated Financial Statements are an integral part of these statements.

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Consolidated statements of cash flows

Year ended December 31, (in millions)	2013	2012	2011
Operating activities			
Net income	\$17,923	\$21,284	\$18,976
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:			
Provision for credit losses	225	3,385	7,574
Depreciation and amortization	4,669	4,190	4,257
Amortization of intangibles	637	957	848
Deferred tax expense	8,003	1,130	1,693
Investment securities gains	(667 )	(2,110 )	(1,593 )
Stock-based compensation	2,219	2,545	2,675
Originations and purchases of loans held-for-sale	(75,928 )	(34,026 )	(52,561 )
Proceeds from sales, securitizations and paydowns of loans held-for-sale	73,566	33,202	54,092
Net change in:			
Trading assets	89,110	(5,379 )	36,443
Securities borrowed	7,562	23,455	(18,936 )
Accrued interest and accounts receivable	(2,340 )	1,732	8,655
Other assets	526	(4,683 )	(15,456 )
Trading liabilities	(9,772 )	(3,921 )	7,905
Accounts payable and other liabilities	(5,743 )	(13,069 )	35,203
Other operating adjustments	(2,037 )	(3,613 )	6,157
Net cash provided by operating activities	107,953	25,079	95,932
Investing activities			
Net change in:			
Deposits with banks	(194,363)	(36,595 )	(63,592 )
Federal funds sold and securities purchased under resale agreements	47,726	(60,821 )	(12,490 )
Held-to-maturity securities:			
Proceeds from paydowns and maturities	189	4	6
Purchases	(24,214 )	—	—
Available-for-sale securities:			
Proceeds from paydowns and maturities	89,631	112,633	86,850
Proceeds from sales	73,312	81,957	68,631
Purchases	(130,266)	(189,630)	(202,309)
Proceeds from sales and securitizations of loans held-for-investment	12,033	6,430	10,478
Other changes in loans, net	(23,721 )	(30,491 )	(58,365 )
Net cash (used in)/received from business acquisitions or dispositions	(149 )	88	102
All other investing activities, net	(679 )	(3,400 )	(63 )
Net cash used in investing activities	(150,501)	(119,825)	(170,752)
Financing activities			
Net change in:			
Deposits	81,476	67,250	203,420
Federal funds purchased and securities loaned or sold under repurchase agreements	(58,867 )	26,546	(63,116 )
Commercial paper and other borrowed funds	2,784	9,315	7,230
Beneficial interests issued by consolidated variable interest entities	(10,433 )	345	1,165
Proceeds from long-term borrowings and trust preferred securities	83,546	86,271	54,844
Payments of long-term borrowings and trust preferred securities	(60,497 )	(96,473 )	(82,078 )
Excess tax benefits related to stock-based compensation	137	255	867
Proceeds from issuance of preferred stock	3,873	1,234	—

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Redemption of preferred stock	(1,800 )	—	—
Treasury stock and warrants repurchased	(4,789 )	(1,653 )	(8,863 )
Dividends paid	(6,056 )	(5,194 )	(3,895 )
All other financing activities, net	(1,050 )	(189 )	(1,868 )
Net cash provided by financing activities	28,324	87,707	107,706
Effect of exchange rate changes on cash and due from banks	272	1,160	(851 )
Net (decrease)/increase in cash and due from banks	(13,952 )	(5,879 )	32,035
Cash and due from banks at the beginning of the period	53,723	59,602	27,567
Cash and due from banks at the end of the period	\$39,771	\$53,723	\$59,602
Cash interest paid	\$9,573	\$11,161	\$13,725
Cash income taxes paid, net	3,502	2,050	8,153

The Notes to Consolidated Financial Statements are an integral part of these statements.

## Notes to consolidated financial statements

## Note 1 – Basis of presentation

JPMorgan Chase & Co. (“JPMorgan Chase” or the “Firm”), a financial holding company incorporated under Delaware law in 1968, is a leading global financial services firm and one of the largest banking institutions in the United States of America (“U.S.”), with operations worldwide. The Firm is a leader in investment banking, financial services for consumers and small business, commercial banking, financial transaction processing, asset management and private equity. For a discussion of the Firm’s business segments, see Note 33 on pages 334–337 of this Annual Report. The accounting and financial reporting policies of JPMorgan Chase and its subsidiaries conform to accounting principles generally accepted in the U.S. (“U.S. GAAP”). Additionally, where applicable, the policies conform to the accounting and reporting guidelines prescribed by regulatory authorities.

Certain amounts reported in prior periods have been reclassified to conform with the current presentation.

## Consolidation

The Consolidated Financial Statements include the accounts of JPMorgan Chase and other entities in which the Firm has a controlling financial interest. All material intercompany balances and transactions have been eliminated. The Firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity (“VIE”).

## Voting Interest Entities

Voting interest entities are entities that have sufficient equity and provide the equity investors voting rights that enable them to make significant decisions relating to the entity’s operations. For these types of entities, the Firm’s determination of whether it has a controlling interest is primarily based on the amount of voting equity interests held. Entities in which the Firm has a controlling financial interest, through ownership of the majority of the entities’ voting equity interests, or through other contractual rights that give the Firm control, are consolidated by the Firm.

Investments in companies in which the Firm has significant influence over operating and financing decisions (but does not own a majority of the voting equity interests) are accounted for (i) in accordance with the equity method of accounting (which requires the Firm to recognize its proportionate share of the entity’s net earnings), or (ii) at fair value if the fair value option was elected. These investments are generally included in other assets, with income or loss included in other income.

Certain Firm-sponsored asset management funds are structured as limited partnerships or limited liability companies. For many of these entities, the Firm is the general partner or managing member, but the non-affiliated partners or members have the ability to remove the Firm as the general partner or managing member without cause

(i.e., kick-out rights), based on a simple majority vote, or the non-affiliated partners or members have rights to participate in important decisions. Accordingly, the Firm does not consolidate these funds. In the limited cases where the nonaffiliated partners or members do not have substantive kick-out or participating rights, the Firm consolidates the funds.

The Firm’s investment companies make investments in both publicly-held and privately-held entities, including investments in buyouts, growth equity and venture opportunities. These investments are accounted for under investment company guidelines and accordingly, irrespective of the percentage of equity ownership interests held, are carried on the Consolidated Balance Sheets at fair value, and are recorded in other assets.

## Variable Interest Entities

VIEs are entities that, by design, either (1) lack sufficient equity to permit the entity to finance its activities without additional subordinated financial support from other parties, or (2) have equity investors that do not have the ability to make significant decisions relating to the entity’s operations through voting rights, or do not have the obligation to absorb the expected losses, or do not have the right to receive the residual returns of the entity.

The most common type of VIE is a special purpose entity (“SPE”). SPEs are commonly used in securitization transactions in order to isolate certain assets and distribute the cash flows from those assets to investors. The basic SPE structure involves a company selling assets to the SPE; the SPE funds the purchase of those assets by issuing securities to investors. The legal documents that govern the transaction specify how the cash earned on the assets must be allocated to the SPE’s investors and other parties that have rights to those cash flows. SPEs are generally structured

to insulate investors from claims on the SPE's assets by creditors of other entities, including the creditors of the seller of the assets.

The primary beneficiary of a VIE (i.e., the party that has a controlling financial interest) is required to consolidate the assets and liabilities of the VIE. The primary beneficiary is the party that has both (1) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance; and (2) through its interests in the VIE, the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE.

To assess whether the Firm has the power to direct the activities of a VIE that most significantly impact the VIE's economic performance, the Firm considers all the facts and circumstances, including its role in establishing the VIE and its ongoing rights and responsibilities. This assessment includes, first, identifying the activities that most significantly impact the VIE's economic performance; and second, identifying which party, if any, has power over those activities. In general, the parties that make the most significant decisions affecting the VIE (such as asset

## Notes to consolidated financial statements

managers, collateral managers, servicers, or owners of call options or liquidation rights over the VIE's assets) or have the right to unilaterally remove those decision-makers are deemed to have the power to direct the activities of a VIE. To assess whether the Firm has the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE, the Firm considers all of its economic interests, including debt and equity investments, servicing fees, and derivative or other arrangements deemed to be variable interests in the VIE. This assessment requires that the Firm apply judgment in determining whether these interests, in the aggregate, are considered potentially significant to the VIE. Factors considered in assessing significance include: the design of the VIE, including its capitalization structure; subordination of interests; payment priority; relative share of interests held across various classes within the VIE's capital structure; and the reasons why the interests are held by the Firm. The Firm performs on-going reassessments of: (1) whether entities previously evaluated under the majority voting-interest framework have become VIEs, based on certain events, and therefore subject to the VIE consolidation framework; and (2) whether changes in the facts and circumstances regarding the Firm's involvement with a VIE cause the Firm's consolidation conclusion to change.

In January 2010, the Financial Accounting Standards Board ("FASB") issued an amendment which deferred the requirements of the accounting guidance for VIEs for certain investment funds, including mutual funds, private equity funds and hedge funds. For the funds to which the deferral applies, the Firm continues to apply other existing authoritative accounting guidance to determine whether such funds should be consolidated.

Assets held for clients in an agency or fiduciary capacity by the Firm are not assets of JPMorgan Chase and are not included on the Consolidated Balance Sheets.

## Use of estimates in the preparation of consolidated financial statements

The preparation of the Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, revenue and expense, and disclosures of contingent assets and liabilities. Actual results could be different from these estimates.

## Foreign currency translation

JPMorgan Chase revalues assets, liabilities, revenue and expense denominated in non-U.S. currencies into U.S. dollars using applicable exchange rates.

Gains and losses relating to translating functional currency financial statements for U.S. reporting are included in other comprehensive income/(loss) ("OCI") within stockholders' equity. Gains and losses relating to nonfunctional currency transactions, including non-U.S. operations where the functional currency is the U.S. dollar, are reported in the Consolidated Statements of Income.

## Offsetting assets and liabilities

U.S. GAAP permits entities to present derivative receivables and derivative payables with the same counterparty and the related cash collateral receivables and payables on a net basis on the balance sheet when a legally enforceable master netting agreement exists. U.S. GAAP also permits securities sold and purchased under repurchase agreements to be presented net when specified conditions are met, including the existence of a legally enforceable master netting agreement. The Firm has elected to net such balances when the specified conditions are met.

The Firm uses master netting agreements to mitigate counterparty credit risk in certain transactions, including derivatives transactions, repurchase and reverse repurchase agreements, and securities borrowed and loaned agreements. A master netting agreement is a single contract with a counterparty that permits multiple transactions governed by that contract to be terminated and settled through a single payment in a single currency in the event of a default (e.g., bankruptcy, failure to make a required payment or securities transfer or deliver collateral or margin when due after expiration of any grace period). Upon the exercise of termination rights by the non-defaulting party, (i) all transactions are terminated, (ii) all transactions are valued and the positive value or "in the money" transactions are netted against the negative value or "out of the money" transactions and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount. Upon exercise of repurchase agreement and securities loaned default rights (i) all securities loan transactions are terminated and accelerated, (ii) all values of securities or cash held or to be delivered are calculated, and all such sums are netted against each other and (iii) the only remaining payment obligation is of one of the parties to pay the netted termination amount.



Typical master netting agreements for these types of transactions also often contain a collateral/margin agreement that provides for a security interest in or title transfer of securities or cash collateral/margin to the party that has the right to demand margin (the “demanding party”). The collateral/margin agreement typically requires a party to transfer collateral/margin to the demanding party with a value equal to the amount of the margin deficit on a net basis across all transactions governed by the master netting agreement, less any threshold. The collateral/margin agreement grants to the demanding party, upon default by the counterparty, the right to set-off any amounts payable by the counterparty against any posted collateral or the cash equivalent of any posted collateral/margin. It also grants to the demanding party the right to liquidate collateral/margin and to apply the proceeds to an amount payable by the counterparty. For further discussion of the Firm’s derivative instruments, see Note 6 on pages 220–233 of this Annual Report. For further discussion of the Firm’s repurchase and reverse repurchase agreements, and securities borrowing and lending agreements, see Note 13 on pages 255–257 of this Annual Report.

#### Statements of cash flows

For JPMorgan Chase’s Consolidated Statements of Cash Flows, cash is defined as those amounts included in cash and due from banks.

#### Significant accounting policies

The following table identifies JPMorgan Chase’s other significant accounting policies and the Note and page where a detailed description of each policy can be found.

Business changes and developments	Note 2	Page 192
Fair value measurement	Note 3	Page 195
Fair value option	Note 4	Page 215
Derivative instruments	Note 6	Page 220
Noninterest revenue	Note 7	Page 234
Interest income and interest expense	Note 8	Page 236
Pension and other postretirement employee benefit plans	Note 9	Page 237
Employee stock-based incentives	Note 10	Page 247
Securities	Note 12	Page 249
Securities financing activities	Note 13	Page 255
Loans	Note 14	Page 258
Allowance for credit losses	Note 15	Page 284
Variable interest entities	Note 16	Page 288
Goodwill and other intangible assets	Note 17	Page 299
Premises and equipment	Note 18	Page 305
Long-term debt	Note 21	Page 306
Income taxes	Note 26	Page 313
Off-balance sheet lending-related financial instruments, guarantees and other commitments	Note 29	Page 318
Litigation	Note 31	Page 326

Notes to consolidated financial statements

Note 2 – Business changes and developments

Student loan business

In September 2013, the Firm announced it ceased student loan originations.

Physical commodities businesses

On July 26, 2013 the Firm announced that it is pursuing strategic alternatives for its physical commodities businesses. Pursuant to that announcement, the Firm is exploring the sale of certain physical commodities operations, including physical oil, gas, power, warehousing facilities and transportation operations. During this process, the Firm will continue to run its physical commodities business as a going concern. The Firm remains fully committed to its traditional banking activities in the commodities markets, including financial derivatives and the trading of precious metals, which are not part of these strategic alternatives.

One Equity Partners

As announced on June 14, 2013, One Equity Partners (“OEP”) is expected to raise its next fund from an external group of limited partners and then become independent from JPMorgan Chase. Until it becomes independent from the Firm, OEP will continue to make direct investments for JPMorgan Chase, and thereafter is expected to continue managing the then-existing group of portfolio companies for JPMorgan Chase in order to maximize value for the Firm.

Other business events

Visa B Shares

In December 2013, JP Morgan Chase sold 20 million Visa Class B shares, resulting in a net pre-tax gain of approximately \$1.3 billion recorded in other income. In conjunction with the sale, the Firm entered into a derivative instrument with the purchaser under which the Firm will (a) make periodic fixed payments, calculated by reference to the market price of Visa Class A common shares and (b) make or receive payments based on subsequent changes in the conversion rate of Visa Class B shares into Visa Class A shares. The payments under the derivative continue as long as Class B shares remain “restricted”. The derivative is accounted for as a trading liability. The fair value of the derivative is estimated using a discounted cash flow methodology and is dependent upon the final resolution of certain Visa litigation matters; changes in fair value will be recognized in other income.

After the sale, the Firm continues to own approximately 40 million Visa Class B shares. These shares will be converted into Visa Class A shares upon final resolution of certain Visa litigation matters; the conversion rate of Visa Class B shares to Visa Class A shares is 0.4206 as of December 31, 2013 and will be adjusted by Visa depending on developments related to certain Visa litigation matters.

One Chase Manhattan Plaza

On December 17, 2013, the Firm sold One Chase Manhattan Plaza, an office building located in New York City, and recognized a pretax gain of \$493 million in Other Income.

Settlement with the President’s Task Force on Residential Mortgage-Backed Securities (“RMBS”)

On November 19, 2013, the Firm announced a resolution of actual and potential civil claims by a number of federal and state government agencies, including the U.S. Department of Justice and, several State Attorneys General, as well as litigation by the Federal Deposit Insurance Corporation, the National Credit Union Administration and the Federal Housing Finance Agency relating to residential mortgage-backed securities activities by JPMorgan Chase, Bear Stearns and Washington Mutual (the “RMBS settlement”). Under the settlement, the Firm paid a total of \$9 billion in cash, and committed to provide \$4 billion in borrower relief. The cash portion consists of a \$2 billion civil monetary penalty and \$7 billion in compensatory payments, including \$4 billion to resolve the Federal Housing Finance Agency litigation (see “Mortgage-backed securities settlements with the Federal Housing Finance Agency, Freddie Mac, and Fannie Mae” below). The \$4 billion of borrower relief will be in the form of principal reduction, forbearance and other direct benefits from various relief programs. The Firm has committed to complete the delivery of the relief to borrowers before the end of 2017.

The Firm’s 2013 results of operations reflected the estimated costs of the settlement (i.e., the cash payments as well as the borrower relief). The estimated impact of the cash settlement has been considered in the Firm’s legal reserve, whereas the impact of the borrower relief portion of the settlement has been considered in the allowance for loan losses.



#### RMBS Trust Settlement

On November 15, 2013, the Firm announced it had reached a \$4.5 billion agreement with 21 major institutional investors to make a binding offer to the trustees of 330 residential mortgage-backed securities trusts issued by J.P. Morgan, Chase, and Bear Stearns (“RMBS Trust Settlement”) to resolve all representation and warranty claims, as well as all servicing claims, on all trusts issued by J.P. Morgan, Chase, and Bear Stearns between 2005 and 2008. The RMBS Trust Settlement is under consideration by the trustees and may be subject to court approval. This agreement does not resolve claims on trusts issued by Washington Mutual. For further information about the RMBS Trust Settlement, see Note 31 on pages 326–332 of this Annual Report.

**Mortgage-backed securities settlements with the Federal Housing Finance Agency, Freddie Mac and Fannie Mae**  
On October 25, 2013, the Firm announced that it had reached a \$4.0 billion agreement to resolve all of its mortgage-backed securities (“MBS”) litigation with the Federal Housing Finance Agency (“FHFA”) as conservator for Freddie Mac and Fannie Mae. The Firm also simultaneously agreed to resolve, for \$1.1 billion, other than certain limited types of exposures, outstanding and future mortgage repurchase demands associated with loans sold to the GSEs from 2000 to 2008 (“FHFA Settlement Agreement”).

**Mortgage foreclosure settlement agreement with the Office of the Comptroller of the Currency and the Board of Governors of the Federal Reserve System**

On January 7, 2013, the Firm announced that it and a number of other financial institutions entered into a settlement agreement with the Office of the Comptroller of the Currency (“OCC”) and the Board of Governors of the Federal Reserve System (“Federal Reserve”) providing for the termination of the independent foreclosure review programs (the “Independent Foreclosure Review”). Under this settlement, the Firm made a cash payment of approximately \$760 million into a settlement fund for distribution to qualified borrowers. The Firm has also committed \$1.2 billion to foreclosure prevention actions, which will be fulfilled through credits given to the Firm for modifications, short sales and other specified types of borrower relief. Foreclosure prevention actions that earn credit under the Independent Foreclosure Review settlement are in addition to actions taken by the Firm to

earn credit under the global settlement entered into by the Firm with state and federal agencies (see "Global settlement on servicing and origination of mortgages" below). The estimated impact of the foreclosure prevention actions required under the Independent Foreclosure Review settlement have been considered in the Firm’s allowance for loan losses. The Firm recognized a pretax charge of approximately \$700 million in the fourth quarter of 2012 related to the Independent Foreclosure Review settlement.

**Washington Mutual, Inc. bankruptcy plan confirmation**

On March 19, 2012, a bankruptcy court approved the joint plan containing the global settlement agreement resolving numerous disputes among Washington Mutual, Inc. (“WMI”), JPMorgan Chase and the Federal Deposit Insurance Corporation (“FDIC”) as well as significant creditor groups (the “WaMu Global Settlement”). The Firm recognized additional assets, including certain pension-related assets, as well as tax refunds, resulting in a pretax gain of \$1.1 billion in 2012.

**Global settlement on servicing and origination of mortgages**

On February 9, 2012, the Firm announced that it had agreed to a settlement in principle (the “global settlement”) with a number of federal and state government agencies, including the U.S. Department of Justice (“DOJ”), the U.S. Department of Housing and Urban Development, the Consumer Financial Protection Bureau and the State Attorneys General, relating to the servicing and origination of mortgages.

The global settlement releases the Firm from certain further claims by the participating government entities related to servicing activities, including foreclosures and loss mitigation activities; certain origination activities; and certain bankruptcy-related activities. Not included in the global settlement are any claims arising out of securitization activities, including representations made to investors with respect to mortgage-backed securities; criminal claims; and repurchase demands from U.S. government-sponsored entities (“GSEs”), among other items.

Also on February 9, 2012, the Firm entered into agreements with the Federal Reserve and the OCC for the payment of civil money penalties related to conduct that was the subject of consent orders entered into with the banking regulators in April 2011.

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Notes to consolidated financial statements

Subsequent events

Settlement agreement with The U.S. Departments Of Justice, Housing and Urban Development, and Veterans Affairs, and The Federal Housing Administration

On February 4, 2014, the Firm announced that it had reached a settlement with the U.S. Attorney's Office for the Southern District of New York, Federal Housing Administration ("FHA"), the U.S. Department of Housing and Urban Development ("HUD"), and the U.S. Department of Veterans Affairs ("VA") resolving claims relating to the Firm's participation in federal mortgage insurance programs overseen by FHA, HUD and VA ("FHA Settlement"). Under the FHA Settlement, which relates to FHA and VA insurance claims that have been paid to the Firm from 2002 through the date of the settlement, the Firm will pay \$614 million in cash, and agree to enhance its quality control program for loans that are submitted in the future to FHA's Direct Endorsement Lender Program. The Firm is fully reserved for the settlement, and any financial impact related to exposure on future claims is not expected to be significant.

Madoff Litigation and Investigations

On January 7, 2014, the Firm announced that certain of its bank subsidiaries had entered into settlements with various governmental agencies in resolution of investigations relating to Bernard L. Madoff Investment Securities LLC ("BLMIS"). The Firm and certain of its subsidiaries also entered into settlements with several private parties in resolution of civil litigation relating to BLMIS. At the same time, certain bank subsidiaries of the Firm consented to the assessment of a civil money penalty by the OCC in connection with various Bank Secrecy Act/Anti-Money Laundering deficiencies, including with relation to the BLMIS fraud, and JPMorgan Chase Bank, N.A. additionally agreed to the assessment of a civil money penalty by the Financial Crimes Enforcement Network for failure to detect and adequately report suspicious transactions relating to BLMIS. For further information on these settlements, see Note 31 on pages 326–332 of this Annual Report.

### Note 3 – Fair value measurement

JPMorgan Chase carries a portion of its assets and liabilities at fair value. These assets and liabilities are predominantly carried at fair value on a recurring basis (i.e., assets and liabilities that are measured and reported at fair value on the Firm's Consolidated Balance Sheets). Certain assets (e.g., certain mortgage, home equity and other loans, where the carrying value is based on the fair value of the underlying collateral), liabilities and unfunded lending-related commitments are measured at fair value on a nonrecurring basis; that is, they are not measured at fair value on an ongoing basis but are subject to fair value adjustments only in certain circumstances (for example, when there is evidence of impairment).

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is based on quoted market prices, where available. If listed prices or quotes are not available, fair value is based on models that consider relevant transaction characteristics (such as maturity) and use as inputs observable or unobservable market parameters, including but not limited to yield curves, interest rates, volatilities, equity or debt prices, foreign exchange rates and credit curves. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value, as described below. Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. Furthermore, while the Firm believes its valuation methods are appropriate and consistent with those of other market participants, the methods and assumptions used reflect management judgment and may vary across the Firm's businesses and portfolios.

The Firm uses various methodologies and assumptions in the determination of fair value. The use of different methodologies or assumptions to those used by the Firm could result in a different estimate of fair value at the reporting date.

#### Valuation process

Risk-taking functions are responsible for providing fair value estimates for assets and liabilities carried on the Consolidated Balance Sheets at fair value. The Firm's valuation control function, which is part of the Firm's Finance function and independent of the risk-taking functions, is responsible for verifying these estimates and determining any fair value adjustments that may be required to ensure that the Firm's positions are recorded at fair value. In addition, the Firm has a firmwide Valuation Governance Forum ("VGF") comprising senior finance and risk executives to oversee the management of risks arising from valuation activities conducted across the Firm. The VGF is chaired by the firm-wide head of the valuation control function, and also includes sub-forums for the Corporate & Investment Bank ("CIB"), Mortgage Banking, (part of Consumer & Community Banking) and certain corporate functions including Treasury and Chief Investment Office ("CIO").

The valuation control function verifies fair value estimates leveraging independently derived prices, valuation inputs and other market data, where available. Where independent prices or inputs are not available, additional review is performed by the valuation control function to ensure the reasonableness of estimates that cannot be verified to external independent data, and may include: evaluating the limited market activity including client unwinds; benchmarking of valuation inputs to those for similar instruments; decomposing the valuation of structured instruments into individual components; comparing expected to actual cash flows; reviewing profit and loss trends; and reviewing trends in collateral valuation. In addition there are additional levels of management review for more significant or complex positions.

## Notes to consolidated financial statements

The valuation control function determines any valuation adjustments that may be required to the estimates provided by the risk-taking functions. No adjustments are applied to the quoted market price for instruments classified within level 1 of the fair value hierarchy (see below for further information on the fair value hierarchy). For other positions, judgment is required to assess the need for valuation adjustments to appropriately reflect liquidity considerations, unobservable parameters, and, for certain portfolios that meet specified criteria, the size of the net open risk position. The determination of such adjustments follows a consistent framework across the Firm:

Liquidity valuation adjustments are considered when the Firm may not be able to observe a recent market price for a financial instrument that trades in an inactive (or less active) market. The Firm estimates the amount of uncertainty in the initial fair value estimate based on the degree of liquidity in the market. Factors that may be considered in determining the liquidity adjustment include: (1) the amount of time since the last relevant pricing point; (2) whether there was an actual trade or relevant external quotes or alternatively pricing points for similar instruments in active markets; and (3) the volatility of the principal risk component of the financial instrument.

The Firm manages certain portfolios of financial instruments on the basis of net open risk exposure and, as permitted by US GAAP, has elected to estimate the fair value of such portfolios on the basis of a transfer of the entire net open risk position in an orderly transaction. Where this is the case, valuation adjustments may be necessary to reflect the cost of exiting a larger-than-normal market-size net open risk position. Where applied, such adjustments are based on factors that a relevant market participant would consider in the transfer of the net open risk position including the size of the adverse market move that is likely to occur during the period required to reduce the net open risk position to a normal market-size.

Unobservable parameter valuation adjustments may be made when positions are valued using internally developed models that incorporate unobservable parameters – that is, parameters that must be estimated and are, therefore, subject to management judgment. Unobservable parameter valuation adjustments are applied to reflect the uncertainty inherent in the valuation estimate provided by the model.

Where appropriate, the Firm also applies adjustments to its estimates of fair value in order to appropriately reflect counterparty credit quality and the Firm's own creditworthiness, applying a consistent framework across the Firm. For more information on such adjustments see Credit adjustments on page 212 of this Note

## Impact of funding on valuation estimates

The Firm incorporates the impact of funding in its valuation estimates where there is evidence that a market participant in the principal market would incorporate it in a transfer of the instrument. As a result, the fair value of collateralized derivatives is estimated by discounting expected future cash flows at the relevant overnight indexed swap ("OIS") rate given the underlying collateral agreement with the counterparty. Prior to the fourth quarter of 2013, the Firm did not incorporate the impact of funding in its valuation of uncollateralized (including partially collateralized) derivatives and structured notes. However, during the fourth quarter of 2013, the Firm implemented a funding valuation adjustment ("FVA") framework to incorporate its best estimate of the funding cost or benefit that a relevant market participant would consider in the transfer of an OTC derivative or structured note. As a result, the Firm recorded a one time \$1.5 billion loss in principal transactions revenue in the fourth quarter, which was recorded in the CIB.

The FVA framework applies to both assets and liabilities, but the adjustment in the fourth quarter largely relates to uncollateralized derivative receivables given that the impact of the Firm's own credit risk, which is a significant component of funding costs, is already incorporated in the valuation of liabilities through the application of DVA.

## Valuation model review and approval

If prices or quotes are not available for an instrument or a similar instrument, fair value is generally determined using valuation models that consider relevant transaction data such as maturity and use as inputs market-based or independently sourced parameters. Where this is the case the price verification process described above is applied to the inputs to those models.

The Firm's Model Risk function within the Firm's Model Risk and Development Group, which in turn reports to the Chief Risk Officer, reviews and approves valuation models used by the Firm. Model reviews consider a number of factors about the model's suitability for valuation of a particular product including whether it accurately reflects the

characteristics and significant risks of a particular instrument; the selection and reliability of model inputs; consistency with models for similar products; the appropriateness of any model-related adjustments; and sensitivity to input parameters and assumptions that cannot be observed from the market. When reviewing a model, the Model Risk function analyzes and challenges the model methodology and the reasonableness of model assumptions and may perform or require additional testing, including back-testing of model outcomes.

New significant valuation models, as well as material changes to existing models, are reviewed and approved prior to implementation except where specified conditions are met. The Model Risk function performs an annual firmwide model risk assessment where developments in the product or market are considered in determining whether valuation models which have already been reviewed need to be reviewed and approved again.

#### Valuation hierarchy

A three-level valuation hierarchy has been established under U.S. GAAP for disclosure of fair value measurements. The valuation hierarchy is based on the transparency of inputs to the valuation of an asset or liability as of the measurement date. The three levels are defined as follows.

Level 1 – inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2 – inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the financial instrument.

Level 3 – one or more inputs to the valuation methodology are unobservable and significant to the fair value measurement.

A financial instrument's categorization within the valuation hierarchy is based on the lowest level of input that is significant to the fair value measurement.

## Notes to consolidated financial statements

The following table describes the valuation methodologies used by the Firm to measure its more significant products/instruments at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Product/instrument	Valuation methodology	Classifications in the valuation hierarchy
Securities financing agreements	<p>Valuations are based on discounted cash flows, which consider:</p> <ul style="list-style-type: none"> <li>• Derivative features. For further information refer to the discussion of derivatives below.</li> <li>• Market rates for the respective maturity</li> <li>• Collateral</li> </ul>	Level 2
Loans and lending-related commitments - wholesale	<p>Where observable market data is available, valuations are based on:</p> <ul style="list-style-type: none"> <li>• Observed market prices (circumstances are limited)</li> <li>• Relevant broker quotes</li> <li>• Observed market prices for similar instruments</li> </ul> <p>Where observable market data is unavailable or limited, valuations are based on discounted cash flows, which consider the following:</p> <ul style="list-style-type: none"> <li>• Yield</li> <li>• Lifetime credit losses</li> <li>• Loss severity</li> <li>• Prepayment speed</li> <li>• Servicing costs</li> </ul>	Level 2 or 3
Loans held for investment and associated lending related commitments	<p>Valuations are based on discounted cash flows, which consider:</p> <ul style="list-style-type: none"> <li>• Credit spreads, derived from the cost of CDS; or benchmark credit curves developed by the Firm, by industry and credit rating, and which take into account the difference in loss severity rates between bonds and loans</li> <li>• Prepayment speed</li> </ul> <p>Lending related commitments are valued similar to loans and reflect the portion of an unused commitment expected, based on the Firm's average portfolio historical experience, to become funded prior to an obligor default</p> <p>For information regarding the valuation of loans measured at collateral value, see Note 14 on pages 258-283 of this Annual Report.</p>	Predominantly level 3
Loans - consumer Held for investment consumer loans, excluding credit card	<p>Valuations are based on discounted cash flows, which consider:</p> <ul style="list-style-type: none"> <li>• Discount rates (derived from primary origination rates and market activity)</li> <li>• Expected lifetime credit losses (considering expected and current default rates for existing portfolios, collateral prices, and economic environment expectations (i.e., unemployment rates))</li> <li>• Estimated prepayments</li> </ul>	Predominantly level 3

- Servicing costs
- Market liquidity

For information regarding the valuation of loans measured at collateral value, see Note 14 on pages 258-283 of this Annual Report.

Held for investment credit card receivables

Valuations are based on discounted cash flows, which consider:

- Projected interest income and late fee revenue, funding, servicing and credit costs, and loan repayment rates
- Estimated life of receivables (based on projected loan payment rates)
- Discount rate - based on expected return on receivables
- Credit costs - allowance for loan losses is considered a reasonable proxy for the credit cost based on the short-term nature of credit card receivables

Level 3

Trading loans - Conforming residential mortgage loans expected to be sold

Fair value is based upon observable prices for mortgage-backed securities with similar collateral and incorporates adjustments to these prices to account for differences between the securities and the value of the underlying loans, which include credit characteristics, portfolio composition, and liquidity.

Predominantly level 2

Product/instrument	Valuation methodology, inputs and assumptions	Classifications in the valuation hierarchy
Securities	<p>Quoted market prices are used where available.</p> <p>In the absence of quoted market prices, securities are valued based on:</p> <ul style="list-style-type: none"> <li>• Observable market prices for similar securities</li> <li>• Relevant broker quotes</li> <li>• Discounted cash flows</li> </ul> <p>In addition, the following inputs to discounted cash flows are used for the following products:</p> <p>Mortgage- and asset-backed securities specific inputs:</p> <ul style="list-style-type: none"> <li>• Collateral characteristics</li> <li>• Deal-specific payment and loss allocations</li> <li>• Current market assumptions related to yield, prepayment speed, conditional default rates and loss severity</li> </ul> <p>Collateralized loan obligations (“CLOs”), specific inputs:</p> <ul style="list-style-type: none"> <li>• Collateral characteristics</li> <li>• Deal-specific payment and loss allocations</li> <li>• Expected prepayment speed, conditional default rates, loss severity</li> <li>• Credit spreads</li> <li>• Credit rating data</li> </ul>	<p>Level 1</p> <p>Level 2 or 3</p>
Physical commodities	<p>Valued using observable market prices or data</p>	<p>Predominantly Level 1 and 2</p>
Derivatives	<p>Exchange-traded derivatives that are actively traded and valued using the exchange price, and over-the-counter contracts where quoted prices are available in an active market.</p> <p>Derivatives that are valued using models such as the Black-Scholes option pricing model, simulation models, or a combination of models, that use observable or unobservable valuation inputs (e.g. plain vanilla options and interest rate and credit default swaps). Inputs include:</p> <ul style="list-style-type: none"> <li>• Contractual terms including the period to maturity</li> <li>• Readily observable parameters including interest rates and volatility</li> <li>• Credit quality of the counterparty and of the Firm</li> <li>• Market funding levels</li> <li>• Correlation levels</li> </ul> <p>In addition, the following specific inputs are used for the following derivatives that are valued based on models with significant unobservable inputs:</p> <p>Structured credit derivatives specific inputs include:</p> <ul style="list-style-type: none"> <li>• CDS spreads and recovery rates</li> <li>• Credit correlation between the underlying debt instruments (levels are modeled on a transaction basis and calibrated to liquid benchmark tranche indices)</li> <li>• Actual transactions, where available, are used to regularly recalibrate unobservable parameters</li> </ul>	<p>Level 1</p> <p>Level 2 or 3</p>

Certain long-dated equity option specific inputs include:

- Long-dated equity volatilities

Certain interest rate and FX exotic options specific inputs include:

- Interest rate correlation
- Interest rate spread volatility
- Foreign exchange correlation
- Correlation between interest rates and foreign exchange rates
- Parameters describing the evolution of underlying interest rates

Certain commodity derivatives specific inputs include:

- Commodity volatility
- Forward commodity price

Adjustments to reflect counterparty credit quality (credit valuation adjustments or “CVA”), the Firms own creditworthiness (debit valuation adjustments or “DVA”), and FVA to incorporate the impact of funding see page 212 of this Note.

## Notes to consolidated financial statements

Product/instrument	Valuation methodology, inputs and assumptions	Classification in the valuation hierarchy
Mortgage servicing rights (“MSRs”)	See Mortgage servicing rights in Note 17 on pages 299-304 of this Annual Report.	Level 3
Private equity direct investments	Private equity direct investments	Level 3
	Fair value is estimated using all available information and considering the range of potential inputs, including: <ul style="list-style-type: none"> <li>• Transaction prices</li> <li>• Trading multiples of comparable public companies</li> <li>• Operating performance of the underlying portfolio company</li> <li>• Additional available inputs relevant to the investment</li> <li>• Adjustments as required, since comparable public companies are not identical to the company being valued, and for company-specific issues and lack of liquidity</li> </ul>	
	Public investments held in the Private Equity portfolio	Level 1 or 2
	• Valued using observable market prices less adjustments for relevant restrictions, where applicable	
Fund investments (i.e., mutual/collective investment funds, private equity funds, hedge funds, and real estate funds)	Net asset value (“NAV”) <ul style="list-style-type: none"> <li>• NAV is validated by sufficient level of observable activity (i.e., purchases and sales)</li> <li>• Adjustments to the NAV as required, for restrictions on redemption (e.g., lock up periods or withdrawal limitations) or where observable activity is limited</li> </ul>	Level 1 Level 2 or 3
	Valued using observable market information, where available	Level 2 or 3
Beneficial interests issued by consolidated VIE	In the absence of observable market information, valuations are based on the fair value of the underlying assets held by the VIE	
Long-term debt, not carried at fair value	Valuations are based on discounted cash flows, which consider: <ul style="list-style-type: none"> <li>• Market rates for respective maturity</li> <li>• The Firm’s own creditworthiness (DVA), see page 212 of this Note.</li> </ul>	Predominantly level 2
Structured notes (included in deposits, other borrowed funds and long-term debt)	<ul style="list-style-type: none"> <li>• Valuations are based on discounted cash flow analyses that consider the embedded derivative and the terms and payment structure of the note.</li> <li>• The embedded derivative features are considered using models such as the Black-Scholes option pricing model, simulation models, or a combination of models that use observable or unobservable valuation inputs, depending on the embedded derivative. The specific inputs used vary according to the nature of the embedded derivative features, as described in the discussion above regarding derivative valuation. Adjustments are then made to this base valuation to reflect the Firm’s own credit risk (DVA) and to incorporate the impact of funding (FVA). See page 212 of</li> </ul>	Level 2 or 3

this Note.

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The following table presents the asset and liabilities measured at fair value as of December 31, 2013 and 2012 by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

December 31, 2013 (in millions)	Fair value hierarchy			Netting adjustments	Total fair value
	Level 1	Level 2	Level 3		
Federal funds sold and securities purchased under resale agreements	\$—	\$25,135	\$—	\$—	\$25,135
Securities borrowed	—	3,739	—	—	3,739
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies <sup>(a)</sup>	4	25,582	1,005	—	26,591
Residential – nonagency	—	1,749	726	—	2,475
Commercial – nonagency	—	871	432	—	1,303
Total mortgage-backed securities	4	28,202	2,163	—	30,369
U.S. Treasury and government agencies <sup>(a)</sup>	14,933	10,547	—	—	25,480
Obligations of U.S. states and municipalities	—	6,538	1,382	—	7,920
Certificates of deposit, bankers' acceptances and commercial paper	—	3,071	—	—	3,071
Non-U.S. government debt securities	25,762	22,379	143	—	48,284
Corporate debt securities	—	24,802	5,920	—	30,722
Loans <sup>(b)</sup>	—	17,331	13,455	—	30,786
Asset-backed securities	—	3,647	1,272	—	4,919
Total debt instruments	40,699	116,517	24,335	—	181,551
Equity securities	107,667	954	885	—	109,506
Physical commodities <sup>(c)</sup>	4,968	5,217	4	—	10,189
Other	—	5,659	2,000	—	7,659
Total debt and equity instruments <sup>(d)</sup>	153,334	128,347	27,224	—	308,905
Derivative receivables:					
Interest rate	419	848,862	5,398	(828,897)	25,782
Credit	—	79,754	3,766	(82,004)	1,516
Foreign exchange	434	151,521	1,644	(136,809)	16,790
Equity	—	45,892	7,039	(40,704)	12,227
Commodity	320	34,696	722	(26,294)	9,444
Total derivative receivables <sup>(e)</sup>	1,173	1,160,725	18,569	(1,114,708)	65,759
Total trading assets	154,507	1,289,072	45,793	(1,114,708)	374,664
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies <sup>(a)</sup>	—	77,815	—	—	77,815
Residential – nonagency	—	61,760	709	—	62,469
Commercial – nonagency	—	15,900	525	—	16,425
Total mortgage-backed securities	—	155,475	1,234	—	156,709
U.S. Treasury and government agencies <sup>(a)</sup>	21,091	298	—	—	21,389
Obligations of U.S. states and municipalities	—	29,461	—	—	29,461
Certificates of deposit	—	1,041	—	—	1,041
Non-U.S. government debt securities	25,648	30,600	—	—	56,248
Corporate debt securities	—	21,512	—	—	21,512
Asset-backed securities:					

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Collateralized loan obligations	—	27,409	821	—	28,230
Other	—	11,978	267	—	12,245
Equity securities	3,142	—	—	—	3,142
Total available-for-sale securities	49,881	277,774	2,322	—	329,977
Loans	—	80	1,931	—	2,011
Mortgage servicing rights	—	—	9,614	—	9,614
Other assets:					
Private equity investments <sup>(f)</sup>	606	429	6,474	—	7,509
All other	4,213	289	3,176	—	7,678
Total other assets	4,819	718	9,650	—	15,187
Total assets measured at fair value on a recurring basis	\$209,207	\$1,596,518	<sup>(g)</sup> \$69,310	<sup>(g)</sup> \$(1,114,708)	\$760,327
Deposits	\$—	\$4,369	\$2,255	\$—	\$6,624
Federal funds purchased and securities loaned or sold under repurchase agreements	—	5,426	—	—	5,426
Other borrowed funds	—	11,232	2,074	—	13,306
Trading liabilities:					
Debt and equity instruments <sup>(d)</sup>	61,262	19,055	113	—	80,430
Derivative payables:					
Interest rate	321	822,014	3,019	(812,071)	)13,283
Credit	—	78,731	3,671	(80,121)	)2,281
Foreign exchange	443	156,838	2,844	(144,178)	)15,947
Equity	—	46,552	8,102	(39,935)	)14,719
Commodity	398	36,609	607	(26,530)	)11,084
Total derivative payables <sup>(e)</sup>	1,162	1,140,744	18,243	(1,102,835)	)57,314
Total trading liabilities	62,424	1,159,799	18,356	(1,102,835)	)137,744
Accounts payable and other liabilities	—	—	25	—	25
Beneficial interests issued by consolidated VIEs	—	756	1,240	—	1,996
Long-term debt	—	18,870	10,008	—	28,878
Total liabilities measured at fair value on a recurring basis	\$62,424	\$1,200,452	\$33,958	\$(1,102,835)	\$193,999

## Notes to consolidated financial statements

December 31, 2012 (in millions)	Fair value hierarchy			Netting adjustments	Total fair value
	Level 1	Level 2	Level 3		
Federal funds sold and securities purchased under resale agreements	\$—	\$24,258	\$—	\$—	\$24,258
Securities borrowed	—	10,177	—	—	10,177
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies <sup>(a)</sup>	—	36,240	498	—	36,738
Residential – nonagency	—	1,509	663	—	2,172
Commercial – nonagency	—	1,565	1,207	—	2,772
Total mortgage-backed securities	—	39,314	2,368	—	41,682
U.S. Treasury and government agencies <sup>(a)(h)</sup>	15,170	7,255	—	—	22,425
Obligations of U.S. states and municipalities	—	16,726	1,436	—	18,162
Certificates of deposit, bankers' acceptances and commercial paper	—	4,759	—	—	4,759
Non-U.S. government debt securities <sup>(h)</sup>	26,095	44,028	67	—	70,190
Corporate debt securities <sup>(h)</sup>	—	31,882	5,308	—	37,190
Loans <sup>(b)</sup>	—	30,754	10,787	—	41,541
Asset-backed securities	—	4,182	3,696	—	7,878
Total debt instruments	41,265	178,900	23,662	—	243,827
Equity securities	106,898	2,687	1,114	—	110,699
Physical commodities <sup>(c)</sup>	10,107	6,066	—	—	16,173
Other	—	3,483	863	—	4,346
Total debt and equity instruments <sup>(d)</sup>	158,270	191,136	25,639	—	375,045
Derivative receivables:					
Interest rate <sup>(h)</sup>	476	1,295,239	6,617	(1,263,127)	39,205
Credit	—	93,821	6,489	(98,575)	1,735
Foreign exchange <sup>(h)</sup>	450	143,752	3,051	(133,111)	14,142
Equity <sup>(h)</sup>	—	37,758	4,921	(33,413)	9,266
Commodity <sup>(h)</sup>	316	42,300	1,155	(33,136)	10,635
Total derivative receivables <sup>(e)</sup>	1,242	1,612,870	22,233	(1,561,362)	74,983
Total trading assets	159,512	1,804,006	47,872	(1,561,362)	450,028
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies <sup>(a)</sup>	—	98,388	—	—	98,388
Residential – nonagency	—	74,189	450	—	74,639
Commercial – nonagency	—	12,948	255	—	13,203
Total mortgage-backed securities	—	185,525	705	—	186,230
U.S. Treasury and government agencies <sup>(a)(h)</sup>	11,089	1,041	—	—	12,130
Obligations of U.S. states and municipalities	35	21,489	187	—	21,711
Certificates of deposit	—	2,783	—	—	2,783
Non-U.S. government debt securities <sup>(h)</sup>	29,556	36,488	—	—	66,044
Corporate debt securities	—	38,609	—	—	38,609
Asset-backed securities:					
Collateralized loan obligations	—	—	27,896	—	27,896
Other	—	12,843	128	—	12,971
Equity securities	2,733	38	—	—	2,771

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Total available-for-sale securities	43,413	298,816	28,916	—	371,145
Loans	—	273	2,282	—	2,555
Mortgage servicing rights	—	—	7,614	—	7,614
Other assets:					
Private equity investments <sup>(f)</sup>	578	—	7,181	—	7,759
All other	4,188	253	4,258	—	8,699
Total other assets	4,766	253	11,439	—	16,458
Total assets measured at fair value on a recurring basis	\$207,691	\$2,137,783	(\$98,123)	(\$1,561,362)	\$882,235
Deposits	\$—	\$3,750	\$1,983	\$—	\$5,733
Federal funds purchased and securities loaned or sold under repurchase agreements	—	4,388	—	—	4,388
Other borrowed funds	—	9,972	1,619	—	11,591
Trading liabilities:					
Debt and equity instruments <sup>(d)(h)</sup>	47,469	13,588	205	—	61,262
Derivative payables:					
Interest rate <sup>(h)</sup>	490	1,256,989	3,295	(1,235,868)	24,906
Credit	—	95,411	4,616	(97,523)	2,504
Foreign exchange <sup>(h)</sup>	428	155,323	4,801	(141,951)	18,601
Equity <sup>(h)</sup>	—	37,808	6,727	(32,716)	11,819
Commodity <sup>(h)</sup>	176	46,548	901	(34,799)	12,826
Total derivative payables <sup>(e)</sup>	1,094	1,592,079	20,340	(1,542,857)	70,656
Total trading liabilities	48,563	1,605,667	20,545	(1,542,857)	131,918
Accounts payable and other liabilities	—	—	36	—	36
Beneficial interests issued by consolidated VIEs	—	245	925	—	1,170
Long-term debt	—	22,312	8,476	—	30,788
Total liabilities measured at fair value on a recurring basis	\$48,563	\$1,646,334	\$33,584	\$(1,542,857)	\$185,624

(a) At December 31, 2013 and 2012, included total U.S. government-sponsored enterprise obligations of \$91.5 billion and \$119.4 billion, respectively, which were predominantly mortgage-related.

At December 31, 2013 and 2012, included within trading loans were \$14.8 billion and \$26.4 billion, respectively, of residential first-lien mortgages, and \$2.1 billion and \$2.2 billion, respectively, of commercial first-lien (b) mortgages. Residential mortgage loans include conforming mortgage loans originated with the intent to sell to U.S. government agencies of \$6.0 billion and \$17.4 billion, respectively, and reverse mortgages of \$3.6 billion and \$4.0 billion, respectively.

Physical commodities inventories are generally accounted for at the lower of cost or market. “Market” is a term defined in U.S. GAAP as not exceeding fair value less costs to sell (“transaction costs”). Transaction costs for the Firm’s physical commodities inventories are either not applicable or immaterial to the value of the inventory.

Therefore, market approximates fair value for the Firm’s physical commodities inventories. When fair value (c)hedging has been applied (or when market is below cost), the carrying value of physical commodities approximates fair value, because under fair value hedge accounting, the cost basis is adjusted for changes in fair value. For a further discussion of the Firm’s hedge accounting relationships, see Note 6 on pages 220–233 of this Annual Report. To provide consistent fair value disclosure information, all physical commodities inventories have been included in each period presented.

Balances reflect the reduction of securities owned (long positions) by the amount of securities sold but not yet (d)purchased (short positions) when the long and short positions have identical Committee on Uniform Security Identification Procedures numbers (“CUSIPs”).

As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral received and paid when a legally enforceable master netting agreement exists. For purposes of the tables above, the Firm does not reduce derivative receivables and derivative payables balances for this netting adjustment, either within or across the levels of the fair value hierarchy, as such netting is not relevant to a (e)presentation based on the transparency of inputs to the valuation of an asset or liability. Therefore, the balances reported in the fair value hierarchy table are gross of any counterparty netting adjustments. However, if the Firm were to net such balances within level 3, the reduction in the level 3 derivative receivables and payables balances would be \$7.6 billion and \$7.4 billion at December 31, 2013 and 2012, respectively; this is exclusive of the netting benefit associated with cash collateral, which would further reduce the level 3 balances.

Private equity instruments represent investments within the Corporate/Private Equity line of business. The cost (f)basis of the private equity investment portfolio totaled \$8.0 billion and \$8.4 billion at December 31, 2013 and 2012, respectively.

Includes investments in hedge funds, private equity funds, real estate and other funds that do not have readily determinable fair values. The Firm uses net asset value per share when measuring the fair value of these (g)investments. At December 31, 2013 and 2012, the fair values of these investments were \$3.2 billion and \$4.9 billion, respectively, of which \$899 million and \$1.1 billion, respectively were classified in level 2, and \$2.3 billion and \$3.8 billion, respectively, in level 3.

(h) The prior period amounts have been revised. This revision had no impact on the Firm’s Consolidated Balance Sheets or its results of operations.

Transfers between levels for instruments carried at fair value on a recurring basis

For the year ended December 31, 2013 and 2011, there were no significant transfers between levels 1 and 2.

During the year ended December 31, 2013, transfers from level 3 to level 2 included certain highly rated CLOs, including \$27.4 billion held in the Firm’s available-for-sale (“AFS”) securities portfolio and \$1.4 billion held in the trading portfolio, based on increased liquidity and price transparency; and \$1.3 billion of long-term debt, largely driven by an increase in observability of certain equity structured notes. Transfers from level 2 to level 3 included \$1.4 billion of corporate debt securities in the trading portfolio largely driven by a decrease in observability for certain credit instruments.

For the year ended December 31, 2012, \$113.9 billion of settled U.S. government agency mortgage-backed securities were transferred from level 1 to level 2. While the U.S. government agency mortgage-backed securities market remained highly liquid and transparent, the transfer reflected greater market price differentiation between settled securities based on certain underlying loan specific factors. There were no significant transfers from level 2 to level 1 for the year ended December 31, 2012.

For the years ended December 31, 2012 and 2011, there were no significant transfers from level 2 into level 3. For the year ended December 31, 2012, transfers from level 3 into level 2 included \$1.2 billion of derivative payables based on increased observability of certain structured equity derivatives; and \$1.8 billion of long-term debt due to increased

observability of certain equity structured notes. For the year ended December 31, 2011, transfers from level 3 into level 2 included \$2.6 billion of long-term debt due to a decrease in valuation uncertainty of certain structured notes.

All transfers are assumed to occur at the beginning of the quarterly reporting period in which they occur. During 2012 the liquidity for certain collateralized loan obligations increased and price transparency improved. Accordingly, the Firm incorporated a revised valuation model into its valuation process for CLOs to better calibrate to market data where available. The Firm began to verify fair value estimates from this model to independent sources during the fourth quarter of 2012. Although market liquidity and price transparency have improved, CLO market prices were not yet considered materially observable and therefore CLOs remained in level 3 as of December 31, 2012. The change in the valuation process did not have a significant impact on the fair value of the Firm's CLO positions. As previously described, a portion of the CLOs that were subject to the revised valuation model (namely certain highly rated CLOs) were transferred from level 3 to level 2 of the fair value hierarchy during the year ended December 31, 2013.

## Notes to consolidated financial statements

## Level 3 valuations

The Firm has established well-documented processes for determining fair value, including for instruments where fair value is estimated using significant unobservable inputs (level 3). For further information on the Firm's valuation process and a detailed discussion of the determination of fair value for individual financial instruments, see pages 196–200 of this Note.

Estimating fair value requires the application of judgment. The type and level of judgment required is largely dependent on the amount of observable market information available to the Firm. For instruments valued using internally developed models that use significant unobservable inputs and are therefore classified within level 3 of the fair value hierarchy, judgments used to estimate fair value are more significant than those required when estimating the fair value of instruments classified within levels 1 and 2.

In arriving at an estimate of fair value for an instrument within level 3, management must first determine the appropriate model to use. Second, due to the lack of observability of significant inputs, management must assess all relevant empirical data in deriving valuation inputs — including, but not limited to, transaction details, yield curves, interest rates, prepayment speed, default rates, volatilities, correlations, equity or debt prices, valuations of comparable instruments, foreign exchange rates and credit curves.

Finally, management judgment must be applied to assess the appropriate level of valuation adjustments to reflect counterparty credit quality, the Firm's creditworthiness, the impact of funding, constraints on liquidity and unobservable parameters, where relevant. The judgments made are typically affected by the type of product and its specific contractual terms, and the level of liquidity for the product or within the market as a whole.

The following table presents the Firm's primary level 3 financial instruments, the valuation techniques used to measure the fair value of those financial instruments, the significant unobservable inputs, the range of values for those inputs and, for certain instruments, the weighted averages of such inputs. While the determination to classify an instrument within level 3 is based on the significance of the unobservable inputs to the overall fair value measurement, level 3 financial instruments typically include observable components (that is, components that are actively quoted and can be validated to external sources) in

addition to the unobservable components. The level 1 and/or level 2 inputs are not included in the table. In addition, the Firm manages the risk of the observable components of level 3 financial instruments using securities and derivative positions that are classified within levels 1 or 2 of the fair value hierarchy.

The range of values presented in the table is representative of the highest and lowest level input used to value the significant groups of instruments within a product/instrument classification. The input range does not reflect the level of input uncertainty; rather, it is driven by the different underlying characteristics of the various instruments within the classification. For example, two option contracts may have similar levels of market risk exposure and valuation uncertainty, but may have significantly different implied volatility levels because the option contracts have different underlyings, tenors, or strike prices.

Where provided, the weighted averages of the input values presented in the table are calculated based on the fair value of the instruments that the input is being used to value. In the Firm's view, the input range and the weighted average value do not reflect the degree of input uncertainty or an assessment of the reasonableness of the Firm's estimates and assumptions. Rather, they reflect the characteristics of the various instruments held by the Firm and the relative distribution of instruments within the range of characteristics. The input range and weighted average values will therefore vary from period-to-period and parameter to parameter based on the characteristics of the instruments held by the Firm at each balance sheet date.

For the Firm's derivatives and structured notes positions classified within level 3, the equity and interest rate correlation inputs used in estimating fair value were concentrated at the upper end of the range presented, while the credit correlation inputs were distributed across the range presented and the foreign exchange correlation inputs were concentrated at the lower end of the range presented. In addition, the interest rate volatility inputs used in estimating fair value were concentrated at the upper end of the range presented, while equity volatilities were concentrated at the lower end of the range. The forward commodity prices used in estimating the fair value of commodity derivatives were concentrated within the lower end of the range presented.



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Level 3 inputs<sup>(a)</sup>

December 31, 2013 (in millions, except for ratios and basis points)

Product/Instrument	Fair value	Principal valuation technique	Unobservable inputs	Range of input values	Weighted average
Residential mortgage-backed securities and loans	\$11,089	Discounted cash flows	Yield	3 % - 18%	7%
			Prepayment speed	0 % - 15%	7%
			Conditional default rate	0 % - 100%	26%
			Loss severity	0 % - 100%	21%
Commercial mortgage-backed securities and loans <sup>(b)</sup>	1,204	Discounted cash flows	Yield	6 % - 29%	11%
			Conditional default rate	0 % - 100%	10%
			Loss severity	0 % - 40%	33%
Corporate debt securities, obligations of U.S. states and municipalities, and other <sup>(c)</sup>	15,209	Discounted cash flows	Credit spread	88 bps - 255 bps	154 bps
			Yield	1 % - 40%	10%
Net interest rate derivatives	5,843	Market comparables	Price	3 - 122	95
			Interest rate correlation	(75) % - 95%	
Net credit derivatives <sup>(b)(c)</sup>	2,379	Option pricing	Interest rate spread volatility	0 % - 60%	
			Credit correlation	34 % - 82%	
Net foreign exchange derivatives	95	Discounted cash flows	Credit correlation	34 % - 82%	
Net equity derivatives	(1,200)	Option pricing	Foreign exchange correlation	45 % - 75%	
Net commodity derivatives	(1,063)	Option pricing	Equity volatility	20 % - 55%	
Collateralized loan obligations	115	Discounted cash flows	Forward commodity price	\$20 - \$160 per megawatt hour	
			Credit spread	214 bps - 575 bps	234 bps
Mortgage servicing rights ("MSRs")	821	Discounted cash flows	Prepayment speed	20%	20%
			Conditional default rate	2%	2%
			Loss severity	40%	40%
			Price	0 - 114	88
Private equity direct investments	487	Market comparables	Refer to Note 17 on pages 299–304 of this Annual Report.		
			EBITDA multiple	4.0x - 14.7x	8.1x
Private equity fund investments <sup>(d)</sup>	9,614	Discounted cash flows	Liquidity adjustment	0 % - 37%	11%
			Net asset value	Net asset value <sup>(f)</sup>	
Long-term debt, other borrowed funds, and deposits <sup>(e)</sup>	4,872	Market comparables	Interest rate correlation	(75) % - 95%	
			Foreign exchange correlation	0 % - 75%	
			Equity correlation	(50) % - 85%	
Long-term debt, other borrowed funds, and deposits <sup>(e)</sup>	1,602	Net asset value	Interest rate correlation	(75) % - 95%	
			Foreign exchange correlation	0 % - 75%	
			Equity correlation	(50) % - 85%	

1,055	Discounted cash flows	Credit correlation	34	% - 82%
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(a) The categories presented in the table have been aggregated based upon the product type, which may differ from their classification on the Consolidated Balance Sheets.

(b) The unobservable inputs and associated input ranges for approximately \$735 million of credit derivative receivables and \$644 million of credit derivative payables with underlying mortgage risk have been included in the inputs and ranges provided for commercial mortgage-backed securities and loans.

(c) The unobservable inputs and associated input ranges for approximately \$1.0 billion of credit derivative receivables and \$890 million of credit derivative payables with underlying asset-backed securities risk have been included in the inputs and ranges provided for corporate debt securities, obligations of U.S. states and municipalities and other.

(d) As of December 31, 2013, \$757 million of private equity fund exposure was carried at a discount to net asset value per share.

(e) Long-term debt, other borrowed funds and deposits include structured notes issued by the Firm that are predominantly financial instruments containing embedded derivatives. The estimation of the fair value of structured notes is predominantly based on the derivative features embedded within the instruments. The significant unobservable inputs are broadly consistent with those presented for derivative receivables.

(f) The range has not been disclosed due to the wide range of possible values given the diverse nature of the underlying investments.

## Notes to consolidated financial statements

## Changes in and ranges of unobservable inputs

The following discussion provides a description of the impact on a fair value measurement of a change in each unobservable input in isolation, and the interrelationship between unobservable inputs, where relevant and significant. The impact of changes in inputs may not be independent as a change in one unobservable input may give rise to a change in another unobservable input, and where relationships exist between two unobservable inputs, those relationships are discussed below. Relationships may also exist between observable and unobservable inputs (for example, as observable interest rates rise, unobservable prepayment rates decline). Such relationships have not been included in the discussion below. In addition, for each of the individual relationships described below, the inverse relationship would also generally apply.

In addition, the following discussion provides a description of attributes of the underlying instruments and external market factors that affect the range of inputs used in the valuation of the Firm's positions.

**Yield** – The yield of an asset is the interest rate used to discount future cash flows in a discounted cash flow calculation. An increase in the yield, in isolation, would result in a decrease in a fair value measurement.

**Credit spread** – The credit spread is the amount of additional annualized return over the market interest rate that a market participant would demand for taking exposure to the credit risk of an instrument. The credit spread for an instrument forms part of the discount rate used in a discounted cash flow calculation. Generally, an increase in the credit spread would result in a decrease in a fair value measurement.

The yield and the credit spread of a particular mortgage-backed security primarily reflect the risk inherent in the instrument. The yield is also impacted by the absolute level of the coupon paid by the instrument (which may not correspond directly to the level of inherent risk). Therefore, the range of yield and credit spreads reflects the range of risk inherent in various instruments owned by the Firm. The risk inherent in mortgage-backed securities is driven by the subordination of the security being valued and the characteristics of the underlying mortgages within the collateralized pool, including borrower FICO scores, loan-to-value ratios for residential mortgages and the nature of the property and/or any tenants for commercial mortgages. For corporate debt securities, obligations of U.S. states and municipalities and other similar instruments, credit spreads reflect the credit quality of the obligor and the tenor of the obligation.

**Prepayment speed** – The prepayment speed is a measure of the voluntary unscheduled principal repayments of a prepayable obligation in a collateralized pool. Prepayment speeds generally decline as borrower delinquencies rise. An increase in prepayment speeds, in isolation, would result in a decrease in a fair value measurement of assets valued at a premium to par and an increase in a fair value measurement of assets valued at a discount to par.

Prepayment speeds may vary from collateral pool to collateral pool, and are driven by the type and location of the underlying borrower, the remaining tenor of the obligation as well as the level and type (e.g., fixed or floating) of interest rate being paid by the borrower. Typically collateral pools with higher borrower credit quality have a higher prepayment rate than those with lower borrower credit quality, all other factors being equal.

**Conditional default rate** – The conditional default rate is a measure of the reduction in the outstanding collateral balance underlying a collateralized obligation as a result of defaults. While there is typically no direct relationship between conditional default rates and prepayment speeds, collateralized obligations for which the underlying collateral have high prepayment speeds will tend to have lower conditional default rates. An increase in conditional default rates would generally be accompanied by an increase in loss severity and an increase in credit spreads. An increase in the conditional default rate, in isolation, would result in a decrease in a fair value measurement.

Conditional default rates reflect the quality of the collateral underlying a securitization and the structure of the securitization itself. Based on the types of securities owned in the Firm's market-making portfolios, conditional default rates are most typically at the lower end of the range presented.

**Loss severity** – The loss severity (the inverse concept is the recovery rate) is the expected amount of future realized losses resulting from the ultimate liquidation of a particular loan, expressed as the net amount of loss relative to the outstanding loan balance. An increase in loss severity is generally accompanied by an increase in conditional default rates. An increase in the loss severity, in isolation, would result in a decrease in a fair value measurement.

The loss severity applied in valuing a mortgage-backed security investment depends on a host of factors relating to the underlying mortgages. This includes the loan-to-value ratio, the nature of the lender's charge over the property and various other instrument-specific factors.

**Correlation** – Correlation is a measure of the relationship between the movements of two variables (e.g., how the change in one variable influences the change in the other). Correlation is a pricing input for a derivative product where the payoff is driven by one or more underlying risks. Correlation inputs are related to the type of derivative (e.g., interest rate, credit, equity and foreign exchange) due to the nature of the underlying risks. When parameters are positively correlated, an increase in one parameter will result in an increase in the other parameter. When parameters are negatively correlated, an increase in one parameter will result in a decrease in the other parameter. An increase in correlation can result in an increase or a decrease in a fair value measurement. Given a short correlation position, an increase in correlation, in isolation, would generally result in a decrease in a fair value measurement. Correlation inputs between risks within the same asset class are generally narrower than those between underlying risks across asset classes. In addition, the ranges of credit correlation inputs tend to be narrower than those affecting other asset classes.

The level of correlation used in the valuation of derivatives with multiple underlying risks depends on a number of factors including the nature of those risks. For example, the correlation between two credit risk exposures would be different than that between two interest rate risk exposures. Similarly, the tenor of the transaction may also impact the correlation input as the relationship between the underlying risks may be different over different time periods.

Furthermore, correlation levels are very much dependent on market conditions and could have a relatively wide range of levels within or across asset classes over time, particularly in volatile market conditions.

**Volatility** – Volatility is a measure of the variability in possible returns for an instrument, parameter or market index given how much the particular instrument, parameter or index changes in value over time. Volatility is a pricing input for options, including equity options, commodity options, and interest rate options. Generally, the higher the volatility of the underlying, the riskier the instrument. Given a long position in an option, an increase in volatility, in isolation, would generally result in an increase in a fair value measurement.

The level of volatility used in the valuation of a particular option-based derivative depends on a number of factors, including the nature of the risk underlying the option (e.g., the volatility of a particular equity security may be significantly different from that of a particular commodity index), the tenor of the derivative as well as the strike price of the option.

**EBITDA multiple** – EBITDA multiples refer to the input (often derived from the value of a comparable company) that is multiplied by the historic and/or expected earnings before interest, taxes, depreciation and amortization (“EBITDA”) of a company in order to estimate the company’s value. An increase in the EBITDA multiple, in isolation, net of adjustments, would result in an increase in a fair value measurement.

**Net asset value** – Net asset value is the total value of a fund’s assets less liabilities. An increase in net asset value would result in an increase in a fair value measurement.

#### Changes in level 3 recurring fair value measurements

The following tables include a rollforward of the Consolidated Balance Sheet amounts (including changes in fair value) for financial instruments classified by the Firm within level 3 of the fair value hierarchy for the years ended December 31, 2013, 2012 and 2011. When a determination is made to classify a financial instrument within level 3, the determination is based on the significance of the unobservable parameters to the overall fair value measurement. However, level 3 financial instruments typically include, in addition to the unobservable or level 3 components, observable components (that is, components that are actively quoted and can be validated to external sources); accordingly, the gains and losses in the table below include changes in fair value due in part to observable factors that are part of the valuation methodology. Also, the Firm risk-manages the observable components of level 3 financial instruments using securities and derivative positions that are classified within level 1 or 2 of the fair value hierarchy; as these level 1 and level 2 risk management instruments are not included below, the gains and losses in the following tables do not reflect the effect of the Firm’s risk management activities related to such level 3 instruments.



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Notes to consolidated financial statements

Fair value measurements using significant unobservable inputs

Year ended December 31, 2013 (in millions)	Fair value at January 1, 2013	Total realized/unrealized gains/(losses)	Purchases <sup>(a)</sup>	Sales	Settlements	Transfers into and/or out of level 3 <sup>(h)</sup>	Fair value at Dec. 31, 2013	Change in unrealized gains/(losses) related to financial instruments held at Dec. 31, 2013
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	\$498	\$ 169	\$ 819	\$(381 )	\$(100 )	\$—	\$1,005	\$200
Residential – nonagency	663	407	780	(1,028 )	(91 )	(5 )	726	205
Commercial – nonagency	1,207	114	841	(1,522 )	(208 )	—	432	(4 )
Total mortgage-backed securities	2,368	690	2,440	(2,931 )	(399 )	(5 )	2,163	401
Obligations of U.S. states and municipalities	1,436	71	472	(251 )	(346 )	—	1,382	18
Non-U.S. government debt securities	67	4	1,449	(1,479 )	(8 )	110	143	(1 )
Corporate debt securities	5,308	103	7,602	(5,975 )	(1,882 )	764	5,920	466
Loans	10,787	665	10,411	(7,431 )	(685 )	(292 )	13,455	315
Asset-backed securities	3,696	191	1,912	(2,379 )	(292 )	(1,856 )	1,272	105
Total debt instruments	23,662	1,724	24,286	(20,446)	(3,612 )	(1,279 )	24,335	1,304
Equity securities	1,114	(41 )	328	(266 )	(135 )	(115 )	885	46
Physical commodities	—	(4 )	—	(8 )	—	16	4	(4 )
Other	863	558	659	(95 )	(120 )	135	2,000	1,074
Total trading assets – debt and equity instruments	25,639	2,237	<sup>(c)</sup> 25,273	(20,815)	(3,867 )	(1,243 )	27,224	2,420
Net derivative receivables: <sup>(a)</sup>								
Interest rate	3,322	1,358	344	(220 )	(2,391 )	(34 )	2,379	107
Credit	1,873	(1,697 )	115	(12 )	(357 )	173	95	(1,449 )
Foreign exchange	(1,750 )	(101 )	3	(4 )	683	(31 )	(1,200 )	(110 )
Equity	(1,806 )	2,587	2,918	(3,783 )	(1,353 )	374	(1,063 )	872

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Commodity	254	816		105	(3 )	(1,107 )	50	115	410
Total net derivative receivables	1,893	2,963	(c)	3,485	(4,022 )	(4,525 )	532	326	(170 ) (c)
Available-for-sale securities:									
Asset-backed securities	28,024	4		579	(57 )	(57 )	(27,405 )	1,088	4
Other	892	26		508	(216 )	(6 )	30	1,234	25
Total available-for-sale securities	28,916	30	(d)	1,087	(273 )	(63 )	(27,375 )	2,322	29 (d)
Loans	2,282	81	(c)	1,065	(191 )	(1,306 )	—	1,931	(21 ) (c)
Mortgage servicing rights	7,614	1,612	(e)	2,215	(725 )	(1,102 )	—	9,614	1,612 (e)
Other assets:									
Private equity investments	7,181	645	(c)	673	(1,137 )	(687 )	(201 )	6,474	262 (c)
All other	4,258	98	(f)	272	(730 )	(722 )	—	3,176	53 (f)

Fair value measurements using significant unobservable inputs

Year ended December 31, 2013 (in millions)	Fair value at January 1, 2013	Total realized/unrealized (gains)/losses	Purchases	Sales	Issuances	Settlements	Transfers into and/or out of level 3 <sup>(h)</sup>	Fair value at Dec. 31, 2013	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2013
<b>Liabilities:<sup>(b)</sup></b>									
Deposits	\$1,983	\$ (82 ) (c)	\$ —	\$ —	\$ 1,248	\$(222 )	\$(672 )	\$2,255	\$(88 ) (c)
Other borrowed funds	1,619	(177 ) (c)	—	—	7,108	(6,845 )	369	2,074	291 (c)
Trading liabilities – debt and equity instruments	205	(83 ) (c)	(2,418 )	2,594	—	(54 )	(131 )	113	(100 ) (c)
Accounts payable and other liabilities	36	(2 ) (f)	—	—	—	(9 )	—	25	(2 ) (f)
Beneficial interests issued by consolidated VIEs	925	174 (c)	—	—	353	(212 )	—	1,240	167 (c)
Long-term debt	8,476	(435 ) (c)	—	—	6,830	(4,362 )	(501 )	10,008	(85 ) (c)

## Fair value measurements using significant unobservable inputs

Year ended December 31, 2012 (in millions)	Fair value at January 1, 2012	Total realized/unrealized gains/(losses)	Purchases	Sales	Settlements	Transfers into and/or out of level 3 <sup>(h)</sup>	Fair value at Dec. 31, 2012	Change in unrealized gains/(losses) related to financial instruments held at Dec. 31, 2012
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	\$86	\$ (44 )	\$ 575	\$(103)	\$(16 )	\$—	\$498	\$(21 )
Residential – nonagency	796	151	417	(533 )	(145 )	(23 )	663	74
Commercial – nonagency	1,758	(159 )	287	(475 )	(104 )	(100 )	1,207	(145 )
Total mortgage-backed securities	2,640	(52 )	1,279	(1,111)	(265 )	(123 )	2,368	(92 )
Obligations of U.S. states and municipalities	1,619	37	336	(552 )	(4 )	—	1,436	(15 )
Non-U.S. government debt securities	104	(6 )	661	(668 )	(24 )	—	67	(5 )
Corporate debt securities	6,373	187	8,391	(6,186)	(3,045 )	(412 )	5,308	689
Loans	12,209	836	5,342	(3,269)	(3,801 )	(530 )	10,787	411
Asset-backed securities	7,965	272	2,550	(6,468)	(614 )	(9 )	3,696	184
Total debt instruments	30,910	1,274	18,559	(18,254)	(7,753 )	(1,074 )	23,662	1,172
Equity securities	1,177	(209 )	460	(379 )	(12 )	77	1,114	(112 )
Other	880	186	68	(108 )	(163 )	—	863	180
Total trading assets – debt and equity instruments	32,967	1,251	(c) 19,087	(18,741)	(7,928 )	(997 )	25,639	1,240 (c)
Net derivative receivables: <sup>(a)</sup>								
Interest rate	3,561	6,930	406	(194 )	(7,071 )	(310 )	3,322	905
Credit	7,732	(4,487 )	124	(84 )	(1,416 )	4	1,873	(3,271 )
Foreign exchange	(1,263 )	(800 )	112	(184 )	436	(51 )	(1,750 )	(957 )
Equity	(3,105 )	168	1,676	(2,579)	899	1,135	(1,806 )	580
Commodity	(687 )	(673 )	74	64	1,278	198	254	(160 )
Total net derivative receivables	6,238	1,138	(c) 2,392	(2,977)	(5,874 )	976	1,893	(2,903 ) (c)

Available-for-sale securities:										
Asset-backed securities	24,958	135		9,280	(3,361)	(3,104)	) 116	28,024	118	
Other	528	55		667	(113)	(245)	) —	892	59	
Total available-for-sale securities	25,486	190	(d)	9,947	(3,474)	(3,349)	) 116	28,916	177	(d)
Loans	1,647	695	(e)	1,536	(22)	(1,718)	) 144	2,282	12	(e)
Mortgage servicing rights	7,223	(635)	(e)	2,833	(579)	(1,228)	) —	7,614	(635)	(e)
Other assets:										
Private equity investments	6,751	420	(e)	1,545	(512)	(977)	) (46)	7,181	333	(e)
All other	4,374	(195)	(f)	818	(238)	(501)	) —	4,258	(200)	(f)

## Fair value measurements using significant unobservable inputs

Year ended December 31, 2012 (in millions)	Fair value at January 1, 2012	Total realized/unrealized (gains)/losses	Purchases	Sales	Issuance	Settlements	Transfers into and/or out of level 3 <sup>(h)</sup>	Fair value at Dec. 31, 2012	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2012		
Liabilities: <sup>(b)</sup>											
Deposits	\$1,418	\$ 212	(c)	\$ —	\$ —	\$ 1,236	\$(380)	\$(503)	\$1,983	\$ 185	(c)
Other borrowed funds	1,507	148	(c)	—	—	1,646	(1,774)	92	1,619	72	(c)
Trading liabilities – debt and equity instruments	211	(16)	(c)	(2,875)	2,940	—	(50)	(5)	205	(12)	(c)
Accounts payable and other liabilities	51	1	(f)	—	—	—	(16)	—	36	1	(f)
Beneficial interests issued by consolidated VIEs	791	181	(c)	—	—	221	(268)	—	925	143	(c)
Long-term debt	10,310	328	(c)	—	—	3,662	(4,511)	(1,313)	8,476	(101)	(c)

## Notes to consolidated financial statements

## Fair value measurements using significant unobservable inputs

Year ended December 31, 2011 (in millions)	Fair value at January 1, 2011	Total realized/unrealized gains/(losses)	Purchases	Sales	Settlements	Transfers into and/or out of level 3 <sup>(h)</sup>	Fair value at Dec. 31, 2011	Change in unrealized gains/(losses) related to financial instruments held at Dec. 31, 2011
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	\$ 174	\$ 24	\$ 28	\$(39 )	\$(43 )	\$(58 )	\$86	\$(51 )
Residential – nonagency	687	109	708	(432 )	(221 )	(55 )	796	(9 )
Commercial – nonagency	2,069	37	796	(973 )	(171 )	—	1,758	33
Total mortgage-backed securities	2,930	170	1,532	(1,444)	(435 )	(113 )	2,640	(27 )
Obligations of U.S. states and municipalities	2,257	9	807	(1,465)	(1 )	12	1,619	(11 )
Non-U.S. government debt securities	202	35	552	(531 )	(80 )	(74 )	104	38
Corporate debt securities	4,946	32	8,080	(5,939)	(1,005 )	259	6,373	26
Loans	13,144	329	5,532	(3,873)	(2,691 )	(232 )	12,209	142
Asset-backed securities	8,460	90	4,185	(4,368)	(424 )	22	7,965	(217 )
Total debt instruments	31,939	665	20,688	(17,620)	(4,636 )	(126 )	30,910	(49 )
Equity securities	1,685	267	180	(541 )	(352 )	(62 )	1,177	278
Other	930	48	36	(39 )	(95 )	—	880	79
Total trading assets – debt and equity instruments	34,554	980	(c) 20,904	(18,200)	(5,083 )	(188 )	32,967	308 (c)
Net derivative receivables: <sup>(a)</sup>								
Interest rate	2,836	5,205	511	(219 )	(4,534 )	(238 )	3,561	1,497
Credit	5,386	2,240	22	(13 )	116	(19 )	7,732	2,744
Foreign exchange	(614 )	(1,913 )	191	(20 )	886	207	(1,263 )	(1,878 )
Equity	(2,446 )	(60 )	715	(1,449)	37	98	(3,105 )	(132 )
Commodity	(805 )	596	328	(350 )	(294 )	(162 )	(687 )	208
Total net derivative receivables	4,357	6,068	(c) 1,767	(2,051)	(3,789 )	(114 )	6,238	2,439 (c)
Available-for-sale securities:								
Asset-backed securities	13,775	(95 )	15,268	(1,461)	(2,529 )	—	24,958	(106 )
Other	512	—	57	(15 )	(26 )	—	528	8

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Total available-for-sale securities	14,287	(95 )	(d)	15,325	(1,476)	(2,555 )	—	25,486	(98 )	(d)
Loans	1,466	504	(c)	326	(9 )	(639 )	(1 )	1,647	484	(c)
Mortgage servicing rights	13,649	(7,119 )	(e)	2,603	—	(1,910 )	—	7,223	(7,119 )	(e)
Other assets:										
Private equity investments	7,862	943	(c)	1,452	(2,746)	(594 )	(166 )	6,751	(242 )	(c)
All other	4,179	(54 )	(f)	938	(139 )	(521 )	(29 )	4,374	(83 )	(f)

Fair value measurements using significant unobservable inputs

Year ended December 31, 2011 (in millions)	Fair value at January 1, 2011	Total realized/unrealized (gains)/losses	Purchases	Sales	Issuance	Settlements	Transfers into and/or out of level 3 <sup>(h)</sup>	Fair value at Dec. 31, 2011	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2011		
<b>Liabilities:<sup>(b)</sup></b>											
Deposits	\$773	\$ 15	(c)	\$ —	\$ —	\$ 433	\$(386 )	\$583	\$1,418	\$4	(c)
Other borrowed funds	1,384	(244 )	(c)	—	—	1,597	(834 )	(396 )	1,507	(85 )	(c)
Trading liabilities – debt and equity instruments	54	17	(c)	(533 )	778	—	(109 )	4	211	(7 )	(c)
Accounts payable and other liabilities	236	(61 )	(f)	—	—	—	(124 )	—	51	5	(f)
Beneficial interests issued by consolidated VIEs	873	17	(c)	—	—	580	(679 )	—	791	(15 )	(c)
Long-term debt	13,044	60	(c)	—	—	2,564	(3,218 )	(2,140 )	10,310	288	(c)

(a) All level 3 derivatives are presented on a net basis, irrespective of underlying counterparty.

(b) Level 3 liabilities as a percentage of total Firm liabilities accounted for at fair value (including liabilities measured at fair value on a nonrecurring basis) were 18%, 18% and 22% at December 31, 2013, 2012 and 2011, respectively.

Predominantly reported in principal transactions revenue, except for changes in fair value for Consumer &

(c) Community Banking (“CCB”) mortgage loans, lending-related commitments originated with the intent to sell, and mortgage loan purchase commitments, which are reported in mortgage fees and related income.

- Realized gains/(losses) on AFS securities, as well as other-than-temporary impairment losses that are recorded in earnings, are reported in securities gains. Unrealized gains/(losses) are reported in OCI. Realized gains/(losses) and foreign exchange remeasurement adjustments recorded in income on AFS securities were \$17 million, \$145 million, and \$(240) million for the years ended December 31, 2013, 2012 and 2011, respectively. Unrealized gains/(losses) recorded on AFS securities in OCI were \$13 million, \$45 million and \$145 million for the years ended December 31, 2013, 2012 and 2011, respectively.
- (d) Changes in fair value for CCB mortgage servicing rights are reported in mortgage fees and related income.
  - (e) Largely reported in other income.
  - (f) Loan originations are included in purchases.
  - (g) All transfers into and/or out of level 3 are assumed to occur at the beginning of the quarterly reporting period in which they occur.
  - (h)

#### Level 3 analysis

##### Consolidated Balance Sheets changes

Level 3 assets (including assets measured at fair value on a nonrecurring basis) were 3.1% of total Firm assets at December 31, 2013. The following describes significant changes to level 3 assets since December 31, 2012, for those items measured at fair value on a recurring basis. For further information on changes impacting items measured at fair value on a nonrecurring basis, see Assets and liabilities measured at fair value on a nonrecurring basis on page 213 of this Annual Report.

For the year ended December 31, 2013

Level 3 assets were \$69.3 billion at December 31, 2013, reflecting a decrease of \$28.8 billion from December 31, 2012, due to the following:

- \$27.0 billion decrease in asset-backed AFS securities, predominantly driven by transfers of highly rated CLOs from level 3 to into level 2 during the year ended 2013, based on increased liquidity and price transparency;
- \$3.7 billion decrease in gross derivative receivables, predominantly driven by a \$2.7 billion decrease from the impact of tightening reference entity credit spreads and risk reductions of credit derivatives, \$1.4 billion decrease in foreign exchange derivatives due to market movements, and \$1.2 billion decrease in interest rate derivatives due to the increase in interest rates, partially offset by \$2.1 billion increase in equity derivatives due to client-driven market-making activity;
- \$1.1 billion decrease in all other assets, predominantly driven by sales of tax-oriented and hedge fund investments, and redemptions from investment funds.

The decreases above are partially offset by:

- \$2.0 billion increase in MSR. For further discussion of the change, refer to Note 17 on pages 299–304 of this Annual Report;
- \$1.6 billion increase in trading assets – debt and equity instruments, largely driven by net purchases of trading loans, new client-driven financing transactions, and partially offset by transfers of highly rated CLOs from level 3 to into level 2 during the year ended 2013, based on increased liquidity and price transparency.

#### Gains and Losses

The following describes significant components of total realized/unrealized gains/(losses) for instruments measured at fair value on a recurring basis for the years ended 2013, 2012 and 2011. For further information on these instruments, see Changes in level 3 recurring fair value measurements rollforward tables on pages 207–210 of this Annual Report.

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\$3.0 billion of net gains on derivatives, largely driven by \$2.6 billion of gains on equity derivatives, primarily related to client-driven market-making activity and a rise in equity markets; and \$1.4 billion of gains, predominantly on interest rate lock and mortgage loan purchase commitments; partially offset by \$1.7 billion of losses on credit derivatives from the impact of tightening reference entity credit spreads;

\$2.2 billion of net gains on trading assets - debt and equity instruments, largely driven by market making and credit spread tightening in nonagency mortgage-backed securities and trading loans, and the impact of market movements on client-driven financing transactions;

\$1.6 billion of net gains on MSRs. For further discussion of the change, refer to Note 17 on pages 299–304 of this Annual Report.

2012

\$1.3 billion of net gains on trading assets - debt and equity instruments, largely driven by tightening of credit spreads and fluctuation in foreign exchange rates;

- \$1.1 billion of net gains on derivatives, driven by \$6.9 billion of net gains predominantly on interest rate lock commitments due to increased volumes and lower interest rates, partially offset by \$4.5 billion of net losses on credit derivatives largely as a result of tightening of reference entity credit spreads.

2011

- \$7.1 billion of losses on MSRs. For further discussion of the change, refer to Note 17 on pages 299–304 of this Annual Report;

- \$6.1 billion of net gains on derivatives, related to declining interest rates and widening of reference entity credit spreads, partially offset by losses due to fluctuation in foreign exchange rates.

## Notes to consolidated financial statements

## Credit and funding adjustments

When determining the fair value of an instrument, it may be necessary to record adjustments to the Firm's estimates of fair value in order to reflect the counterparty credit quality and the Firm's own creditworthiness:

Credit valuation adjustments ("CVA") are taken to reflect the credit quality of a counterparty in the valuation of derivatives. CVA adjustments are necessary when the market price (or parameter) is not indicative of the credit quality of the counterparty. As few classes of derivative contracts are listed on an exchange, derivative positions are predominantly valued using models that use as their basis observable market parameters. An adjustment therefore may be necessary to reflect the credit quality of each derivative counterparty to arrive at fair value.

The Firm estimates derivatives CVA using a scenario analysis to estimate the expected credit exposure across all of the Firm's positions with each counterparty, and then estimates losses as a result of a counterparty credit event. The key inputs to this methodology are (i) the expected positive exposure to each counterparty based on a simulation that assumes the current population of existing derivatives with each counterparty remains unchanged and considers contractual factors designed to mitigate the Firm's credit exposure, such as collateral and legal rights of offset; (ii) the probability of a default event occurring for each counterparty, as derived from observed or estimated credit default swap ("CDS") spreads; and (iii) estimated recovery rates implied by CDS, adjusted to consider the differences in recovery rates as a derivative creditor relative to those reflected in CDS spreads, which generally reflect senior unsecured creditor risk.

Debit valuation adjustments ("DVA") are taken to reflect the credit quality of the Firm in the valuation of liabilities measured at fair value. The DVA calculation methodology is generally consistent with the CVA methodology described above and incorporates JPMorgan Chase's credit spread as observed through the CDS market to estimate the probability of default and loss given default as a result of a systemic event affecting the Firm. Structured notes DVA is estimated using the current fair value of the structured note as the exposure amount, and is otherwise consistent with the derivative DVA methodology.

During the fourth quarter of 2013 the Firm implemented the FVA framework to incorporate the impact of funding into its valuation estimates for OTC derivatives and structured notes. The Firm's FVA framework leverages its existing CVA and DVA calculation methodologies, and the key inputs are: (i) the expected funding requirements arising from the Firm's positions with each counterparty and collateral arrangements; (ii) for assets, the estimated market funding cost in the principal market; and (iii) for liabilities, the hypothetical market funding cost for a

transfer to a market participant with similar credit standing as the Firm.

The following table provides the credit and funding adjustments, excluding the effect of any hedging activity, reflected within the Consolidated Balance Sheets as of the dates indicated.

December 31, (in millions)	2013	2012
Derivative receivables balance <sup>(a)</sup>	\$65,759	\$74,983
Derivative payables balance <sup>(a)</sup>	57,314	70,656
Derivatives CVA <sup>(b)(c)</sup>	(2,352	) (4,238
Derivatives DVA and FVA <sup>(b)(d)</sup>	(322	) 830
Structured notes balance (net of structured notes DVA and FVA) <sup>(b)(e)</sup>	48,808	48,112
Structured notes DVA and FVA <sup>(b)(f)</sup>	952	1,712

(a) Balances are presented net of applicable credit and funding adjustments.

Positive credit and funding adjustments represent amounts that increased receivable balances or decreased payable (b) balances; negative credit and funding adjustments represent amounts that decreased receivable balances or increased payable balances.

(c) Derivatives CVA, gross of hedges, includes results managed by the Credit Portfolio and other lines of business within the CIB.

(d) At December 31, 2013 and 2012 included derivatives DVA of \$715 million and \$830 million, respectively.

(e) Structured notes are predominantly financial instruments containing embedded derivatives. At December 31, 2013 and 2012, included \$1.1 billion and \$1.1 billion, respectively, of financial instruments with with no embedded

derivative for which the fair value option has been elected.

(f) At December 31, 2013 and 2012 included structured notes DVA of \$1.4 billion and \$1.7 billion, respectively.

The following table provides the impact of credit and funding adjustments on earnings in the respective periods, excluding the effect of any hedging activity.

Year ended December 31, (in millions)	2013	2012	2011
Derivative CVA <sup>(a)</sup>	\$1,886	\$2,698	\$(2,574)
Derivative DVA and FVA <sup>(b)</sup>	(1,152)	) (590	) 538
Structured notes DVA and FVA <sup>(c)(d)</sup>	(760	) (340	) 899

(a) Derivatives CVA, gross of hedges, includes results managed by the Credit Portfolio and other lines of business within the CIB.

(b) At December 31, 2013, 2012 and 2011 included derivatives DVA of \$(115) million, \$(590) million and \$538 million, respectively.

(c) Structured notes are measured at fair value based on the Firm's election under the fair value option. For further information on these elections, see Note 4 on pages 215–218 of this Annual Report.

(d) At December 31, 2013, 2012 and 2011 included structured notes DVA of \$(337) million, \$(340) million and \$899 million, respectively.

Assets and liabilities measured at fair value on a nonrecurring basis

At December 31, 2013 and 2012, assets measured at fair value on a nonrecurring basis were \$6.2 billion and \$5.1 billion, respectively, comprised predominantly of loans. At December 31, 2013, \$339 million and \$5.8 billion of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. At December 31, 2012, \$667 million and \$4.4 billion of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. Liabilities measured at fair value on a nonrecurring basis were not significant at December 31, 2013 and 2012. For the years ended December 31, 2013, 2012 and 2011, there were no significant transfers between levels 1, 2, and 3.

Of the \$6.2 billion of assets measured at fair value on a nonrecurring basis, \$3.6 billion related to trade finance loans that were reclassified to held-for-sale during the fourth quarter of 2013 and subject to a lower of cost or fair value adjustment. These loans were classified as level 3, as they are valued based on the indicative pricing received from external investors, which ranged from a spread of 30 bps to 78 bps, with a weighted average of 60 bps.

At December 31, 2013, the assets measured at fair value on a nonrecurring basis also included \$1.7 billion related to residential real estate loans at the net realizable value of the underlying collateral (i.e., collateral-dependent loans and other loans charged off in accordance with regulatory guidance). These amounts are classified as level 3, as they are valued using a broker's price opinion and discounted based upon the Firm's experience with actual liquidation values. These discounts to the broker price opinions ranged from 17% to 62%, with a weighted average of 29%.

The total change in the value of assets and liabilities for which a fair value adjustment has been included in the Consolidated Statements of Income for the years ended December 31, 2013, 2012 and 2011, related to financial instruments held at those dates were losses of \$789 million, \$1.6 billion and \$2.2 billion, respectively; these losses were predominantly associated with loans. The changes reported for the year ended December 31, 2012, included the impact of charge-offs recognized on residential real estate loans discharged under Chapter 7 bankruptcy, as described in Note 14 on page 267 of this Annual Report.

For further information about the measurement of impaired collateral-dependent loans, and other loans where the carrying value is based on the fair value of the underlying collateral (e.g., residential mortgage loans charged off in accordance with regulatory guidance), see Note 14 on pages 258–283 of this Annual Report.

Additional disclosures about the fair value of financial instruments that are not carried on the Consolidated Balance Sheets at fair value

U.S. GAAP requires disclosure of the estimated fair value of certain financial instruments, and the methods and significant assumptions used to estimate their fair value. Financial instruments within the scope of these disclosure requirements are included in the following table. However, certain financial instruments and all nonfinancial instruments are excluded from the scope of these disclosure requirements. Accordingly, the fair value disclosures provided in the following table include only a partial estimate of the fair value of JPMorgan Chase's assets and liabilities. For example, the Firm has developed long-term relationships with its customers through its deposit base and credit card accounts, commonly referred to as core deposit intangibles and credit card relationships. In the opinion of management, these items, in the aggregate, add significant value to JPMorgan Chase, but their fair value is not disclosed in this Note.

Financial instruments for which carrying value approximates fair value

Certain financial instruments that are not carried at fair value on the Consolidated Balance Sheets are carried at amounts that approximate fair value, due to their short-term nature and generally negligible credit risk. These instruments include cash and due from banks; deposits with banks; federal funds sold; securities purchased under resale agreements and securities borrowed with short-dated maturities; short-term receivables and accrued interest receivable; commercial paper; federal funds purchased; securities loaned and sold under repurchase agreements with short-dated maturities; other borrowed funds; accounts payable; and accrued liabilities. In addition, U.S. GAAP requires that the fair value of deposit liabilities with no stated maturity (i.e., demand, savings and certain money market deposits) be equal to their carrying value; recognition of the inherent funding value of these instruments is not

permitted.

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## Notes to consolidated financial statements

The following table presents the carrying values and estimated fair values at December 31, 2013 and 2012, of financial assets and liabilities, excluding financial instruments which are carried at fair value on a recurring basis, and information is provided on their classification within the fair value hierarchy. For additional information regarding the financial instruments within the scope of this disclosure, and the methods and significant assumptions used to estimate their fair value, see pages 196–200 of this Note.

(in billions)	December 31, 2013					December 31, 2012				
	Carrying value	Estimated fair value hierarchy			Total estimated fair value	Carrying value	Estimated fair value hierarchy			Total estimated fair value
		Level 1	Level 2	Level 3			Level 1	Level 2	Level 3	
<b>Financial assets</b>										
Cash and due from banks	\$39.8	\$39.8	\$—	\$—	\$39.8	\$53.7	\$53.7	\$—	\$—	\$53.7
Deposits with banks	316.1	309.7	6.4	—	316.1	121.8	114.1	7.7	—	121.8
Accrued interest and accounts receivable	65.2	—	64.9	0.3	65.2	60.9	—	60.3	0.6	60.9
Federal funds sold and securities purchased under resale agreements	223.0	—	223.0	—	223.0	272.0	—	272.0	—	272.0
Securities borrowed	107.7	—	107.7	—	107.7	108.8	—	108.8	—	108.8
Securities, held-to-maturity <sup>(a)</sup>	24.0	—	23.7	—	23.7	—	—	—	—	—
Loans, net of allowance for loan losses <sup>(b)</sup>	720.1	—	23.0	697.2	720.2	709.3	—	26.4	685.4	711.8
Other	58.1	—	54.5	4.3	58.8	49.7	—	42.7	7.4	50.1
<b>Financial liabilities</b>										
Deposits	\$1,281.1	\$—	\$1,280.3	\$1.2	\$1,281.5	\$1,187.9	\$—	\$1,187.2	\$1.2	\$1,188.4
Federal funds purchased and securities loaned or sold under repurchase agreements	175.7	—	175.7	—	175.7	235.7	—	235.7	—	235.7
Commercial paper	57.8	—	57.8	—	57.8	55.4	—	55.4	—	55.4
Other borrowed funds	14.7	—	14.7	—	14.7	15.0	—	15.0	—	15.0
Accounts payable and other liabilities	160.2	—	158.2	1.8	160.0	156.5	—	153.8	2.5	156.3
Beneficial interests issued by consolidated VIEs	47.6	—	44.3	3.2	47.5	62.0	—	57.7	4.4	62.1
Long-term debt and junior subordinated deferrable interest debentures <sup>(c)</sup>	239.0	—	240.8	6.0	246.8	218.2	—	220.0	5.4	225.4

(a) Carrying value includes unamortized discount or premium.

Fair value is typically estimated using a discounted cash flow model that incorporates the characteristics of the underlying loans (including principal, contractual interest rate and contractual fees) and other key inputs, including expected lifetime credit losses, interest rates, prepayment rates, and primary origination or secondary market spreads. For certain loans, the fair value is measured based on the value of the underlying collateral. The difference between the estimated fair value and carrying value of a financial asset or liability is the result of the different methodologies used to determine fair value as compared with carrying value. For example, credit losses are estimated for a financial asset's remaining life in a fair value calculation but are estimated for a loss emergence period in the allowance for loan loss calculation; future loan income (interest and fees) is incorporated in a fair value calculation but is generally not considered in the allowance for loan losses. For a further discussion of the Firm's methodologies for estimating the fair value of loans and lending-related commitments, see Valuation hierarchy on pages 196–200 of this Annual Report.

(c) Carrying value includes unamortized original issue discount and other valuation adjustments.

The majority of the Firm's lending-related commitments are not carried at fair value on a recurring basis on the Consolidated Balance Sheets, nor are they actively traded. The carrying value and estimated fair value of the Firm's wholesale lending-related commitments were as follows for the periods indicated.

(in billions)	December 31, 2013					December 31, 2012				
	Carrying value <sup>(a)</sup>	Estimated fair value hierarchy			Total estimated fair value	Carrying value <sup>(a)</sup>	Estimated fair value hierarchy			Total estimated fair value
		Level 1	Level 2	Level 3			Level 1	Level 2	Level 3	
Wholesale lending-related commitments	\$0.7	\$—	\$—	\$1.0	\$1.0	\$0.7	\$—	\$—	\$1.9	\$1.9

(a) Represents the allowance for wholesale lending-related commitments. Excludes the current carrying values of the guarantee liability and the offsetting asset, each of which are recognized at fair value at the inception of guarantees.

The Firm does not estimate the fair value of consumer lending-related commitments. In many cases, the Firm can reduce or cancel these commitments by providing the borrower notice or, in some cases, without notice as permitted by law. For a further discussion of the valuation of lending-related commitments, see page 198 of this Note.

Trading assets and liabilities

Trading assets include debt and equity instruments owned by JPMorgan Chase (“long” positions) that are held for client market-making and client-driven activities, as well as for certain risk management activities, certain loans managed on a fair value basis and for which the Firm has elected the fair value option, and physical commodities

inventories that are generally accounted for at the lower of cost or market (market approximates fair value). Trading liabilities include debt and equity instruments that the Firm has sold to other parties but does not own (“short” positions). The Firm is obligated to purchase instruments at a future date to cover the short positions. Included in trading assets and trading liabilities are the reported receivables (unrealized gains) and payables (unrealized losses) related to derivatives. Trading assets and liabilities are carried at fair value on the Consolidated Balance Sheets. Balances reflect the reduction of securities owned (long positions) by the amount of identical securities sold but not yet purchased (short positions).

Trading assets and liabilities – average balances

Average trading assets and liabilities were as follows for the periods indicated.

Year ended December 31, (in millions)	2013	2012	2011
Trading assets – debt and equity instruments	\$340,449	\$349,337	\$393,890
Trading assets – derivative receivables	72,629	85,744	90,003
Trading liabilities – debt and equity instruments <sup>(a)</sup>	77,706	69,001	81,916
Trading liabilities – derivative payables	64,553	76,162	71,539

(a) Primarily represent securities sold, not yet purchased.

Note 4 – Fair value option

The fair value option provides an option to elect fair value as an alternative measurement for selected financial assets, financial liabilities, unrecognized firm commitments, and written loan commitments not previously carried at fair value.

Elections

Elections were made by the Firm to:

Mitigate income statement volatility caused by the differences in the measurement basis of elected instruments (for example, certain instruments elected were previously accounted for on an accrual basis) while the associated risk management arrangements are accounted for on a fair value basis;

Eliminate the complexities of applying certain accounting models (e.g., hedge accounting or bifurcation accounting for hybrid instruments); and/or

Better reflect those instruments that are managed on a fair value basis.

Elections include the following:

Loans purchased or originated as part of securitization warehousing activity, subject to bifurcation accounting, or managed on a fair value basis.

Securities financing arrangements with an embedded derivative and/or a maturity of greater than one year.

Owned beneficial interests in securitized financial assets that contain embedded credit derivatives, which would otherwise be required to be separately accounted for as a derivative instrument.

Certain investments that receive tax credits and other equity investments acquired as part of the Washington Mutual transaction.

Structured notes issued as part of CIB’s client-driven activities. (Structured notes are predominantly financial instruments that contain embedded derivatives.)

Long-term beneficial interests issued by CIB's consolidated securitization trusts where the underlying assets are carried at fair value.

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## Notes to consolidated financial statements

## Changes in fair value under the fair value option election

The following table presents the changes in fair value included in the Consolidated Statements of Income for the years ended December 31, 2013, 2012 and 2011, for items for which the fair value option was elected. The profit and loss information presented below only includes the financial instruments that were elected to be measured at fair value; related risk management instruments, which are required to be measured at fair value, are not included in the table.

December 31, (in millions)	2013			2012			2011		
	Principal transactions	Other income	Total changes in fair value recorded	Principal transactions	Other income	Total changes in fair value recorded	Principal transactions	Other income	Total changes in fair value recorded
Federal funds sold and securities purchased under resale agreements	\$(454)	\$—	\$(454)	\$161	\$—	\$161	\$270	\$—	\$270
Securities borrowed	10	—	10	10	—	10	(61)	—	(61)
Trading assets:									
Debt and equity instruments, excluding loans	582	7	(c) 589	513	7	(c) 520	53	(6)	(c) 47
Loans reported as trading assets:									
Changes in instrument-specific credit risk	1,161	23	(c) 1,184	1,489	81	(c) 1,570	934	(174)	(c) 760
Other changes in fair value	(133)	(c) 1,833	(c) 1,700	(183)	(c) 7,670	(c) 7,487	127	(c) 5,263	(c) 5,390
Loans:									
Changes in instrument-specific credit risk	36	—	36	(14)	—	(14)	2	—	2
Other changes in fair value	17	—	17	676	—	676	535	—	535
Other assets	32	(29)	(d) 3	—	(339)	(d) (339)	(49)	(19)	(d) (68)
Deposits <sup>(a)</sup>	260	—	260	(188)	—	(188)	(237)	—	(237)
Federal funds purchased and securities loaned or sold under repurchase agreements	73	—	73	(25)	—	(25)	(4)	—	(4)
Other borrowed funds <sup>(a)</sup>	(399)	—	(399)	494	—	494	2,986	—	2,986
Trading liabilities	(46)	—	(46)	(41)	—	(41)	(57)	—	(57)
Beneficial interests issued by consolidated VIEs	(278)	—	(278)	(166)	—	(166)	(83)	—	(83)
Other liabilities	—	2	(d) 2	—	—	—	(3)	(5)	(d) (8)
Long-term debt:									
Changes in instrument-specific credit risk <sup>(a)</sup>	(271)	—	(271)	(835)	—	(835)	927	—	927

Other changes in fair value <sup>(b)</sup>	1,280	—	1,280	(1,025 )	—	(1,025 )	322	—	322
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(a) Total changes in instrument-specific credit risk related to structured notes were \$(337) million, \$(340) million, and \$899 million for the years ended December 31, 2013, 2012 and 2011, respectively. These totals include adjustments for structured notes classified within deposits and other borrowed funds, as well as long-term debt.

(b) Structured notes are predominantly financial instruments containing embedded derivatives. Where present, the embedded derivative is the primary driver of risk. Although the risk associated with the structured notes is actively managed, the gains/(losses) reported in this table do not include the income statement impact of the risk management instruments used to manage such risk.

(c) Reported in mortgage fees and related income.

(d) Reported in other income.

Determination of instrument-specific credit risk for items for which a fair value election was made

The following describes how the gains and losses included in earnings during December 31, 2013, 2012 and 2011, which were attributable to changes in instrument-specific credit risk, were determined.

Loans and lending-related commitments: For floating-rate instruments, all changes in value are attributed to instrument-specific credit risk. For fixed-rate instruments, an allocation of the changes in value for the period is made between those changes in value that are interest rate-related and changes in value that are credit-related. Allocations are generally based on an analysis of borrower-specific credit spread and recovery

information, where available, or benchmarking to similar entities or industries.

Long-term debt: Changes in value attributable to instrument-specific credit risk were derived principally from observable changes in the Firm's credit spread.

Resale and repurchase agreements, securities borrowed agreements and securities lending agreements: Generally, for these types of agreements, there is a requirement that collateral be maintained with a market value equal to or in excess of the principal amount loaned; as a result, there would be no adjustment or an immaterial adjustment for instrument-specific credit risk related to these agreements.

Difference between aggregate fair value and aggregate remaining contractual principal balance outstanding

The following table reflects the difference between the aggregate fair value and the aggregate remaining contractual principal balance outstanding as of December 31, 2013 and 2012, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

December 31, (in millions)	2013		Fair value over/(under) contractual principal outstanding		2012		Fair value over/(under) contractual principal outstanding	
	Contractual principal outstanding	Fair value	contractual principal outstanding	Fair value	contractual principal outstanding	Fair value	contractual principal outstanding	Fair value
Loans <sup>(a)</sup>								
Nonaccrual loans								
Loans reported as trading assets	\$5,156	\$1,491	\$ (3,665 )	\$4,217	\$960	\$ (3,257 )		
Loans <sup>(d)</sup>	209	154	(55 )	293	236	(57 )		
Subtotal	5,365	1,645	(3,720 )	4,510	1,196	(3,314 )		
All other performing loans								
Loans reported as trading assets	33,069	29,295	(3,774 )	44,084	40,581	(3,503 )		
Loans <sup>(d)</sup>	1,618	1,563	(55 )	2,034	1,927	(107 )		
Total loans	\$40,052	\$32,503	\$ (7,549 )	\$50,628	\$43,704	\$ (6,924 )		
Long-term debt								
Principal-protected debt	\$15,797 <sup>(c)</sup>	\$15,909	\$ 112	\$16,541 <sup>(c)</sup>	\$16,391	\$ (150 )		
Nonprincipal-protected debt <sup>(b)</sup>	NA	12,969	NA	NA	14,397	NA		
Total long-term debt	NA	\$28,878	NA	NA	\$30,788	NA		
Long-term beneficial interests								
Nonprincipal-protected debt <sup>(b)</sup>	NA	\$1,996	NA	NA	\$1,170	NA		
Total long-term beneficial interests	NA	\$1,996	NA	NA	\$1,170	NA		

<sup>(a)</sup> There were no performing loans that were ninety days or more past due as of December 31, 2013 and 2012, respectively.

<sup>(b)</sup> Remaining contractual principal is not applicable to nonprincipal-protected notes. Unlike principal-protected structured notes, for which the Firm is obligated to return a stated amount of principal at the maturity of the note, nonprincipal-protected structured notes do not obligate the Firm to return a stated amount of principal at maturity, but to return an amount based on the performance of an underlying variable or derivative feature embedded in the

note.

(c) Where the Firm issues principal-protected zero-coupon or discount notes, the balance reflected as the remaining contractual principal is the final principal payment at maturity.

(d) During 2013, certain loans that resulted from restructurings that were previously classified as performing were reclassified as nonperforming loans. Prior periods were revised to conform with the current presentation.

At December 31, 2013 and 2012, the contractual amount of letters of credit for which the fair value option was elected was \$4.5 billion and \$4.5 billion, respectively, with a corresponding fair value of \$(99) million and \$(75) million, respectively. For further information regarding off-balance sheet lending-related financial instruments, see Note 29 on pages 318–324 of this Annual Report.

## Notes to consolidated financial statements

## Structured note products by balance sheet classification and risk component

The table below presents the fair value of the structured notes issued by the Firm, by balance sheet classification and the primary risk to which the structured notes' embedded derivative relates.

(in millions)	December 31, 2013				December 31, 2012			
	Long-term debt	Other borrowed funds	Deposits	Total	Long-term debt	Other borrowed funds	Deposits	Total
Risk exposure								
Interest rate	\$9,516	\$ 615	\$1,270	\$11,401	\$8,669	\$ 1,143	\$559	\$10,371
Credit	4,248	13	—	4,261	6,166	—	—	6,166
Foreign exchange	2,321	194	27	2,542	2,819	—	29	2,848
Equity	11,082	11,936	3,736	26,754	11,580	9,809	2,972	24,361
Commodity	1,260	310	1,133	2,703	1,379	332	1,555	3,266
Total structured notes	\$28,427	\$ 13,068	\$6,166	\$47,661	\$30,613	\$ 11,284	\$5,115	\$47,012

## Note 5 – Credit risk concentrations

Concentrations of credit risk arise when a number of customers are engaged in similar business activities or activities in the same geographic region, or when they have similar economic features that would cause their ability to meet contractual obligations to be similarly affected by changes in economic conditions.

JPMorgan Chase regularly monitors various segments of its credit portfolios to assess potential concentration risks and to obtain collateral when deemed necessary. Senior management is significantly involved in the credit approval and review process, and risk levels are adjusted as needed to reflect the Firm's risk appetite.

In the Firm's consumer portfolio, concentrations are evaluated primarily by product and by U.S. geographic region, with a key focus on trends and concentrations at the portfolio level, where potential risk concentrations can be remedied through changes in underwriting policies and portfolio guidelines. In the wholesale portfolio, risk concentrations are evaluated primarily by industry and monitored regularly on both an aggregate portfolio level and on an individual customer basis. Management of the Firm's wholesale exposure is accomplished through loan syndications and participations, loan sales, securitizations, credit derivatives, use of master netting agreements, and collateral and other risk-reduction techniques. For

additional information on loans see Note 14 on pages 258–283 of this Annual Report.

The Firm does not believe that its exposure to any particular loan product (e.g., option adjustable rate mortgages (“ARMs”)), industry segment (e.g., commercial real estate) or its exposure to residential real estate loans with high loan-to-value ratios results in a significant concentration of credit risk. Terms of loan products and collateral coverage are included in the Firm's assessment when extending credit and establishing its allowance for loan losses.

Customer receivables representing primarily margin loans to prime and retail brokerage clients of \$26.9 billion and \$23.8 billion at December 31, 2013 and 2012, respectively, are included in the table below. These margin loans are generally over-collateralized through a pledge of assets maintained in clients' brokerage accounts and are subject to daily minimum collateral requirements. In the event that the collateral value decreases, a maintenance margin call is made to the client to provide additional collateral into the account. If additional collateral is not provided by the client, the client's positions may be liquidated by the Firm to meet the minimum collateral requirements. As a result of the Firm's credit risk mitigation practices, the Firm did not hold any reserves for credit impairment on these receivables as of December 31, 2013 and 2012.

The table below presents both on–balance sheet and off–balance sheet consumer and wholesale-related credit exposure by the Firm's three credit portfolio segments as of December 31, 2013 and 2012.

December 31, (in millions)	2013				2012			
	Credit exposure	On-balance sheet		Off-balance sheet <sup>(b)</sup>	Credit exposure	On-balance sheet		Off-balance sheet <sup>(b)</sup>
		Loans	Derivatives			Loans	Derivatives	
Total consumer, excluding credit card	\$345,259	\$289,063	\$—	\$56,057	\$352,889	\$292,620	\$—	\$60,156
Total credit card	657,174	127,791	—	529,383	661,011	127,993	—	533,018
Total consumer	1,002,433	416,854	—	585,440	1,013,900	420,613	—	593,174
Wholesale-related								
Real Estate	87,102	69,151	460	17,491	76,198	60,740	1,084	14,374
Banks & Finance Cos	66,881	25,482	18,888	22,511	73,318	26,651	19,846	26,821
Oil & Gas	46,934	14,383	2,203	30,348	42,563	14,704	2,345	25,514
Healthcare	45,910	13,319	3,202	29,389	48,487	11,638	3,359	33,490
State & Municipal Govt	35,666	8,708	3,319	23,639	41,821	7,998	5,138	28,685
Consumer Products	34,145	9,099	715	24,331	32,778	9,151	826	22,801
Asset Managers	33,506	5,656	7,175	20,675	31,474	6,220	8,390	16,864
Utilities	28,983	5,582	2,248	21,153	29,533	6,814	2,649	20,070
	25,068	7,504	273	17,291	25,597	7,901	429	17,267

Retail & Consumer  
Services

Technology	21,403	4,426	1,392	15,585	18,488	3,806	1,192	13,490
Central Govt	21,049	1,754	9,998	9,297	21,223	1,333	11,232	8,658
Machinery & Equipment Mfg	19,078	5,969	476	12,633	18,504	6,304	592	11,608
Metals/Mining	17,434	5,825	560	11,049	20,958	6,059	624	14,275
Business Services	14,601	4,497	594	9,510	13,577	4,550	190	8,837
Transportation	13,975	6,845	621	6,509	19,827	12,763	673	6,391
All other <sup>(a)</sup>	308,519	120,063	13,635	174,821	301,673	119,590	16,414	165,669
Subtotal	820,254	308,263	65,759	446,232	816,019	306,222	74,983	434,814
Loans held-for-sale and loans at fair value	13,301	13,301	—	—	6,961	6,961	—	—
Receivables from customers and other	26,744	—	—	—	23,648	—	—	—
Total wholesale-related	860,299	321,564	65,759	446,232	\$846,628	\$313,183	74,983	434,814
Total exposure <sup>(c)</sup>	\$1,862,732	\$738,418	\$65,759	\$1,031,672	\$1,860,528	\$733,796	\$74,983	\$1,027,988

(a) For more information on exposures to SPEs included within All other see Note 16 on pages 288–299 of this Annual Report.

(b) Represents lending-related financial instruments.

For further information regarding on–balance sheet credit concentrations by major product and/or geography, see

(c) Notes 6, 14 and 15 on pages 220–233, 258–283 and 284–287, respectively, of this Annual Report. For information regarding concentrations of off–balance sheet lending-related financial instruments by major product, see Note 29 on pages 318–324 of this Annual Report.

## Notes to consolidated financial statements

## Note 6 – Derivative instruments

Derivative instruments enable end-users to modify or mitigate exposure to credit or market risks. Counterparties to a derivative contract seek to obtain risks and rewards similar to those that could be obtained from purchasing or selling a related cash instrument without having to exchange upfront the full purchase or sales price. JPMorgan Chase makes markets in derivatives for customers and also uses derivatives to hedge or manage its own risk exposures.

Predominantly all of the Firm's derivatives are entered into for market-making or risk management purposes.

## Market-making derivatives

The majority of the Firm's derivatives are entered into for market-making purposes. Customers use derivatives to mitigate or modify interest rate, credit, foreign exchange, equity and commodity risks. The Firm actively manages the risks from its exposure to these derivatives by entering into other derivative transactions or by purchasing or selling other financial instruments that partially or fully offset the exposure from client derivatives. The Firm also seeks to earn a spread between the client derivatives and offsetting positions, and from the remaining open risk positions.

## Risk management derivatives

The Firm manages its market risk exposures using various derivative instruments.

Interest rate contracts are used to minimize fluctuations in earnings that are caused by changes in interest rates.

Fixed-rate assets and liabilities appreciate or depreciate in market value as interest rates change. Similarly, interest income and expense increases or decreases as a result of variable-rate assets and liabilities resetting to current market rates, and as a result of the repayment and subsequent origination or issuance of fixed-rate assets and liabilities at current market rates. Gains or losses on the derivative instruments that are related to such assets and liabilities are expected to substantially offset this variability in earnings. The Firm generally uses interest rate swaps, forwards and futures to manage the impact of interest rate fluctuations on earnings.

Foreign currency forward contracts are used to manage the foreign exchange risk associated with certain foreign currency-denominated (i.e., non-U.S. dollar) assets and liabilities and forecasted transactions, as well as the Firm's net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. As a result of fluctuations in foreign currencies, the U.S. dollar-equivalent values of the foreign currency-denominated assets and liabilities or forecasted revenue or expense increase or decrease. Gains or losses on the derivative instruments related to these foreign currency-denominated assets or liabilities, or forecasted transactions, are expected to substantially offset this variability.

Commodities contracts are used to manage the price risk of certain commodities inventories. Gains or losses on these derivative instruments are expected to substantially offset

the depreciation or appreciation of the related inventory. Also in the commodities portfolio, electricity and natural gas futures and forwards contracts are used to manage price risk associated with energy-related tolling and load-serving contracts and investments.

The Firm uses credit derivatives to manage the counterparty credit risk associated with loans and lending-related commitments. Credit derivatives compensate the purchaser when the entity referenced in the contract experiences a credit event, such as bankruptcy or a failure to pay an obligation when due. Credit derivatives primarily consist of credit default swaps. For a further discussion of credit derivatives, see the discussion in the Credit derivatives section on pages 231–233 of this Note.

For more information about risk management derivatives, see the risk management derivatives gains and losses table on page 231 of this Note, and the hedge accounting gains and losses tables on pages 229–231 of this Note.

## Derivative counterparties and settlement types

The Firm enters into over-the-counter ("OTC") derivatives, which are negotiated and settled bilaterally with the derivative counterparty. The Firm also enters into, as principal, certain exchange traded derivatives ("ETD") such as futures and options, and "cleared" over-the-counter ("OTC-cleared") derivative contracts with central counterparties ("CCPs"). ETD contracts are generally standardized contracts traded on an exchange and cleared by the CCP, which is the counterparty from the inception of the transactions. OTC-cleared derivatives are traded on a bilateral basis and then novated to the CCP for clearing.

## Accounting for derivatives

All free-standing derivatives that the Firm executes for its own account are required to be recorded on the Consolidated Balance Sheets at fair value. For information on the derivatives that the Firm clears for its clients' accounts, see Note 29 on pages 318–324 of this Annual Report.

As permitted under U.S. GAAP, the Firm nets derivative assets and liabilities, and the related cash collateral receivables and payables, when a legally enforceable master netting agreement exists between the Firm and the derivative counterparty. For further discussion of the offsetting of assets and liabilities, see Note 1 on pages 189–191 of this Annual Report. The accounting for changes in value of a derivative depends on whether or not the transaction has been designated and qualifies for hedge accounting. Derivatives that are not designated as hedges are reported and measured at fair value through earnings. The tabular disclosures on pages 223–233 of this Note provide additional information on the amount of, and reporting for, derivative assets, liabilities, gains and losses. For further discussion of derivatives embedded in structured notes, see Notes 3 and 4 on pages 195–215 and 215–218, respectively, of this Annual Report.

#### Derivatives designated as hedges

The Firm applies hedge accounting to certain derivatives executed for risk management purposes – generally interest rate, foreign exchange and commodity derivatives. However, JPMorgan Chase does not seek to apply hedge accounting to all of the derivatives involved in the Firm’s risk management activities. For example, the Firm does not apply hedge accounting to purchased credit default swaps used to manage the credit risk of loans and lending-related commitments, because of the difficulties in qualifying such contracts as hedges. For the same reason, the Firm does not apply hedge accounting to certain interest rate and commodity derivatives used for risk management purposes. To qualify for hedge accounting, a derivative must be highly effective at reducing the risk associated with the exposure being hedged. In addition, for a derivative to be designated as a hedge, the risk management objective and strategy must be documented. Hedge documentation must identify the derivative hedging instrument, the asset or liability or forecasted transaction and type of risk to be hedged, and how the effectiveness of the derivative is assessed prospectively and retrospectively. To assess effectiveness, the Firm uses statistical methods such as regression analysis, as well as nonstatistical methods including dollar-value comparisons of the change in the fair value of the derivative to the change in the fair value or cash flows of the hedged item. The extent to which a derivative has been, and is expected to continue to be, effective at offsetting changes in the fair value or cash flows of the hedged item must be assessed and documented at least quarterly. Any hedge ineffectiveness (i.e., the amount by which the gain or loss on the designated derivative instrument does not exactly offset the change in the hedged item attributable to the hedged risk) must be reported in current-period earnings. If it is determined that a derivative is not highly effective at hedging the designated exposure, hedge accounting is discontinued.

There are three types of hedge accounting designations: fair value hedges, cash flow hedges and net investment hedges. JPMorgan Chase uses fair value hedges primarily to hedge fixed-rate long-term debt, AFS securities and certain commodities inventories. For qualifying fair value hedges, the changes in the fair value of the derivative, and in the value of the hedged item for the risk being hedged, are recognized in earnings. If the hedge relationship is terminated, then the adjustment to the hedged item continues to be reported as part of the basis of the hedged item and for interest-bearing instruments is amortized to earnings as a yield adjustment. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily net interest income and principal transactions revenue.

JPMorgan Chase uses cash flow hedges primarily to hedge the exposure to variability in forecasted cash flows from floating-rate assets and liabilities and foreign currency–denominated revenue and expense. For qualifying cash flow hedges, the effective portion of the change in the fair value of the derivative is recorded in OCI and recognized in the Consolidated Statements of Income when the hedged cash flows affect earnings. Derivative amounts affecting earnings are recognized consistent with the classification of the hedged item – primarily interest income, interest expense, noninterest revenue and compensation expense. The ineffective portions of cash flow hedges are immediately recognized in earnings. If the hedge relationship is terminated, then the value of the derivative recorded in accumulated other comprehensive income/(loss) (“AOCI”) is recognized in earnings when the cash flows that were hedged affect earnings. For hedge relationships that are discontinued because a forecasted transaction is expected to not occur according to the original hedge forecast, any related derivative values recorded in AOCI are immediately recognized in earnings.

JPMorgan Chase uses foreign currency hedges to protect the value of the Firm’s net investments in certain non-U.S. subsidiaries or branches whose functional currencies are not the U.S. dollar. For foreign currency qualifying net investment hedges, changes in the fair value of the derivatives are recorded in the translation adjustments account within AOCI.

## Notes to consolidated financial statements

The following table outlines the Firm's primary uses of derivatives and the related hedge accounting designation or disclosure category.

Type of Derivative	Use of Derivative	Designation and disclosure	Affected segment or unit	Page reference
Manage specifically identified risk exposures in qualifying hedge accounting relationships:				
Interest rate	Hedge fixed rate assets and liabilities	Fair value hedge	Corporate/PE	229
Interest rate	Hedge floating rate assets and liabilities	Cash flow hedge	Corporate/PE	230
Foreign exchange	Hedge foreign currency-denominated assets and liabilities	Fair value hedge	Corporate/PE	229
Foreign exchange	Hedge forecasted revenue and expense	Cash flow hedge	Corporate/PE	230
Foreign exchange	Hedge the value of the Firm's investments in non-U.S. subsidiaries	Net investment hedge	Corporate/PE	231
Commodity	Hedge commodity inventory	Fair value hedge	CIB	229
Manage specifically identified risk exposures not designated in qualifying hedge accounting relationships:				
Interest rate	Manage the risk of the mortgage pipeline, warehouse loans and MSRs	Specified risk management	CCB	231
Credit	Manage the credit risk of wholesale lending exposures	Specified risk management	CIB	231
Credit <sup>(a)</sup>	Manage the credit risk of certain AFS securities	Specified risk management	Corporate/PE	231
Commodity	Manage the risk of certain commodities-related contracts and investments	Specified risk management	CIB	231
Interest rate and foreign exchange	Manage the risk of certain other specified assets and liabilities	Specified risk management	Corporate/PE	231
Market-making derivatives and other activities:				
• Various	Market-making and related risk management	Market-making and other	CIB	231
• Various <sup>(b)</sup>	Other derivatives, including the synthetic credit portfolio	Market-making and other	CIB, Corporate/PE	231

(a) Includes a limited number of single-name credit derivatives used to mitigate the credit risk arising from specified AFS securities.

The synthetic credit portfolio is a portfolio of index credit derivatives, including short and long positions, that was held by CIO. On July 2, 2012, CIO transferred the synthetic credit portfolio, other than a portion that aggregated to a notional amount of approximately \$12 billion, to CIB. The positions making up the portion of the synthetic credit portfolio retained by CIO on July 2, 2012, were effectively closed out during the third quarter of 2012. The results of the synthetic credit portfolio, including the portion transferred to CIB, have been included in the gains and losses on derivatives related to market-making activities and other derivatives category discussed on page 231 of this Note.

## Notional amount of derivative contracts

The following table summarizes the notional amount of derivative contracts outstanding as of December 31, 2013 and 2012.

December 31, (in billions)	Notional amounts <sup>(c)</sup>	
	2013	2012
Interest rate contracts <sup>(a)</sup>		
Swaps	\$35,221	\$33,037
Futures and forwards	11,251	11,756
Written options	3,991	3,860
Purchased options	4,187	3,909
Total interest rate contracts	54,650	52,562
Credit derivatives <sup>(b)</sup>	5,386	5,981
Foreign exchange contracts <sup>(a)</sup>		
Cross-currency swaps	3,488	3,413
Spot, futures and forwards	3,773	4,005
Written options	659	651
Purchased options	652	662
Total foreign exchange contracts	8,572	8,731
Equity contracts		
Swaps	205	163
Futures and forwards <sup>(a)</sup>	49	38
Written options <sup>(a)</sup>	425	441
Purchased options	380	403
Total equity contracts	1,059	1,045
Commodity contracts		
Swaps <sup>(a)</sup>	124	120
Spot, futures and forwards <sup>(a)</sup>	234	367
Written options	202	262
Purchased options	203	260
Total commodity contracts	763	1,009
Total derivative notional amounts	\$70,430	\$69,328

(a) The prior period amounts have been revised. This revision had no impact on the Firm's Consolidated Balance Sheets or its results of operations.

(b) Primarily consists of credit default swaps. For more information on volumes and types of credit derivative contracts, see the Credit derivatives discussion on pages 231–233 of this Note.

(c) Represents the sum of gross long and gross short third-party notional derivative contracts.

While the notional amounts disclosed above give an indication of the volume of the Firm's derivatives activity, the notional amounts significantly exceed, in the Firm's view, the possible losses that could arise from such transactions. For most derivative transactions, the notional amount is not exchanged; it is used simply as a reference to calculate payments.



## Notes to consolidated financial statements

## Impact of derivatives on the Consolidated Balance Sheets

The following table summarizes information on derivative receivables and payables (before and after netting adjustments) that are reflected on the Firm's Consolidated Balance Sheets as of December 31, 2013 and 2012, by accounting designation (e.g., whether the derivatives were designated in qualifying hedge accounting relationships or not) and contract type.

Free-standing derivative receivables and payables<sup>(a)</sup>

December 31, 2013 (in millions)	Gross derivative receivables			Net derivative receivables <sup>(c)</sup>	Gross derivative payables			Net derivative payables <sup>(c)</sup>
	Not designated as hedges	Designated as hedges	Total derivative receivables		Not designated as hedges	Designated as hedges	Total derivative payables	
Trading assets and liabilities								
Interest rate	\$851,189	\$3,490	\$854,679	\$ 25,782	\$820,811	\$4,543	\$825,354	\$ 13,283
Credit	83,520	—	83,520	1,516	82,402	—	82,402	2,281
Foreign exchange	152,240	1,359	153,599	16,790	158,728	1,397	160,125	15,947
Equity	52,931	—	52,931	12,227	54,654	—	54,654	14,719
Commodity	34,344	1,394	35,738	9,444	37,605	9	37,614	11,084
Total fair value of trading assets and liabilities	\$1,174,224	\$6,243	\$1,180,467	\$ 65,759	\$1,154,200	\$5,949	\$1,160,149	\$ 57,314

December 31, 2012 (in millions)	Gross derivative receivables			Net derivative receivables <sup>(c)</sup>	Gross derivative payables			Net derivative payables <sup>(c)</sup>
	Not designated as hedges	Designated as hedges	Total derivative receivables		Not designated as hedges	Designated as hedges	Total derivative payables	
Trading assets and liabilities								
Interest rate <sup>(b)</sup>	\$1,296,268	\$6,064	\$1,302,332	\$ 39,205	\$1,257,654	\$3,120	\$1,260,774	\$ 24,906
Credit	100,310	—	100,310	1,735	100,027	—	100,027	2,504
Foreign exchange <sup>(b)</sup>	145,676	1,577	147,253	14,142	158,419	2,133	160,552	18,601
Equity <sup>(b)</sup>	42,679	—	42,679	9,266	44,535	—	44,535	11,819
Commodity <sup>(b)</sup>	43,185	586	43,771	10,635	46,981	644	47,625	12,826
Total fair value of trading assets and liabilities	\$1,628,118	\$8,227	\$1,636,345	\$ 74,983	\$1,607,616	\$5,897	\$1,613,513	\$ 70,656

(a) Balances exclude structured notes for which the fair value option has been elected. See Note 4 on pages 215–218 of this Annual Report for further information.

(b) The prior period amounts have been revised. This revision had no impact on the Firm's Consolidated Balance Sheets or its results of operations.

(c) As permitted under U.S. GAAP, the Firm has elected to net derivative receivables and derivative payables and the related cash collateral receivables and payables when a legally enforceable master netting agreement exists.

The following table presents, as of December 31, 2013 and 2012, the gross and net derivative receivables by contract and settlement type. Derivative receivables have been netted on the Consolidated Balance Sheets against derivative payables to the same counterparty with respect to derivative contracts for which the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, the receivables are not eligible under U.S. GAAP for netting against related derivative payables on the Consolidated Balance Sheets, and are shown separately in the table below.

December 31, (in millions)	2013			2012		
	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables	Gross derivative receivables	Amounts netted on the Consolidated balance sheets	Net derivative receivables
U.S. GAAP nettable derivative receivables						
Interest rate contracts:						
Over-the-counter (“OTC”)	\$486,449	\$(466,493 )	\$19,956	\$794,282	\$(771,449 )	\$22,833
OTC-cleared	362,426	(362,404 )	22	491,947	(491,678 )	269
Exchange traded <sup>(b)</sup>	—	—	—	—	—	—
Total interest rate contracts	848,875	(828,897 )	19,978	1,286,229	(1,263,127 )	23,102
Credit contracts:						
OTC	66,269	(65,725 )	544	90,744	(90,104 )	640
OTC-cleared	16,841	(16,279 )	562	8,471	(8,471 )	—
Total credit contracts	83,110	(82,004 )	1,106	99,215	(98,575 )	640
Foreign exchange contracts:						
OTC <sup>(a)</sup>	148,953	(136,763 )	12,190	141,053	(133,088 )	7,965
OTC-cleared	46	(46 )	—	23	(23 )	—
Exchange traded <sup>(b)</sup>	—	—	—	—	—	—
Total foreign exchange contracts	148,999	(136,809 )	12,190	141,076	(133,111 )	7,965
Equity contracts:						
OTC <sup>(a)</sup>	31,870	(29,289 )	2,581	26,025	(24,645 )	1,380
OTC-cleared	—	—	—	—	—	—
Exchange traded <sup>(b)</sup>	17,732	(11,415 )	6,317	12,841	(8,768 )	4,073
Total equity contracts	49,602	(40,704 )	8,898	38,866	(33,413 )	5,453
Commodity contracts:						
OTC <sup>(a)</sup>	21,619	(15,082 )	6,537	26,850	(20,729 )	6,121
OTC-cleared	—	—	—	—	—	—
Exchange traded <sup>(b)</sup>	12,528	(11,212 )	1,316	15,108	(12,407 )	2,701
Total commodity contracts	34,147	(26,294 )	7,853	41,958	(33,136 )	8,822
Derivative receivables with appropriate legal opinion	\$1,164,733	\$(1,114,708) <sup>(c)</sup>	\$50,025	\$1,607,344	\$(1,561,362) <sup>(c)</sup>	\$45,982
Derivative receivables where an appropriate legal opinion has not been either sought or obtained	15,734		15,734	29,001		29,001
Total derivative receivables recognized on the Consolidated Balance Sheets	\$1,180,467		\$65,759	\$1,636,345		\$74,983

The prior period amounts have been revised. This revision had no impact on the Firm’s Consolidated Balance Sheets or its results of operations.

(b) Exchange traded derivative amounts that relate to futures contracts are settled daily.

(c)

Included netted cash collateral payables of \$63.9 billion and \$79.2 billion at December 31, 2013, and December 31, 2012, respectively.

## Notes to consolidated financial statements

The following table presents, as of December 31, 2013 and 2012, the gross and net derivative payables by contract and settlement type. Derivative payables have been netted on the Consolidated Balance Sheets against derivative receivables to the same counterparty with respect to derivative contracts for which the Firm has obtained an appropriate legal opinion with respect to the master netting agreement. Where such a legal opinion has not been either sought or obtained, the payables are not eligible under U.S. GAAP for netting against related derivative receivables on the Consolidated Balance Sheets, and are shown separately in the table below.

December 31, (in millions)	2013			2012		
	Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables	Gross derivative payables	Amounts netted on the Consolidated balance sheets	Net derivative payables
U.S. GAAP nettable derivative payables						
Interest rate contracts:						
OTC <sup>(a)</sup>	\$467,850	\$(458,081 )	\$9,769	\$774,824	\$(754,105 )	\$20,719
OTC–cleared	354,698	(353,990 )	708	482,018	(481,763 )	255
Exchange traded <sup>(b)</sup>	—	—	—	—	—	—
Total interest rate contracts	822,548	(812,071 )	10,477	1,256,842	(1,235,868 )	20,974
Credit contracts:						
OTC	65,223	(63,671 )	1,552	89,170	(88,151 )	1,019
OTC–cleared	16,506	(16,450 )	56	9,372	(9,372 )	—
Total credit contracts	81,729	(80,121 )	1,608	98,542	(97,523 )	1,019
Foreign exchange contracts:						
OTC <sup>(a)</sup>	155,110	(144,119 )	10,991	153,181	(141,928 )	11,253
OTC–cleared	61	(59 )	2	29	(23 )	6
Exchange traded <sup>(b)</sup>	—	—	—	—	—	—
Total foreign exchange contracts	155,171	(144,178 )	10,993	153,210	(141,951 )	11,259
Equity contracts:						
OTC <sup>(a)</sup>	33,295	(28,520 )	4,775	28,321	(23,949 )	4,372
OTC–cleared	—	—	—	—	—	—
Exchange traded <sup>(b)</sup>	17,349	(11,415 )	5,934	12,000	(8,767 )	3,233
Total equity contracts	50,644	(39,935 )	10,709	40,321	(32,716 )	7,605
Commodity contracts:						
OTC <sup>(a)</sup>	21,993	(15,318 )	6,675	28,744	(22,392 )	6,352
OTC–cleared	—	—	—	—	—	—
Exchange traded <sup>(b)</sup>	12,367	(11,212 )	1,155	14,488	(12,407 )	2,081
Total commodity contracts	34,360	(26,530 )	7,830	43,232	(34,799 )	8,433
Derivative payables with appropriate legal opinions	\$1,144,452	\$(1,102,835) <sup>(c)</sup>	\$41,617	\$1,592,147	\$(1,542,857) <sup>(c)</sup>	\$49,290
Derivative payables where an appropriate legal opinion has not been either sought or obtained	15,697		15,697	21,366		21,366
Total derivative payables recognized on the Consolidated Balance Sheets	\$1,160,149		\$57,314	\$1,613,513		\$70,656

The prior period amounts have been revised. This revision had no impact on the Firm's Consolidated Balance Sheets or its results of operations.

(b) Exchange traded derivative balances that relate to futures contracts are settled daily.

(c)

Included netted cash collateral receivables of \$52.1 billion and \$60.7 billion related to OTC and OTC-cleared derivatives at December 31, 2013, and December 31, 2012, respectively.

In addition to the cash collateral received and transferred that is presented on a net basis with net derivative receivables and payables, the Firm receives and transfers additional collateral (financial instruments and cash). These amounts mitigate counterparty credit risk associated with the Firm's derivative instruments but are not eligible for net presentation, because (a) the collateral is non-cash

financial instruments (generally U.S. government and agency securities and other G7 government bonds), (b) the amount of collateral held or transferred exceeds the fair value exposure, at the individual counterparty level, as of the date presented, or (c) the collateral relates to derivative receivables or payables where an appropriate legal opinion has not been either sought or obtained.

The following tables present information regarding certain financial instrument collateral received and transferred as of December 31, 2013 and 2012, that is not eligible for net presentation under U.S. GAAP. The collateral included in these tables relates only to the derivative instruments for which appropriate legal opinions have been obtained; excluded are (i) additional collateral that exceeds the fair value exposure and (ii) all collateral related to derivative instruments where an appropriate legal opinion has not been either sought or obtained.

#### Derivative receivable collateral

December 31, (in millions)	2013			2012		
	Net derivative receivables	Collateral not nettable on the Consolidated balance sheets	Net exposure	Net derivative receivables	Collateral not nettable on the Consolidated balance sheets	Net exposure
Derivative receivables with appropriate legal opinions	\$50,025	\$(12,414)	)(a) \$37,611	\$45,982	\$(11,350)	)(a) \$34,632
Derivative payable collateral <sup>(b)</sup>						

December 31, (in millions)	2013			2012		
	Net derivative payables	Collateral not nettable on the Consolidated balance sheets	Net amount <sup>(c)</sup>	Net derivative payables	Collateral not nettable on the Consolidated balance sheets	Net amount <sup>(c)</sup>
Derivative payables with appropriate legal opinions	\$41,617	\$(6,873)	)(a) \$34,744	\$49,290	\$(20,109)	)(a) \$29,181

Represents liquid security collateral as well as cash collateral held at third party custodians. For some counterparties, the collateral amounts of financial instruments may exceed the derivative receivables and derivative payables balances. Where this is the case, the total amount reported is limited to the net derivative receivables and net derivative payables balances with that counterparty.

(a) Derivative payable collateral relates only to OTC and OTC-cleared derivative instruments. Amounts exclude collateral transferred related to exchange-traded derivative instruments.

(c) Net amount represents exposure of counterparties to the Firm.

#### Liquidity risk and credit-related contingent features

In addition to the specific market risks introduced by each derivative contract type, derivatives expose JPMorgan Chase to credit risk — the risk that derivative counterparties may fail to meet their payment obligations under the derivative contracts and the collateral, if any, held by the Firm proves to be of insufficient value to cover the payment obligation. It is the policy of JPMorgan Chase to actively pursue, where possible, the use of legally enforceable master

netting arrangements and collateral agreements to mitigate derivative counterparty credit risk. The amount of derivative receivables reported on the Consolidated Balance Sheets is the fair value of the derivative contracts after giving effect to legally enforceable master netting agreements and cash collateral held by the Firm.

While derivative receivables expose the Firm to credit risk, derivative payables expose the Firm to liquidity risk, as the derivative contracts typically require the Firm to post cash or securities collateral with counterparties as the fair value

of the contracts moves in the counterparties' favor or upon specified downgrades in the Firm's and its subsidiaries' respective credit ratings. Certain derivative contracts also provide for termination of the contract, generally upon a downgrade of either the Firm or the counterparty, at the fair value of the derivative contracts. The following table shows the aggregate fair value of net derivative payables related to OTC and OTC-cleared derivatives that contain contingent collateral or termination features that may be triggered upon a ratings downgrade, and the associated collateral the Firm has posted in the normal course of business, at December 31, 2013 and 2012.

OTC and OTC-cleared derivative payables containing downgrade triggers

December 31, (in millions)	2013	2012
Aggregate fair value of net derivative payables	\$24,631	\$40,844
Collateral posted	20,346	34,414

## Notes to consolidated financial statements

The following table shows the impact of a single-notch and two-notch downgrade of the long-term issuer ratings of JPMorgan Chase & Co. and its subsidiaries, predominantly JPMorgan Chase Bank, National Association (“JPMorgan Chase Bank, N.A.”), at December 31, 2013 and 2012, related to OTC and OTC-cleared derivative contracts with contingent collateral or termination features that may be triggered upon a ratings downgrade. Derivatives contracts generally require additional collateral to be posted or terminations to be triggered when the predefined threshold rating is breached. A downgrade by a single rating agency that does not result in a rating lower than a preexisting corresponding rating provided by another major rating agency will generally not result in additional collateral, except in certain instances in which additional initial margin may be required upon a ratings downgrade, or termination payment requirements. The liquidity impact in the table is calculated based upon a downgrade below the lowest current rating of the rating agencies referred to in the derivative contract.

## Liquidity impact of downgrade triggers on OTC and OTC-cleared derivatives

December 31, (in millions)	2013		2012	
	Single-notch downgrade	Two-notch downgrade	Single-notch downgrade	Two-notch downgrade
Amount of additional collateral to be posted upon downgrade <sup>(a)</sup>	\$952	\$3,244	\$1,234	\$4,090
Amount required to settle contracts with termination triggers upon downgrade <sup>(b)</sup>	540	876	857	1,270

(a) Includes the additional collateral to be posted for initial margin. Prior period amounts have been revised to conform with the current presentation.

(b) Amounts represent fair value of derivative payables, and do not reflect collateral posted.

## Impact of derivatives on the Consolidated Statements of Income

The following tables provide information related to gains and losses recorded on derivatives based on their hedge accounting designation or purpose.

## Fair value hedge gains and losses

The following tables present derivative instruments, by contract type, used in fair value hedge accounting relationships, as well as pretax gains/(losses) recorded on such derivatives and the related hedged items for the years ended December 31, 2013, 2012 and 2011, respectively. The Firm includes gains/(losses) on the hedging derivative and the related hedged item in the same line item in the Consolidated Statements of Income.

Year ended December 31, 2013 (in millions)	Gains/(losses) recorded in income			Income statement impact due to:	
	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness <sup>(e)</sup>	Excluded components <sup>(f)</sup>
Contract type					
Interest rate <sup>(a)</sup>	\$(3,469 )	\$4,851	\$1,382	\$(132 )	\$1,514
Foreign exchange <sup>(b)</sup>	(1,096 ) <sup>(d)</sup>	864	(232 )	—	(232 )
Commodity <sup>(c)</sup>	485	(1,304 )	(819 )	38	(857 )
Total	\$(4,080 )	\$4,411	\$331	\$(94 )	\$425

Year ended December 31, 2012 (in millions)	Gains/(losses) recorded in income			Income statement impact due to:	
	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness <sup>(e)</sup>	Excluded components <sup>(f)</sup>
Contract type					
Interest rate <sup>(a)</sup>	\$(1,238 )	\$1,879	\$641	\$(28 )	\$669
Foreign exchange <sup>(b)</sup>	(3,027 ) <sup>(d)</sup>	2,925	(102 )	—	(102 )
Commodity <sup>(c)</sup>	(2,530 )	1,131	(1,399 )	107	(1,506 )
Total	\$(6,795 )	\$5,935	\$(860 )	\$79	\$(939 )

Year ended December 31, 2011 (in millions)	Gains/(losses) recorded in income			Income statement impact due to:	
	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness <sup>(e)</sup>	Excluded components <sup>(f)</sup>
Contract type					
Interest rate <sup>(a)</sup>	\$532	\$33	\$565	\$104	\$461
Foreign exchange <sup>(b)</sup>	5,684	<sup>(d)</sup> (3,761 )	1,923	—	1,923
Commodity <sup>(c)</sup>	1,784	(2,880 )	(1,096 )	(10 )	(1,086 )
Total	\$8,000	\$(6,608 )	\$1,392	\$94	\$1,298

Primarily consists of hedges of the benchmark (e.g., London Interbank Offered Rate (“LIBOR”)) interest rate risk of (a) fixed-rate long-term debt and AFS securities. Gains and losses were recorded in net interest income. The current presentation excludes accrued interest.

(b) Primarily consists of hedges of the foreign currency risk of long-term debt and AFS securities for changes in spot foreign currency rates. Gains and losses related to the derivatives and the hedged items, due to changes in foreign

currency rates, were recorded in principal transactions revenue and net interest income.

(c) Consists of overall fair value hedges of physical commodities inventories that are generally carried at the lower of cost or market (market approximates fair value). Gains and losses were recorded in principal transactions revenue.

Included \$(556) million, \$(3.1) billion and \$4.9 billion for the years ended December 31, 2013, 2012 and 2011, (d) respectively, of revenue related to certain foreign exchange trading derivatives designated as fair value hedging instruments.

(e) Hedge ineffectiveness is the amount by which the gain or loss on the designated derivative instrument does not exactly offset the gain or loss on the hedged item attributable to the hedged risk.

(f) The assessment of hedge effectiveness excludes certain components of the changes in fair values of the derivatives and hedged items such as forward points on foreign exchange forward contracts and time values.

## Notes to consolidated financial statements

## Cash flow hedge gains and losses

The following tables present derivative instruments, by contract type, used in cash flow hedge accounting relationships, and the pretax gains/(losses) recorded on such derivatives, for the years ended December 31, 2013, 2012 and 2011, respectively. The Firm includes the gain/(loss) on the hedging derivative and the change in cash flows on the hedged item in the same line item in the Consolidated Statements of Income.

Year ended December 31, 2013 (in millions)	Gains/(losses) recorded in income and other comprehensive income/(loss) <sup>(c)</sup>				
	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income <sup>(d)</sup>	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate <sup>(a)</sup>	\$(108	)\$ —	\$(108	)\$(565	)\$(457
Foreign exchange <sup>(b)</sup>	7	—	7	40	33
Total	\$(101	)\$ —	\$(101	)\$(525	)\$(424

Year ended December 31, 2012 (in millions)	Gains/(losses) recorded in income and other comprehensive income/(loss) <sup>(c)</sup>				
	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income <sup>(d)</sup>	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate <sup>(a)</sup>	\$(3	)\$ 5	\$2	\$13	\$16
Foreign exchange <sup>(b)</sup>	31	—	31	128	97
Total	\$28	\$ 5	\$33	\$141	\$113

Year ended December 31, 2011 (in millions)	Gains/(losses) recorded in income and other comprehensive income/(loss) <sup>(c)</sup>				
	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income <sup>(d)</sup>	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate <sup>(a)</sup>	\$310	\$ 19	\$329	\$107	\$(203
Foreign exchange <sup>(b)</sup>	(9	)—	(9	)(57	)(48
Total	\$301	\$ 19	\$320	\$50	\$(251

(a) Primarily consists of benchmark interest rate hedges of LIBOR-indexed floating-rate assets and floating-rate liabilities. Gains and losses were recorded in net interest income.

(b) Primarily consists of hedges of the foreign currency risk of non-U.S. dollar-denominated revenue and expense. The income statement classification of gains and losses follows the hedged item – primarily noninterest revenue and compensation expense.

(c) The Firm did not experience any forecasted transactions that failed to occur for the years ended December 31, 2013, 2012 or 2011.

Hedge ineffectiveness is the amount by which the cumulative gain or loss on the designated derivative instrument (d) exceeds the present value of the cumulative expected change in cash flows on the hedged item attributable to the hedged risk.

Over the next 12 months, the Firm expects that \$4.6 million (after-tax) of net losses recorded in AOCI at December 31, 2013, related to cash flow hedges will be recognized in income. The maximum length of time over which forecasted transactions are hedged is 10 years, and such transactions primarily relate to core lending and borrowing activities.

## Net investment hedge gains and losses

The following tables present hedging instruments, by contract type, that were used in net investment hedge accounting relationships, and the pretax gains/(losses) recorded on such instruments for the years ended December 31, 2013, 2012 and 2011.

Year ended December 31, (in millions)	Gains/(losses) recorded in income and other comprehensive income/(loss)					
	2013		2012		2011	
Contract type	Excluded components recorded directly in income <sup>(a)</sup>	Effective portion recorded in OCI	Excluded components recorded directly in income <sup>(a)</sup>	Effective portion recorded in OCI	Excluded components recorded directly in income <sup>(a)</sup>	Effective portion recorded in OCI
Foreign exchange derivatives	\$(383)	)\$773	\$(306)	)\$(82)	) \$(251)	)\$225
Foreign currency denominated debt	—	—	—	—	—	1
Total	\$(383)	)\$773	\$(306)	)\$(82)	) \$(251)	)\$226

Certain components of hedging derivatives are permitted to be excluded from the assessment of hedge effectiveness, such as forward points on foreign exchange forward contracts. Amounts related to excluded (a) components are recorded in current-period income. The Firm measures the ineffectiveness of net investment hedge accounting relationships based on changes in spot foreign currency rates, and therefore there was no ineffectiveness for net investment hedge accounting relationships during 2013, 2012 and 2011.

## Gains and losses on derivatives used for specified risk management purposes

The following table presents pretax gains/(losses) recorded on a limited number of derivatives, not designated in hedge accounting relationships, that are used to manage risks associated with certain specified assets and liabilities, including certain risks arising from the mortgage pipeline, warehouse loans, MSRs, wholesale lending exposures, AFS securities, foreign currency-denominated liabilities, and commodities-related contracts and investments.

Year ended December 31, (in millions)	Derivatives gains/(losses) recorded in income		
	2013	2012	2011
Contract type			
Interest rate <sup>(a)</sup>	\$617	\$5,353	\$8,084
Credit <sup>(b)</sup>	(142)	) (175)	) (52)
Foreign exchange <sup>(c)</sup>	1	47	(157)
Commodity <sup>(d)</sup>	178	94	41
Total	\$654	\$5,319	\$7,916

Primarily relates to interest rate derivatives used to hedge the interest rate risks associated with the mortgage (a) pipeline, warehouse loans and MSRs. Gains and losses were recorded predominantly in mortgage fees and related income.

Relates to credit derivatives used to mitigate credit risk associated with lending exposures in the Firm's wholesale businesses, and single-name credit derivatives used to mitigate credit risk arising from certain AFS securities.

(b) These derivatives do not include the synthetic credit portfolio or credit derivatives used to mitigate counterparty credit risk arising from derivative receivables, both of which are included in gains and losses on derivatives related to market-making activities and other derivatives. Gains and losses were recorded in principal transactions revenue.

(c) Primarily relates to hedges of the foreign exchange risk of specified foreign currency-denominated liabilities. Gains and losses were recorded in principal transactions revenue and net interest income.

(d) Primarily relates to commodity derivatives used to mitigate energy price risk associated with energy-related contracts and investments. Gains and losses were recorded in principal transactions revenue.

Gains and losses on derivatives related to market-making activities and other derivatives

The Firm makes markets in derivatives in order to meet the needs of customers and uses derivatives to manage certain risks associated with net open risk positions from the Firm's market-making activities, including the counterparty credit risk arising from derivative receivables. These derivatives, as well as all other derivatives (including the synthetic credit portfolio ) that are not included in the hedge accounting or specified risk management categories above, are included in this category. Gains and losses on these derivatives are primarily recorded in principal transactions revenue. See Note 7 on pages 234–235 of this Annual Report for information on principal transactions revenue.

Credit derivatives

Credit derivatives are financial instruments whose value is derived from the credit risk associated with the debt of a third-party issuer (the reference entity) and which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Credit derivatives expose the protection purchaser to the creditworthiness of the protection seller, as the protection seller is required to make payments under the contract when the reference entity experiences a credit event, such as a bankruptcy, a failure to pay its obligation or a restructuring. The seller of credit protection receives a premium for providing protection but has the risk that the underlying instrument referenced in the contract will be subject to a credit event.

The Firm is both a purchaser and seller of protection in the credit derivatives market and uses these derivatives for two primary purposes. First, in its capacity as a market-maker, the Firm actively manages a portfolio of credit derivatives by purchasing and selling credit protection, predominantly on corporate debt obligations, to meet the needs of customers. Second, as an end-user, the Firm uses credit derivatives to manage credit risk associated with lending exposures (loans and unfunded commitments) and derivatives counterparty exposures in the Firm's wholesale businesses, and to manage the credit risk arising from

## Notes to consolidated financial statements

certain AFS securities and from certain financial instruments in the Firm's market-making businesses. For more information on the synthetic credit portfolio, see the discussion on page 222 of this Note. Following is a summary of various types of credit derivatives.

## Credit default swaps

Credit derivatives may reference the credit of either a single reference entity ("single-name") or a broad-based index. The Firm purchases and sells protection on both single-name and index-reference obligations. Single-name CDS and index CDS contracts are typically OTC-cleared derivative contracts. Single-name CDS are used to manage the default risk of a single reference entity, while index CDS contracts are used to manage the credit risk associated with the broader credit markets or credit market segments. Like the S&P 500 and other market indices, a CDS index comprises a portfolio of CDS across many reference entities. New series of CDS indices are periodically established with a new underlying portfolio of reference entities to reflect changes in the credit markets. If one of the reference entities in the index experiences a credit event, then the reference entity that defaulted is removed from the index. CDS can also be referenced against specific portfolios of reference names or against customized exposure levels based on specific client demands: for example, to provide protection against the first \$1 million of realized credit losses in a \$10 million portfolio of exposure. Such structures are commonly known as tranche CDS.

For both single-name CDS contracts and index CDS contracts, upon the occurrence of a credit event, under the terms of a CDS contract neither party to the CDS contract has recourse to the reference entity. The protection purchaser has recourse to the protection seller for the difference between the face value of the CDS contract and the fair value of the reference obligation at settlement of the credit derivative contract, also known as the recovery value. The protection purchaser does not need to hold the debt instrument of the underlying reference entity in order to receive amounts due under the CDS contract when a credit event occurs.

## Credit-related notes

A credit-related note is a funded credit derivative where the issuer of the credit-related note purchases from the note investor credit protection on a reference entity or an index. Under the contract, the investor pays the issuer the par value of the note at the inception of the transaction, and in return, the issuer pays periodic payments to the investor, based on the credit risk of the referenced entity. The issuer also repays the investor the par value of the note at maturity unless the reference entity experiences a specified credit event (or one of the entities that makes up a reference index). If a credit event occurs, the issuer is not obligated to repay the par value of the note, but rather, the issuer pays the investor the difference between the par value of the note and the fair value of the defaulted reference obligation at the time of settlement. Neither party to the credit-related note has recourse to the defaulting reference entity. For a further discussion of credit-related notes, see Note 16 on pages 288–299 of this Annual Report.

The following tables present a summary of the notional amounts of credit derivatives and credit-related notes the Firm sold and purchased as of December 31, 2013 and 2012. Upon a credit event, the Firm as a seller of protection would typically pay out only a percentage of the full notional amount of net protection sold, as the amount actually required to be paid on the contracts takes into account the recovery value of the reference obligation at the time of settlement. The Firm manages the credit risk on contracts to sell protection by purchasing protection with identical or similar underlying reference entities. Other purchased protection referenced in the following tables includes credit derivatives bought on related, but not identical, reference positions (including indices, portfolio coverage and other reference points) as well as protection purchased through credit-related notes.

The Firm does not use notional amounts of credit derivatives as the primary measure of risk management for such derivatives, because the notional amount does not take into account the probability of the occurrence of a credit event, the recovery value of the reference obligation, or related cash instruments and economic hedges, each of which reduces, in the Firm's view, the risks associated with such derivatives.

Total credit derivatives and credit-related notes

December 31, 2013 (in millions)	Maximum payout/Notional amount			
	Protection sold	Protection purchased with identical underlyings <sup>(b)</sup>	Net protection (sold)/purchased <sup>(c)</sup>	Other protection purchased <sup>(d)</sup>
Credit derivatives				
Credit default swaps	\$ (2,601,581 )	\$ 2,610,198	\$ 8,617	\$ 8,722
Other credit derivatives <sup>(a)</sup>	(95,094 )	45,921	(49,173 )	24,192
Total credit derivatives	(2,696,675 )	2,656,119	(40,556 )	32,914
Credit-related notes	(130 )	—	(130 )	2,720
Total	\$ (2,696,805 )	\$ 2,656,119	\$ (40,686 )	\$ 35,634

December 31, 2012 (in millions)	Maximum payout/Notional amount			
	Protection sold	Protection purchased with identical underlyings <sup>(b)</sup>	Net protection (sold)/purchased <sup>(c)</sup>	Other protection purchased <sup>(d)</sup>
Credit derivatives				
Credit default swaps	\$ (2,954,705 )	\$ 2,879,105	\$ (75,600 )	\$ 42,460
Other credit derivatives <sup>(a)</sup>	(66,244 )	5,649	(60,595 )	33,174
Total credit derivatives	(3,020,949 )	2,884,754	(136,195 )	75,634
Credit-related notes	(233 )	—	(233 )	3,255
Total	\$ (3,021,182 )	\$ 2,884,754	\$ (136,428 )	\$ 78,889

(a) Other credit derivatives predominantly consists of put options on fixed income portfolios.

Represents the total notional amount of protection purchased where the underlying reference instrument is identical

(b) to the reference instrument on protection sold; the notional amount of protection purchased for each individual identical underlying reference instrument may be greater or lower than the notional amount of protection sold.

(c) Does not take into account the fair value of the reference obligation at the time of settlement, which would generally reduce the amount the seller of protection pays to the buyer of protection in determining settlement value.

(d) Represents protection purchased by the Firm on referenced instruments (single-name, portfolio or index) where the Firm has not sold any protection on the identical reference instrument.

The following tables summarize the notional and fair value amounts of credit derivatives and credit-related notes as of December 31, 2013 and 2012, where JPMorgan Chase is the seller of protection. The maturity profile is based on the remaining contractual maturity of the credit derivative contracts. The ratings profile is based on the rating of the reference entity on which the credit derivative contract is based. The ratings and maturity profile of credit derivatives and credit-related notes where JPMorgan Chase is the purchaser of protection are comparable to the profile reflected below.

Protection sold – credit derivatives and credit-related notes ratings<sup>(a)</sup>/maturity profile

December 31, 2013 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables <sup>(b)</sup>	Fair value of payables <sup>(b)</sup>	Net fair value
Investment-grade	\$ (365,660 )	\$ (1,486,394 )	\$ (130,597 )	\$ (1,982,651 )	\$ 31,727	\$ (5,629 )	\$ 26,098

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December 31, 2012 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables <sup>(b)</sup>	Fair value of payables <sup>(b)</sup>	Net fair value
Noninvestment-grade	(140,540 )	(544,671 )	(28,943 )	(714,154 )	27,426	(16,674 )	10,752
Total	\$(506,200 )	\$(2,031,065 )	\$(159,540 )	\$(2,696,805 )	\$ 59,153	\$(22,303 )	\$36,850
Risk rating of reference entity							
Investment-grade	\$(409,748 )	\$(1,383,644 )	\$(224,001 )	\$(2,017,393 )	\$ 16,690	\$(22,393 )	\$(5,703 )
Noninvestment-grade	(214,949 )	(722,115 )	(66,725 )	(1,003,789 )	22,355	(36,815 )	(14,460 )
Total	\$(624,697 )	\$(2,105,759 )	\$(290,726 )	\$(3,021,182 )	\$ 39,045	\$(59,208 )	\$(20,163 )

(a) The ratings scale is based on the Firm's internal ratings, which generally correspond to ratings as defined by S&P and Moody's.

(b) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements and cash collateral received by the Firm.

## Notes to consolidated financial statements

## Note 7 – Noninterest revenue

## Investment banking fees

This revenue category includes equity and debt underwriting and advisory fees. Underwriting fees are recognized as revenue when the Firm has rendered all services to the issuer and is entitled to collect the fee from the issuer, as long as there are no other contingencies associated with the fee. Underwriting fees are net of syndicate expense; the Firm recognizes credit arrangement and syndication fees as revenue after satisfying certain retention, timing and yield criteria. Advisory fees are recognized as revenue when the related services have been performed and the fee has been earned.

The following table presents the components of investment banking fees.

Year ended December 31, (in millions)	2013	2012	2011
Underwriting			
Equity	\$1,499	\$1,026	\$1,181
Debt	3,537	3,290	2,934
Total underwriting	5,036	4,316	4,115
Advisory	1,318	1,492	1,796
Total investment banking fees	\$6,354	\$5,808	\$5,911

## Principal transactions

Principal transactions revenue includes realized and unrealized gains and losses recorded on derivatives, other financial instruments, and private equity investments.

Principal transactions revenue also includes certain realized and unrealized gains and losses related to hedge accounting and specified risk management activities disclosed separately in Note 6, including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specific risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives, including the synthetic credit portfolio. See Note 6 on pages 220–233 of this Form Annual Report for information on the income statement classification of gains and losses on derivatives.

Principal transactions revenue also includes revenue associated with market-making and client-driven activities that involve physical commodities. The Firm, through its Global Commodities Group within CIB (“Commodities Group”) generally provides risk management, investment and financing solutions to clients globally both through financial derivatives transactions, as well as through physical commodities transactions. On the financial side, the Commodities Group engages in OTC derivatives transactions (e.g., swaps, forwards, options) and exchange-traded derivatives referencing various types of commodities (see below and Note 6 – Derivative instruments for further information). On the physical side, the Commodities Group engages in the purchase, sale, transport, and storage of power, gas, liquefied natural gas, coal, crude oil, refined

products, precious and base metals among others. Realized gains and losses and unrealized losses arising from market-making and client-driven activities involving physical commodities inventories that are generally carried at the lower of cost or market (market approximates fair value), subject to any applicable fair value hedge accounting adjustments, are recorded in principal transactions revenue. Fees relating to storage and transportation are recorded in other income. These fees are generally recognized over the arrangement period. Expenses relating to such activities are recorded in other expense (see Note 11 on page 249 of this Annual Report for further information). Additional information on the physical commodities business can be found in Note 2 – Business Changes and Developments on pages 192–194 of this Annual Report.

The following table presents principal transactions revenue by major underlying type of risk exposures. This table does not include other types of revenue, such as net interest income on trading assets, which are an integral part of the overall performance of the Firm’s client-driven market-making activities.

Year ended December 31, (in millions)	2013	2012	2011
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Trading revenue by risk exposure			
Interest rate <sup>(a)</sup>	\$776	\$3,922	\$(873 )
Credit <sup>(b)</sup>	2,424	(5,460 )	3,393
Foreign exchange	1,540	1,436	1,154
Equity	2,526	2,504	2,401
Commodity <sup>(c)</sup>	2,073	2,363	2,823
Total trading revenue <sup>(d)(e)</sup>	9,339	4,765	8,898
Private equity gains <sup>(f)</sup>	802	771	1,107
Principal transactions	\$10,141	\$5,536	\$10,005

(a) Includes a pretax gain of \$665 million for the year ended December 31, 2012, reflecting the recovery on a Bear Stearns-related subordinated loan.

(b) Includes \$5.8 billion of losses incurred by CIO from the synthetic credit portfolio for the six months ended June 30, 2012, and \$449 million of losses incurred by CIO from the retained index credit derivative positions for the three months ended September 30, 2012; and losses incurred by CIB from the synthetic credit portfolio.

(c) Includes realized gains and losses and unrealized losses on physical commodities inventories that are generally carried at the lower of cost or market (market approximates fair value), subject to any applicable fair value hedge accounting adjustments, and gains and losses on commodity derivatives and other financial instruments that are carried at fair value through income. Commodity derivatives are frequently used to manage the Firm's risk exposure to its physical commodities inventories. Gains/(losses) related to commodity fair value hedges were \$(819) million, \$(1.4) billion and \$(1.1) billion for the years ended December 31, 2013, 2012 and 2011, respectively.

(d) Principal transactions revenue included DVA related to structured notes and derivative liabilities measured at fair value in CIB. DVA gains/(losses) were \$(452) million, \$(930) million, and \$1.4 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

(e) During the fourth quarter of 2013, the Firm implemented a funding valuation adjustment ("FVA") framework in order to incorporate the impact of funding into its valuation estimates for over-the-counter ("OTC") derivatives and structured notes. As a result the Firm recorded a \$1.5 billion loss in principal transactions revenue in the fourth quarter of 2013, reported in the CIB. This reflects an industry migration towards incorporating the cost of unsecured funding in the valuation of such instruments.

(f) Includes revenue on private equity investments held in the Private Equity business within Corporate/Private Equity, as well as those held in other business segments.

### Lending- and deposit-related fees

This revenue category includes fees from loan commitments, standby letters of credit, financial guarantees, deposit-related fees in lieu of compensating balances, cash management-related activities or transactions, deposit accounts and other loan-servicing activities. These fees are recognized over the period in which the related service is provided.

### Asset management, administration and commissions

This revenue category includes fees from investment management and related services, custody, brokerage services, insurance premiums and commissions, and other products. These fees are recognized over the period in which the related service is provided. Performance-based fees, which are earned based on exceeding certain benchmarks or other performance targets, are accrued and recognized at the end of the performance period in which the target is met. The Firm has contractual arrangements with third parties to provide certain services in connection with its asset management activities. Amounts paid to third-party service providers are predominantly expensed, such that asset management fees are recorded gross of payments made to third parties.

The following table presents components of asset management, administration and commissions.

Year ended December 31, (in millions)	2013	2012	2011
Asset management			
Investment management fees <sup>(a)</sup>	\$8,044	\$6,744	\$6,449
All other asset management fees <sup>(b)</sup>	505	357	241
Total asset management fees	8,549	7,101	6,690
Total administration fees <sup>(c)</sup>	2,101	2,135	2,171
Commissions and other fees			
Brokerage commissions	2,321	2,331	2,753
All other commissions and fees	2,135	2,301	2,480
Total commissions and fees	4,456	4,632	5,233
Total asset management, administration and commissions	\$15,106	\$13,868	\$14,094

(a) Represents fees earned from managing assets on behalf of Firm clients, including investors in Firm-sponsored funds and owners of separately managed investment accounts.

(b) Represents fees for services that are ancillary to investment management services, such as commissions earned on the sales or distribution of mutual funds to clients.

(c) Predominantly, includes fees for custody, securities lending, funds services and securities clearance.

### Mortgage fees and related income

This revenue category primarily reflects CCB's Mortgage Production and Mortgage Servicing revenue, including: fees and income derived from mortgages originated with the intent to sell; mortgage sales and servicing including losses related to the repurchase of previously-sold loans; the impact of risk management activities associated with the mortgage pipeline, warehouse loans and MSR; and revenue related to any residual interests held from mortgage securitizations. This revenue category also includes gains and losses on sales and lower of cost or fair value adjustments for mortgage loans held-for-sale, as well as changes in fair value for mortgage loans originated with the intent to sell and measured at fair value under the fair value option. Changes in the fair value of CCB MSR are reported in mortgage fees and related income. Net interest income from mortgage loans is recorded in interest income. For a further discussion of MSR, see Note 17 on pages 299–304 of this Annual Report.

### Card income

This revenue category includes interchange income from credit and debit cards and net fees earned from processing credit card transactions for merchants. Card income is recognized as earned. Annual fees and direct loan origination costs are deferred and recognized on a straight-line basis over a 12-month period. Expense related to rewards

programs is recorded when the rewards are earned by the customer and netted against interchange income.

#### Credit card revenue sharing agreements

The Firm has contractual agreements with numerous co-brand partners and affinity organizations (collectively, “partners”), which grant the Firm exclusive rights to market to the customers or members of such partners. These partners endorse the credit card programs and provide their customer and member lists to the Firm, and they may also conduct marketing activities and provide awards under the various credit card programs. The terms of these agreements generally range from three to ten years.

The Firm typically makes incentive payments to the partners based on new account originations, charge volumes and the cost of the partners’ marketing activities and awards. Payments based on new account originations are accounted for as direct loan origination costs. Payments to partners based on charge volumes are deducted from interchange income as the related revenue is earned. Payments based on marketing efforts undertaken by the partners are expensed by the Firm as incurred and reported as noninterest expense.

#### Other income

Included in other income is operating lease income of \$1.5 billion, \$1.3 billion and \$1.2 billion for the years ended December 31, 2013, 2012 and 2011, respectively. Additionally, included in other income is a net pre-tax gain of approximately \$1.3 billion, from the sale of the Visa B Shares. See Note 2 on pages 192–194 of this Annual Report for more information.

## Notes to consolidated financial statements

## Note 8 – Interest income and Interest expense

Interest income and interest expense is recorded in the Consolidated Statements of Income and classified based on the nature of the underlying asset or liability. Interest income and interest expense includes the current-period interest accruals for financial instruments measured at fair value, except for financial instruments containing embedded derivatives that would be separately accounted for in accordance with U.S. GAAP absent the fair value option election; for those instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue. For financial instruments that are not measured at fair value, the related interest is included within interest income or interest expense, as applicable.

Details of interest income and interest expense were as follows.

Year ended December 31, (in millions)	2013	2012	2011
Interest income			
Loans	\$33,489	\$35,832	\$37,098
Securities	7,812	7,939	9,215
Trading assets	8,426	9,039	11,142
Federal funds sold and securities purchased under resale agreements	1,940	2,442	2,523
Securities borrowed	(127)	(3)	110
Deposits with banks	918	555	599
Other assets <sup>(a)</sup>	538	259	606
Total interest income	52,996	56,063	61,293
Interest expense			
Interest-bearing deposits	2,067	2,655	3,855
Short-term and other liabilities <sup>(b)</sup>	2,125	1,788	2,873
Long-term debt	5,007	6,062	6,109
Beneficial interests issued by consolidated VIEs	478	648	767
Total interest expense	9,677	11,153	13,604
Net interest income	43,319	44,910	47,689
Provision for credit losses	225	3,385	7,574
Net interest income after provision for credit losses	\$43,094	\$41,525	\$40,115

(a) Largely margin loans.

(b) Includes brokerage customer payables.

Negative interest income for the years ended December 31, 2013 and 2012, is a result of increased client-driven (c) demand for certain securities combined with the impact of low interest rates; the offset of this matched book activity is reflected as lower net interest expense reported within short-term and other liabilities.

Note 9 – Pension and other postretirement employee benefit plans

The Firm’s defined benefit pension plans and its other postretirement employee benefit (“OPEB”) plans (collectively the “Plans”) are accounted for in accordance with U.S. GAAP for retirement benefits.

Defined benefit pension plans

The Firm has a qualified noncontributory U.S. defined benefit pension plan that provides benefits to substantially all U.S. employees. The U.S. plan employs a cash balance formula in the form of pay and interest credits to determine the benefits to be provided at retirement, based on eligible compensation and years of service. Employees begin to accrue plan benefits after completing one year of service, and benefits generally vest after three years of service. The Firm also offers benefits through defined benefit pension plans to qualifying employees in certain non-U.S. locations based on factors such as eligible compensation, age and/or years of service.

It is the Firm’s policy to fund the pension plans in amounts sufficient to meet the requirements under applicable laws. The Firm does not anticipate at this time any contribution to the U.S. defined benefit pension plan in 2014. The 2014 contributions to the non-U.S. defined benefit pension plans are expected to be \$49 million of which \$32 million are contractually required.

JPMorgan Chase also has a number of defined benefit pension plans that are not subject to Title IV of the Employee Retirement Income Security Act. The most significant of these plans is the Excess Retirement Plan, pursuant to which certain employees previously earned pay credits on compensation amounts above the maximum stipulated by law under a qualified plan; no further pay credits are allocated under this plan. The Excess Retirement Plan had an unfunded projected benefit obligation in the amount of \$245 million and \$276 million, at December 31, 2013 and 2012, respectively.

Effective March 19, 2012, pursuant to the WaMu Global Settlement, JPMorgan Chase Bank, N.A. became the sponsor of the WaMu Pension Plan. This plan’s assets were merged with and into the JPMorgan Chase Retirement Plan effective as of December 31, 2012.

Defined contribution plans

JPMorgan Chase currently provides two qualified defined contribution plans in the U.S. and other similar arrangements in certain non-U.S. locations, all of which are administered in accordance with applicable local laws and regulations. The most significant of these plans is The JPMorgan Chase 401(k) Savings Plan (the “401(k) Savings Plan”), which covers substantially all U.S. employees. The 401(k) Savings Plan allows employees to make pretax and Roth 401(k) contributions to tax-deferred investment portfolios. The JPMorgan Chase Common Stock Fund, which is an investment option under the 401(k) Savings Plan, is a nonleveraged employee stock ownership plan.

The Firm matches eligible employee contributions up to 5% of benefits-eligible compensation (e.g., base pay) on an annual basis. Employees begin to receive matching contributions after completing a one-year-of-service requirement. Employees with total annual cash compensation of \$250,000 or more are not eligible for matching contributions. Matching contributions vest after three years of service for employees hired on or after May 1, 2009. The 401(k) Savings Plan also permits discretionary profit-sharing contributions by participating companies for certain employees, subject to a specified vesting schedule.

OPEB plans

JPMorgan Chase offers postretirement medical and life insurance benefits to certain retirees and postretirement medical benefits to qualifying U.S. employees. These benefits vary with the length of service and the date of hire and provide for limits on the Firm’s share of covered medical benefits. The medical and life insurance benefits are both contributory. Postretirement medical benefits also are offered to qualifying U.K. employees.

JPMorgan Chase’s U.S. OPEB obligation is funded with corporate-owned life insurance (“COLI”) purchased on the lives of eligible employees and retirees. While the Firm owns the COLI policies, COLI proceeds (death benefits, withdrawals and other distributions) may be used only to reimburse the Firm for its net postretirement benefit claim payments and related administrative expense. The U.K. OPEB plan is unfunded.



## Notes to consolidated financial statements

The following table presents the changes in benefit obligations, plan assets and funded status amounts reported on the Consolidated Balance Sheets for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

As of or for the year ended December 31, (in millions)	Defined benefit pension plans					
	U.S.		Non-U.S.		OPEB plans <sup>(d)</sup>	
	2013	2012	2013	2012	2013	2012
Change in benefit obligation						
Benefit obligation, beginning of year	\$(11,478)	\$(9,043 )	\$(3,243 )	\$(2,829 )	\$(990 )	\$(999 )
Benefits earned during the year	(314 )	(272 )	(34 )	(41 )	(1 )	(1 )
Interest cost on benefit obligations	(447 )	(466 )	(125 )	(126 )	(35 )	(44 )
Plan amendments	—	—	—	6	—	—
WaMu Global Settlement	—	(1,425 )	—	—	—	—
Employee contributions	NA	NA	(7 )	(5 )	(72 )	(74 )
Net gain/(loss)	794	(864 )	(62 )	(244 )	138	(9 )
Benefits paid	669	592	106	108	144	149
Expected Medicare Part D subsidy receipts	NA	NA	NA	NA	(10 )	(10 )
Foreign exchange impact and other	—	—	(68 )	(112 )	—	(2 )
Benefit obligation, end of year	\$(10,776)	\$(11,478)	\$(3,433 )	\$(3,243 )	\$(826 )	\$(990 )
Change in plan assets						
Fair value of plan assets, beginning of year	\$13,012	\$10,472	\$3,330	\$2,989	\$1,563	\$1,435
Actual return on plan assets	1,979	1,292	187	237	211	142
Firm contributions	32	31	45	86	2	2
WaMu Global Settlement	—	1,809	—	—	—	—
Employee contributions	—	—	7	5	—	—
Benefits paid	(669 )	(592 )	(106 )	(108 )	(19 )	(16 )
Foreign exchange impact and other	—	—	69	121	—	—
Fair value of plan assets, end of year	\$14,354 <sup>(b)(c)</sup>	\$13,012 <sup>(b)(c)</sup>	\$3,532 <sup>(c)</sup>	\$3,330 <sup>(c)</sup>	\$1,757	\$1,563
Funded/(unfunded) status <sup>(a)</sup>	\$3,578	\$1,534	\$99	\$87	\$931	\$573
Accumulated benefit obligation, end of year	\$(10,685)	\$(11,447)	\$(3,406 )	\$(3,221 )	NA	NA

(a) Represents plans with an aggregate overfunded balance of \$5.1 billion and \$2.8 billion at December 31, 2013 and 2012, respectively, and plans with an aggregate underfunded balance of \$540 million and \$612 million at December 31, 2013 and 2012, respectively.

(b) At December 31, 2013 and 2012, approximately \$429 million and \$418 million, respectively, of U.S. plan assets included participation rights under participating annuity contracts.

(c) At December 31, 2013 and 2012, defined benefit pension plan amounts not measured at fair value included \$96 million and \$137 million, respectively, of accrued receivables, and \$104 million and \$310 million, respectively, of accrued liabilities, for U.S. plans; and at December 31, 2012, \$47 million of accrued receivables, and \$46 million of accrued liabilities, for non-U.S. plans.

(d) Includes an unfunded accumulated postretirement benefit obligation of \$34 million and \$31 million at December 31, 2013 and 2012, respectively, for the U.K. plan.

## Gains and losses

For the Firm's defined benefit pension plans, fair value is used to determine the expected return on plan assets. Amortization of net gains and losses is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the projected benefit obligation or the fair value of the plan assets. Any excess is amortized over the average future service period of defined benefit pension plan participants, which for

the U.S. defined benefit pension plan is currently nine years. In addition, prior service costs are amortized over the average remaining service period of active employees expected to receive benefits under the plan when the prior service cost is first recognized. The average remaining amortization period for current prior service costs is six years.

For the Firm's OPEB plans, a calculated value that recognizes changes in fair value over a five-year period is used to determine the expected return on plan assets. This value is referred to as the market related value of assets. Amortization of net gains and losses, adjusted for gains and losses not yet recognized, is included in annual net periodic benefit cost if, as of the beginning of the year, the net gain or loss exceeds 10% of the greater of the accumulated postretirement benefit obligation or the market related value of assets. Any excess net gain or loss is amortized over the average expected lifetime of retired participants, which is currently thirteen years; however, prior service costs resulting from plan changes are amortized over the average years of service remaining to full eligibility age, which is currently two years.

The following table presents pretax pension and OPEB amounts recorded in AOCI.

December 31, (in millions)	Defined benefit pension plans					
	U.S.		Non-U.S.		OPEB plans	
	2013	2012	2013	2012	2013	2012
Net gain/(loss)	\$(1,726 )	\$(3,814 )	\$(658 )	\$(676 )	\$125	\$(133 )
Prior service credit/(cost)	196	237	14	18	1	1
Accumulated other comprehensive income/(loss), pretax, end of year	\$(1,530 )	\$(3,577 )	\$(644 )	\$(658 )	\$126	\$(132 )

The following table presents the components of net periodic benefit costs reported in the Consolidated Statements of Income and other comprehensive income for the Firm's U.S. and non-U.S. defined benefit pension, defined contribution and OPEB plans.

Year ended December 31, (in millions)	Pension plans						OPEB plans		
	U.S.		Non-U.S.					2013	2012
	2013	2012	2011	2013	2012	2011	2013	2012	2011
Components of net periodic benefit cost									
Benefits earned during the year	\$314	\$272	\$249	\$34	\$41	\$36	\$1	\$1	\$1
Interest cost on benefit obligations	447	466	451	125	126	133	35	44	51
Expected return on plan assets	(956 )	(861 )	(791 )	(142 )	(137 )	(141 )	(92 )	(90 )	(88 )
Amortization:									
Net (gain)/loss	271	289	165	49	36	48	1	(1 )	1
Prior service cost/(credit)	(41 )	(41 )	(43 )	(2 )	—	(1 )	—	—	(8 )
Net periodic defined benefit cost	35	125	31	64	66	75	(55 )	(46 )	(43 )
Other defined benefit pension plans <sup>(a)</sup>	15	15	19	14	8	12	NA	NA	NA
Total defined benefit plans	50	140	50	78	74	87	(55 )	(46 )	(43 )
Total defined contribution plans	447	409	370	321	302	285	NA	NA	NA
Total pension and OPEB cost included in compensation expense	\$497	\$549	\$420	\$399	\$376	\$372	\$(55 )	\$(46 )	\$(43 )
Changes in plan assets and benefit obligations recognized in other comprehensive income									
Net (gain)/loss arising during the year	\$(1,817)	\$434	\$1,207	\$19	\$146	\$25	\$(257)	\$(43 )	\$58
Prior service credit arising during the year	—	—	—	—	(6 )	—	—	—	—
Amortization of net loss	(271 )	(289 )	(165 )	(49 )	(36 )	(48 )	(1 )	1	(1 )
Amortization of prior service (cost)/credit	41	41	43	2	—	1	—	—	8
Foreign exchange impact and other	—	—	—	14	<sup>(a)</sup> 22	1	—	(1 )	—
Total recognized in other comprehensive income	\$(2,047)	\$186	\$1,085	\$(14 )	\$126	\$(21 )	\$(258)	\$(43 )	\$65
Total recognized in net periodic benefit cost and other comprehensive income	\$(2,012)	\$311	\$1,116	\$50	\$192	\$54	\$(313)	\$(89 )	\$22

(a) Includes various defined benefit pension plans which are individually immaterial.

## Notes to consolidated financial statements

The estimated pretax amounts that will be amortized from AOCI into net periodic benefit cost in 2014 are as follows.

(in millions)	Defined benefit pension plans		OPEB plans	
	U.S.	Non-U.S.	U.S.	Non-U.S.
Net loss/(gain)	\$35	\$47	\$—	\$—
Prior service cost/(credit)	(41)	(2)	—	—
Total	\$(6)	\$45	\$—	\$—

The following table presents the actual rate of return on plan assets for the U.S. and non-U.S. defined benefit pension and OPEB plans.

Year ended December 31,	U.S.			Non-U.S.		
	2013	2012	2011	2013	2012	2011
Actual rate of return:						
Defined benefit pension plans	15.95	% 12.66	% 0.72	% 3.74 - 23.80%	7.21 - 11.72%	(4.29)-13.12%
OPEB plans	13.88	10.10	5.22	NA	NA	NA

## Plan assumptions

JPMorgan Chase's expected long-term rate of return for U.S. defined benefit pension and OPEB plan assets is a blended average of the investment advisor's projected long-term (10 years or more) returns for the various asset classes, weighted by the asset allocation. Returns on asset classes are developed using a forward-looking approach and are not strictly based on historical returns. Equity returns are generally developed as the sum of inflation, expected real earnings growth and expected long-term dividend yield. Bond returns are generally developed as the sum of inflation, real bond yield and risk spread (as appropriate), adjusted for the expected effect on returns from changing yields. Other asset-class returns are derived from their relationship to the equity and bond markets. Consideration is also given to current market conditions and the short-term portfolio mix of each plan; as a result, in 2013 the Firm generally maintained the same expected return on assets as in the prior year.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, procedures similar to those in the U.S. are used to develop the expected long-term rate of return on plan

assets, taking into consideration local market conditions and the specific allocation of plan assets. The expected long-term rate of return on U.K. plan assets is an average of projected long-term returns for each asset class. The return on equities has been selected by reference to the yield on long-term U.K. government bonds plus an equity risk premium above the risk-free rate. The expected return on "AA" rated long-term corporate bonds is based on an implied yield for similar bonds.

The discount rate used in determining the benefit obligation under the U.S. defined benefit pension and OPEB plans was selected by reference to the yields on portfolios of bonds with maturity dates and coupons that closely match each of the plan's projected cash flows; such portfolios are derived from a broad-based universe of high-quality corporate bonds as of the measurement date. In years in which these hypothetical bond portfolios generate excess cash, such excess is assumed to be reinvested at the one-year forward rates implied by the Citigroup Pension Discount Curve published as of the measurement date. The discount rate for the U.K. defined benefit pension plan represents a rate implied from the yield curve of the year-end iBoxx £ corporate "AA" 15-year-plus bond index.

The following tables present the weighted-average annualized actuarial assumptions for the projected and accumulated postretirement benefit obligations, and the components of net periodic benefit costs, for the Firm's significant U.S. and non-U.S. defined benefit pension and OPEB plans, as of and for the periods indicated.

Weighted-average assumptions used to determine benefit obligations

December 31,	U.S.		Non-U.S.	
	2013	2012	2013	2012

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Discount rate:

Defined benefit pension plans	5.00	% 3.90	% 1.10 - 4.40%	1.40 - 4.40%
OPEB plans	4.90	3.90	—	—
Rate of compensation increase	3.50	4.00	2.75 - 4.60	2.75 - 4.10
Health care cost trend rate:				
Assumed for next year	6.50	7.00	—	—
Ultimate	5.00	5.00	—	—
Year when rate will reach ultimate	2017	2017	—	—

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## Weighted-average assumptions used to determine net periodic benefit costs

Year ended December 31, Discount rate:	U.S.			Non-U.S.		
	2013	2012	2011	2013	2012	2011
Defined benefit pension plans	3.90	% 4.60	% 5.50	% 1.40 - 4.40%	1.50 - 4.80%	1.60-5.50%
OPEB plans	3.90	4.70	5.50	—	—	—
Expected long-term rate of return on plan assets:						
Defined benefit pension plans	7.50	7.50	7.50	2.40 - 4.90	2.50 - 4.60	2.40-5.40
OPEB plans	6.25	6.25	6.25	NA	NA	NA
Rate of compensation increase	4.00	4.00	4.00	2.75 - 4.10	2.75 - 4.20	3.00-4.50
Health care cost trend rate:						
Assumed for next year	7.00	7.00	7.00	—	—	—
Ultimate	5.00	5.00	5.00	—	—	—
Year when rate will reach ultimate	2017	2017	2017	—	—	—

The following table presents the effect of a one-percentage-point change in the assumed health care cost trend rate on JPMorgan Chase's total service and interest cost and accumulated postretirement benefit obligation.

Year ended December 31, 2013 (in millions)	1-Percentage point increase	1-Percentage point decrease
Effect on total service and interest cost	\$1	\$(1)
Effect on accumulated postretirement benefit obligation	31	(26)

At December 31, 2013, the Firm increased the discount rates used to determine its benefit obligations for the U.S. defined benefit pension and OPEB plans in light of current market interest rates, which will result in a decrease in expense of approximately \$84 million for 2014. The 2014 expected long-term rate of return on U.S. defined benefit pension plan assets and U.S. OPEB plan assets are 7.00% and 6.25%, respectively. For 2014, the initial health care benefit obligation trend assumption has been set at 6.50%, and the ultimate health care trend assumption and the year to reach the ultimate rate remains at 5.00% and 2017, respectively, unchanged from 2013. As of December 31, 2013, the interest crediting rate assumption remained at 5.00% while the assumed rate of compensation increase decreased to 3.50%.

JPMorgan Chase's U.S. defined benefit pension and OPEB plan expense is sensitive to the expected long-term rate of return on plan assets and the discount rate. With all other assumptions held constant, a 25-basis point decline in the expected long-term rate of return on U.S. plan assets would result in an aggregate increase of approximately \$39 million in 2014 U.S. defined benefit pension and OPEB plan expense. A 25-basis point decline in the discount rate for the U.S. plans would result in an increase in 2014 U.S. defined benefit pension and OPEB plan expense of approximately an aggregate \$26 million and an increase in the related benefit obligations of approximately an aggregate \$254 million. A 25-basis point decrease in the interest crediting rate for the U.S. defined benefit pension plan would result in a decrease in 2014 U.S. defined benefit pension expense of approximately \$32 million and a

decrease in the related projected benefit obligations of approximately \$130 million. A 25-basis point decline in the discount rates for the non-U.S. plans would result in an increase in the 2014 non-U.S. defined benefit pension plan expense of approximately \$15 million.

## Investment strategy and asset allocation

The Firm's U.S. defined benefit pension plan assets are held in trust and are invested in a well-diversified portfolio of equity and fixed income securities, cash and cash equivalents, and alternative investments (e.g., hedge funds, private equity, real estate and real assets). Non-U.S. defined benefit pension plan assets are held in various trusts and are also invested in well-diversified portfolios of equity, fixed income and other securities. Assets of the Firm's COLI policies,

which are used to partially fund the U.S. OPEB plan, are held in separate accounts with an insurance company and are invested in funds intended to replicate equity and fixed income indices.

The investment policy for the Firm's U.S. defined benefit pension plan assets is to optimize the risk-return relationship as appropriate to the needs and goals using a global portfolio of various asset classes diversified by market segment, economic sector, and issuer. Assets are managed by a combination of internal and external investment managers.

Periodically the Firm performs a comprehensive analysis on the U.S. defined benefit pension plan asset allocations, incorporating projected asset and liability data, which focuses on the short- and long-term impact of the asset allocation on cumulative pension expense, economic cost, present value of contributions and funded status. As the U.S. defined benefit pension plan is overfunded, the investment strategy for this plan was adjusted in 2013 to provide for greater liquidity. Currently, approved asset allocation ranges are: U.S. equity 0% to 45%, international equity 0% to 40%, debt securities 0% to 80%, hedge funds 0% to 20%, and real estate 0% to 10%, real assets 0% to 10% and private equity 0% to 20%. Asset allocations are not managed to a specific target but seek to shift asset class allocations within these stated ranges. Investment strategies incorporate the economic outlook and the anticipated implications of the

## Notes to consolidated financial statements

macroeconomic environment on the various asset classes while maintaining an appropriate level of liquidity for the plan. The Firm regularly reviews the asset allocations and asset managers, as well as other factors that impact the portfolio, which is rebalanced when deemed necessary.

For the U.K. defined benefit pension plans, which represent the most significant of the non-U.S. defined benefit pension plans, the assets are invested to maximize returns subject to an appropriate level of risk relative to the plans' liabilities. In order to reduce the volatility in returns relative to the plans' liability profiles, the U.K. defined benefit pension plans' largest asset allocations are to debt securities of appropriate durations. Other assets, mainly equity securities, are then invested for capital appreciation, to provide long-term investment growth. Similar to the U.S. defined benefit pension plan, asset allocations and asset managers for the U.K. plans are reviewed regularly and the portfolio is rebalanced when deemed necessary.

Investments held by the Plans include financial instruments which are exposed to various risks such as interest rate, market and credit risks. Exposure to a concentration of credit risk is mitigated by the broad diversification of both U.S. and non-U.S. investment instruments. Additionally, the investments in each of the common/collective trust funds and registered investment companies are further diversified into various financial instruments. As of December 31, 2013, assets held by the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans do not include JPMorgan Chase common stock, except through indirect exposures through investments in third-party stock-index funds. The plans hold investments in funds that are sponsored or managed by affiliates of JPMorgan Chase in the amount of \$2.9 billion and \$1.8 billion for U.S. plans and \$242 million and \$220 million for non-U.S. plans, as of December 31, 2013 and 2012, respectively.

The following table presents the weighted-average asset allocation of the fair values of total plan assets at December 31 for the years indicated, as well as the respective approved range/target allocation by asset category, for the Firm's U.S. and non-U.S. defined benefit pension and OPEB plans.

December 31, Asset category	Defined benefit pension plans						OPEB plans <sup>(c)</sup>				
	U.S.		Non-U.S.				Target		% of plan assets		
	Target Allocation	% of plan assets 2013	% of plan assets 2012	Target Allocation	% of plan assets 2013	% of plan assets 2012	Allocation	2013	2012		
Debt securities <sup>(a)</sup>	0-80%	25	% 20	% 64	% 63	% 72	% 50	% 50	% 50	%	
Equity securities	0-85	48	41	35	36	27	50	50	50		
Real estate	0-10	4	5	—	—	—	—	—	—		
Alternatives <sup>(b)</sup>	0-50	23	34	1	1	1	—	—	—		
Total	100%	100	% 100	% 100	% 100	% 100	% 100	% 100	% 100	%	

(a) Debt securities primarily include corporate debt, U.S. federal, state, local and non-U.S. government, and mortgage-backed securities.

(b) Alternatives primarily include limited partnerships.

(c) Represents the U.S. OPEB plan only, as the U.K. OPEB plan is unfunded.

## Fair value measurement of the plans' assets and liabilities

For information on fair value measurements, including descriptions of level 1, 2, and 3 of the fair value hierarchy and the valuation methods employed by the Firm, see Note 3 on pages 195–215 of this Annual Report.

## Pension and OPEB plan assets and liabilities measured at fair value

December 31, 2013 (in millions)	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans <sup>(i)</sup>		
	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Total fair value
Cash and cash equivalents	\$62	\$—	\$—	\$62	\$221	\$3	\$224
Equity securities:							
Capital equipment	1,084	—	—	1,084	86	17	103
Consumer goods	1,085	—	—	1,085	225	50	275
Banks and finance companies	737	—	—	737	233	29	262
Business services	510	—	—	510	209	14	223
Energy	292	—	—	292	64	20	84
Materials	344	—	—	344	36	9	45
Real Estate	38	—	—	38	—	1	1
Other	1,337	18	4	1,359	25	103	128
Total equity securities	5,427	18	4	5,449	878	243	1,121
Common/collective trust funds <sup>(a)</sup>	—	1,308	4	1,312	98	248	346
Limited partnerships: <sup>(b)</sup>							
Hedge funds	—	355	718	1,073	—	—	—
Private equity	—	—	1,969	1,969	—	—	—
Real estate	—	—	558	558	—	—	—
Real assets <sup>(c)</sup>	—	—	271	271	—	—	—
Total limited partnerships	—	355	3,516	3,871	—	—	—
Corporate debt securities <sup>(d)</sup>	—	1,223	7	1,230	—	787	787
U.S. federal, state, local and non-U.S. government debt securities	343	299	—	642	—	777	777
Mortgage-backed securities	37	50	—	87	73	—	73
Derivative receivables	—	30	—	30	—	302	302
Other <sup>(e)</sup>	1,214	41	430	1,685	148	52	200
Total assets measured at fair value <sup>(f)(g)</sup>	\$7,083	\$3,324	\$3,961	\$14,368	\$1,418	\$2,412	\$3,830
Derivative payables	\$—	\$(6 )	\$—	\$(6 )	\$—	\$(298 )	\$(298 )
Total liabilities measured at fair value <sup>(h)</sup>	\$—	\$(6 )	\$—	\$(6 )	\$—	\$(298 )	\$(298 )

## Notes to consolidated financial statements

December 31, 2012 (in millions)	U.S. defined benefit pension plans				Non-U.S. defined benefit pension plans <sup>(i)</sup>		
	Level 1	Level 2	Level 3	Total fair value	Level 1	Level 2	Total fair value
Cash and cash equivalents	\$ 162	\$—	\$—	\$ 162	\$ 142	\$—	\$ 142
Equity securities:							
Capital equipment	702	6	—	708	115	15	130
Consumer goods	744	4	—	748	136	32	168
Banks and finance companies	425	54	—	479	94	23	117
Business services	424	—	—	424	125	8	133
Energy	192	—	—	192	54	12	66
Materials	211	—	—	211	30	6	36
Real estate	18	—	—	18	10	—	10
Other	1,107	42	4	1,153	19	71	90
Total equity securities	3,823	106	4	3,933	583	167	750
Common/collective trust funds <sup>(a)</sup>	412	1,660	199	2,271	62	192	254
Limited partnerships: <sup>(b)</sup>							
Hedge funds	—	878	1,166	2,044	—	—	—
Private equity	—	—	1,743	1,743	—	—	—
Real estate	—	—	467	467	—	—	—
Real assets <sup>(c)</sup>	—	—	311	311	—	—	—
Total limited partnerships	—	878	3,687	4,565	—	—	—
Corporate debt securities <sup>(d)</sup>	—	1,114	1	1,115	—	765	765
U.S. federal, state, local and non-U.S. government debt securities	—	537	—	537	—	1,237	1,237
Mortgage-backed securities	107	30	—	137	100	—	100
Derivative receivables	3	5	—	8	109	—	109
Other <sup>(e)</sup>	7	34	420	461	21	67	88
Total assets measured at fair value <sup>(f)(g)</sup>	\$ 4,514	\$ 4,364	\$ 4,311	\$ 13,189	\$ 1,017	\$ 2,428	\$ 3,445
Derivative payables	\$—	\$ (4 )	\$—	\$ (4 )	\$ (116 )	\$—	\$ (116 )
Total liabilities measured at fair value <sup>(h)</sup>	\$—	\$ (4 )	\$—	\$ (4 )	\$ (116 )	\$—	\$ (116 )

(a) At December 31, 2013 and 2012, common/collective trust funds primarily included a mix of short-term investment funds, domestic and international equity investments (including index) and real estate funds.

(b) Unfunded commitments to purchase limited partnership investments for the plans were \$1.6 billion and \$1.4 billion for 2013 and 2012, respectively.

(c) Real assets include investments in productive assets such as agriculture, energy rights, mining and timber properties and exclude raw land to be developed for real estate purposes.

(d) Corporate debt securities include debt securities of U.S. and non-U.S. corporations.

Other consists of money markets, exchange-traded funds and participating and non-participating annuity contracts.

Money markets and exchange-traded funds are primarily classified within level 1 of the fair value hierarchy given

(e) they are valued using market observable prices. Participating and non-participating annuity contracts are classified within level 3 of the fair value hierarchy due to lack of market mechanisms for transferring each policy and surrender restrictions.

At December 31, 2013 and 2012, the fair value of investments valued at NAV were \$2.7 billion and \$4.4 billion,

(f) respectively, which were classified within the valuation hierarchy as follows: \$100 million and \$400 million in level 1, \$1.9 billion and \$2.5 billion in level 2 and \$700 million and \$1.5 billion in level 3.

(g) At December 31, 2013 and 2012, excluded U.S. defined benefit pension plan receivables for investments sold and dividends and interest receivables of \$96 million and \$137 million, respectively; and at December 31, 2012, excluded non-U.S. defined benefit pension plan receivables for investments sold and dividends and interest receivables of \$47 million.

(h) At December 31, 2013 and 2012, excluded \$102 million and \$306 million, respectively, of U.S. defined benefit pension plan payables for investments purchased; and \$2 million and \$4 million, respectively, of other liabilities; and at December 31, 2012, excluded non-U.S. defined benefit pension plan payables for investments purchased of \$46 million.

(i) There were no assets or liabilities classified as level 3 for the non-U.S. defined benefit pension plans as of December 31, 2013 and 2012.

The Firm's U.S. OPEB plan was partially funded with COLI policies of \$1.7 billion and \$1.6 billion at December 31, 2013 and 2012, respectively, which were classified in level 3 of the valuation hierarchy.

## Changes in level 3 fair value measurements using significant unobservable inputs

Year ended December 31, 2013 (in millions)	Fair value, January 1, 2013	Actual return on plan assets		Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2013
		Realized gains/(losses)	Unrealized gains/(losses)			
U.S. defined benefit pension plans						
Equities	\$4	\$—	\$—	\$—	\$—	\$4
Common/collective trust funds	199	59	(32)	(222)	—	4
Limited partnerships:						
Hedge funds	1,166	137	14	(593)	(6)	718
Private equity	1,743	108	170	(4)	(48)	1,969
Real estate	467	21	44	26	—	558
Real assets	311	4	12	(98)	42	271
Total limited partnerships	3,687	270	240	(669)	(12)	3,516
Corporate debt securities	1	—	—	—	6	7
Other	420	—	10	—	—	430
Total U.S. defined benefit pension plans	\$4,311	\$329	\$218	\$(891)	\$(6)	\$3,961
OPEB plans						
COLI	\$1,554	\$—	\$195	\$—	\$—	\$1,749
Total OPEB plans	\$1,554	\$—	\$195	\$—	\$—	\$1,749
Year ended December 31, 2012 (in millions)	Fair value, January 1, 2012	Actual return on plan assets		Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2012
		Realized gains/(losses)	Unrealized gains/(losses)			
U.S. defined benefit pension plans						
Equities	\$1	\$—	\$(1)	\$—	\$4	\$4
Common/collective trust funds	202	2	22	(27)	—	199
Limited partnerships:						
Hedge funds	1,039	1	71	55	—	1,166
Private equity	1,367	59	54	263	—	1,743
Real estate	306	16	1	144	—	467
Real assets	264	—	10	37	—	311
Total limited partnerships	2,976	76	136	499	—	3,687
Corporate debt securities	2	—	—	(1)	—	1
Other	427	—	(7)	—	—	420
Total U.S. defined benefit pension plans	\$3,608	\$78	\$150	\$471	\$4	\$4,311
OPEB plans						
COLI	\$1,427	\$—	\$127	\$—	\$—	\$1,554
Total OPEB plans	\$1,427	\$—	\$127	\$—	\$—	\$1,554

## Notes to consolidated financial statements

Year ended December 31, 2011 (in millions)	Fair value, January 1, 2011	Actual return on plan assets		Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2011
		Realized gains/(losses)	Unrealized gains/(losses)			
U.S. defined benefit pension plans						
Equities	\$—	\$—	\$—	\$—	\$1	\$1
Common/collective trust funds	194	35	1	(28	) —	202
Limited partnerships:						
Hedge funds	1,160	(16	) 27	(76	) (56	) 1,039
Private equity	1,232	56	2	77	—	1,367
Real estate	304	8	40	14	(60	) 306
Real assets	—	5	(7	) 150	116	264
Total limited partnerships	2,696	53	62	165	—	2,976
Corporate debt securities	1	—	—	1	—	2
Other	387	—	41	(1	) —	427
Total U.S. defined benefit pension plans	\$3,278	\$88	\$104	\$137	\$1	\$3,608
OPEB plans						
COLI	\$1,381	\$—	\$70	\$(24	) \$—	\$1,427
Total OPEB plans	\$1,381	\$—	\$70	\$(24	) \$—	\$1,427

## Estimated future benefit payments

The following table presents benefit payments expected to be paid, which include the effect of expected future service, for the years indicated. The OPEB medical and life insurance payments are net of expected retiree contributions.

Year ended December 31, (in millions)	U.S. defined benefit pension plans	Non-U.S. defined benefit pension plans	OPEB before Medicare Part D subsidy	Medicare Part D subsidy
2014	\$703	\$112	\$86	\$10
2015	731	118	85	11
2016	872	123	83	12
2017	907	129	81	12
2018	931	140	78	13
Years 2019–2023	4,139	785	345	47

## Note 10 – Employee stock-based incentives

## Employee stock-based awards

In 2013, 2012 and 2011, JPMorgan Chase granted long-term stock-based awards to certain employees under its Long-Term Incentive Plan, which was last amended in May 2011 (“LTIP”). Under the terms of the LTIP, as of December 31, 2013, 266 million shares of common stock were available for issuance through May 2015. The LTIP is the only active plan under which the Firm is currently granting stock-based incentive awards. In the following discussion, the LTIP, plus prior Firm plans and plans assumed as the result of acquisitions, are referred to collectively as the “LTI Plans,” and such plans constitute the Firm’s stock-based incentive plans.

Restricted stock units (“RSUs”) are awarded at no cost to the recipient upon their grant. Generally, RSUs are granted annually and vest at a rate of 50% after two years and 50% after three years and are converted into shares of common stock as of the vesting date. In addition, RSUs typically include full-career eligibility provisions, which allow employees to continue to vest upon voluntary termination, subject to post-employment and other restrictions based on age or service-related requirements. All RSUs awards are subject to forfeiture until vested and contain clawback provisions that may result in cancellation under certain specified circumstances. RSUs entitle the recipient to receive cash payments equivalent to any dividends paid on the underlying common stock during the period the RSUs are outstanding and, as such, are considered participating securities as discussed in Note 24 on page 311 of this Annual Report.

Under the LTI Plans, stock options and stock appreciation rights (“SARs”) have generally been granted with an exercise price equal to the fair value of JPMorgan Chase’s common stock on the grant date. The Firm typically awards SARs to certain key employees once per year; the Firm also periodically grants employee stock options and SARs to individual employees. The 2013, 2012 and 2011 grants of SARs become exercisable ratably over five years (i.e., 20% per year) and contain clawback provisions similar to RSUs. The 2013, 2012 and 2011 grants of SARs contain full-career eligibility provisions. SARs generally expire ten years after the grant date.

The Firm separately recognizes compensation expense for each tranche of each award as if it were a separate award with its own vesting date. Generally, for each tranche granted, compensation expense is recognized on a straight-line basis from the grant date until the vesting date of the respective tranche, provided that the employees will not become full-career eligible during the vesting period. For awards with full-career eligibility provisions and awards granted with no future substantive service requirement, the Firm accrues the estimated value of awards expected to be awarded to employees as of the grant date without giving consideration to the impact of post-employment restrictions. For each tranche granted to employees who will become full-career eligible during the vesting period, compensation expense is recognized on a straight-line basis from the grant date until the earlier of the employee’s full-career eligibility date or the vesting date of the respective tranche.

The Firm’s policy for issuing shares upon settlement of employee stock-based incentive awards is to issue either new shares of common stock or treasury shares. During 2013, 2012 and 2011, the Firm settled all of its employee stock-based awards by issuing treasury shares.

In January 2008, the Firm awarded to its Chairman and Chief Executive Officer up to 2 million SARs. The terms of this award are distinct from, and more restrictive than, other equity grants regularly awarded by the Firm. Effective January 2013, the Compensation Committee and Board of Directors determined that, while all the requirements for vesting of these awards have been met, vesting should be deferred for a period of up to 18 months (i.e., up to July 22, 2014), to enable the Firm to make progress against the Firm’s strategic priorities and performance goals, including remediation relating to the CIO matter. The SARs, which will expire in January 2018, will become exercisable no earlier than July 22, 2014, and have an exercise price of \$39.83 (the price of JPMorgan Chase common stock on the date of grant). Vesting will be subject to a Board determination taking into consideration the extent of such progress and such other factors as it deems relevant. The expense related to this award is dependent on changes in fair value of the SARs through the date when the vested number of SARs are determined, if any, and the cumulative expense is recognized ratably over the service period, which was initially assumed to be five years but, effective in the first quarter of 2013, has been extended to six and one-half years. The Firm recognized \$14 million, \$5 million and \$(4) million in compensation expense in 2013, 2012 and 2011, respectively, for this award.



## Notes to consolidated financial statements

## RSUs, employee stock options and SARs activity

Compensation expense for RSUs is measured based on the number of shares granted multiplied by the stock price at the grant date, and for employee stock options and SARs, is measured at the grant date using the Black-Scholes valuation model. Compensation expense for these awards is recognized in net income as described previously. The following table summarizes JPMorgan Chase's RSUs, employee stock options and SARs activity for 2013.

Year ended December 31, 2013 (in thousands, except weighted-average data, and where otherwise stated)	RSUs		Options/SARs		Weighted-average remaining contractual life (in years)	Aggregate intrinsic value
	Number of shares	Weighted-average grant date fair value	Number of awards	Weighted-average exercise price		
Outstanding, January 1	142,006	\$ 40.49	115,906	\$ 42.44		
Granted	46,171	46.92	12,563	46.77		
Exercised or vested	(62,331)	43.28	(35,825)	37.32		
Forfeited	(4,605)	40.77	(4,007)	39.44		
Canceled	NA	NA	(1,562)	104.49		
Outstanding, December 31	121,241	\$ 41.47	87,075	\$ 44.24	5.6	\$1,622,238
Exercisable, December 31	NA	NA	46,855	47.50	4.2	904,017

The total fair value of RSUs that vested during the years ended December 31, 2013, 2012 and 2011, was \$2.9 billion, \$2.8 billion and \$5.4 billion, respectively. The weighted-average grant date per share fair value of stock options and SARs granted during the years ended December 31, 2013, 2012 and 2011, was \$9.58, \$8.89 and \$13.04, respectively. The total intrinsic value of options exercised during the years ended December 31, 2013, 2012 and 2011, was \$507 million, \$283 million and \$191 million, respectively.

## Compensation expense

The Firm recognized the following noncash compensation expense related to its various employee stock-based incentive plans in its Consolidated Statements of Income.

Year ended December 31, (in millions)	2013	2012	2011
Cost of prior grants of RSUs and SARs that are amortized over their applicable vesting periods	\$1,440	\$1,810	\$1,986
Accrual of estimated costs of RSUs and SARs to be granted in future periods including those to full-career eligible employees	779	735	689
Total noncash compensation expense related to employee stock-based incentive plans	\$2,219	\$2,545	\$2,675

At December 31, 2013, approximately \$848 million (pretax) of compensation cost related to unvested awards had not yet been charged to net income. That cost is expected to be amortized into compensation expense over a weighted-average period of 1.0 year. The Firm does not capitalize any compensation cost related to share-based compensation awards to employees.

## Cash flows and tax benefits

Income tax benefits related to stock-based incentive arrangements recognized in the Firm's Consolidated Statements of Income for the years ended December 31, 2013, 2012 and 2011, were \$865 million, \$1.0 billion and \$1.0 billion, respectively.

The following table sets forth the cash received from the exercise of stock options under all stock-based incentive arrangements, and the actual income tax benefit realized related to tax deductions from the exercise of the stock options.

Year ended December 31, (in millions)	2013	2012	2011
Cash received for options exercised	\$166	\$333	\$354
Tax benefit realized <sup>(a)</sup>	42	53	31

(a) The tax benefit realized from dividends or dividend equivalents paid on equity-classified share-based payment awards that are charged to retained earnings are recorded as an increase to additional paid-in capital and included in

the pool of excess tax benefits available to absorb tax deficiencies on share-based payment awards.

#### Valuation assumptions

The following table presents the assumptions used to value employee stock options and SARs granted during the years ended December 31, 2013, 2012 and 2011, under the Black-Scholes valuation model.

Year ended December 31,	2013		2012		2011	
Weighted-average annualized valuation assumptions						
Risk-free interest rate	1.18	%	1.19	%	2.58	%
Expected dividend yield	2.66		3.15		2.20	
Expected common stock price volatility	28		35		34	
Expected life (in years)	6.6		6.6		6.5	

The expected dividend yield is determined using forward-looking assumptions. The expected volatility assumption is derived from the implied volatility of JPMorgan Chase's stock options. The expected life assumption is an estimate of the length of time that an employee might hold an option or SAR before it is exercised or canceled, and the assumption is based on the Firm's historical experience.

## Note 11 – Noninterest expense

The following table presents the components of noninterest expense.

Year ended December 31, (in millions)	2013	2012	2011
Compensation expense	\$30,810	\$30,585	\$29,037
Noncompensation expense:			
Occupancy expense	3,693	3,925	3,895
Technology, communications and equipment expense	5,425	5,224	4,947
Professional and outside services	7,641	7,429	7,482
Marketing	2,500	2,577	3,143
Other expense <sup>(a)(b)</sup>	19,761	14,032	13,559
Amortization of intangibles	637	957	848
Total noncompensation expense	39,657	34,144	33,874
Total noninterest expense	\$70,467	\$64,729	\$62,911

(a) Included firmwide legal expense of \$11.1 billion, \$5.0 billion and \$4.9 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

(b) Included FDIC-related expense of \$1.5 billion, \$1.7 billion and \$1.5 billion for the years ended December 31, 2013, 2012 and 2011, respectively.

## Note 12 – Securities

Securities are classified as AFS, held-to-maturity (“HTM”) or trading. Securities classified as trading assets are discussed in Note 3 on pages 195–215 of this Annual Report. Predominantly all of the Firm’s AFS and HTM investment securities (the “investment securities portfolio”) is held by CIO in connection with its asset-liability management objectives. At December 31, 2013, the average credit rating of the debt securities comprising the investment securities portfolio was AA+ (based upon external ratings where available, and where not available, based primarily upon internal ratings which correspond to ratings as defined by S&P and Moody’s). AFS securities are carried at fair value on the Consolidated Balance Sheets. Unrealized gains and losses, after any applicable hedge accounting adjustments, are reported as net increases or decreases to accumulated other comprehensive income/(loss). The specific identification method is used to determine realized gains and losses on AFS securities, which are included in securities gains/(losses) on the Consolidated Statements of Income. HTM debt securities, which management has the intent and ability to hold until maturity, are carried at amortized cost on the Consolidated Balance Sheets. For both AFS and HTM debt securities, purchase discounts or premiums are amortized into interest income.

## Other-than-temporary impairment

AFS debt and equity securities and HTM debt securities in unrealized loss positions are analyzed as part of the Firm’s ongoing assessment of other-than-temporary impairment (“OTTI”). For most types of debt securities, the Firm considers a decline in fair value to be other-than-temporary when the Firm does not expect to recover the entire amortized cost basis of the security. For beneficial interests

in securitizations that are rated below “AA” at their acquisition, or that can be contractually prepaid or otherwise settled in such a way that the Firm would not recover substantially all of its recorded investment, the Firm considers an OTTI to have occurred when there is an adverse change in expected cash flows. For AFS equity securities, the Firm considers a decline in fair value to be other-than-temporary if it is probable that the Firm will not recover its amortized cost basis.

Potential OTTI is considered using a variety of factors, including the length of time and extent to which the market value has been less than cost; adverse conditions specifically related to the industry, geographic area or financial condition of the issuer or underlying collateral of a security; payment structure of the security; changes to the rating of the security by a rating agency; the volatility of the fair value changes; and the Firm’s intent and ability to hold the security until recovery.

For AFS debt securities, the Firm recognizes OTTI losses in earnings if the Firm has the intent to sell the debt security, or if it is more likely than not that the Firm will be required to sell the debt security before recovery of its amortized cost basis. In these circumstances the impairment loss is equal to the full difference between the amortized cost basis and the fair value of the securities. For debt securities in an unrealized loss position, including AFS securities the Firm has the intent and ability to hold, the expected cash flows to be received from the securities are evaluated to determine if a credit loss exists. In the event of a credit loss, only the amount of impairment associated with the credit loss is recognized in income. Amounts relating to factors other than credit losses are recorded in OCI. The Firm's cash flow evaluations take into account the factors noted above and expectations of relevant market and economic data as of the end of the reporting period. For securities issued in a securitization, the Firm estimates cash flows considering underlying loan-level data and structural features of the securitization, such as subordination, excess spread, overcollateralization or other forms of credit enhancement, and compares the losses projected for the underlying collateral ("pool losses") against the level of credit enhancement in the securitization structure to determine whether these features are sufficient to absorb the pool losses, or whether a credit loss exists. The Firm also performs other analyses to support its cash flow projections, such as first-loss analyses or stress scenarios.

For equity securities, OTTI losses are recognized in earnings if the Firm intends to sell the security. In other cases the Firm considers the relevant factors noted above, as well as the Firm's intent and ability to retain its investment for a period of time sufficient to allow for any anticipated recovery in market value, and whether evidence exists to support a realizable value equal to or greater than the carrying value. Any impairment loss on an equity security is equal to the full difference between the amortized cost basis and the fair value of the security.

## Notes to consolidated financial statements

## Realized gains and losses

The following table presents realized gains and losses and credit losses that were recognized in income from AFS securities.

Year ended December 31, (in millions)	2013	2012	2011
Realized gains	\$1,302	\$2,610	\$1,811
Realized losses	(614 )	(457 )	(142 )
Net realized gains <sup>(a)</sup>	688	2,153	1,669
OTTI losses			
Credit-related	(1 )	(28 )	(76 )
Securities the Firm intends to sell	(20 ) <sup>(b)</sup>	(15 ) <sup>(b)</sup>	—
Total OTTI losses recognized in income	(21 )	(43 )	(76 )
Net securities gains	\$667	\$2,110	\$1,593

<sup>(a)</sup> Proceeds from securities sold were within approximately 2% of amortized cost in 2013, and within approximately 4% of amortized cost in 2012 and 2011.

<sup>(b)</sup> Excludes realized losses of \$12 million and \$24 million for the years ended December 31, 2013 and 2012, respectively that had been previously reported as an OTTI loss due to the intention to sell the securities.

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The amortized costs and estimated fair values of the investment securities portfolio were as follows for the dates indicated.

December 31, (in millions)	2013				2012			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Available-for-sale debt securities								
Mortgage-backed securities:								
U.S. government agencies <sup>(a)</sup>	\$76,428	\$ 2,364	\$977	\$77,815	\$93,693	\$ 4,708	\$ 13	\$98,388
Residential:								
Prime and Alt-A	2,744	61	27	2,778	1,853	83	3	1,933
Subprime	908	23	1	930	825	28	—	853
Non-U.S.	57,448	1,314	1	58,761	70,358	1,524	29	71,853
Commercial	15,891	560	26	16,425	12,268	948	13	13,203
Total mortgage-backed securities	153,419	4,322	1,032	156,709	178,997	7,291	58	186,230
U.S. Treasury and government agencies <sup>(a)</sup>	21,310	385	306	21,389	12,022	116	8	12,130
Obligations of U.S. states and municipalities	29,741	707	987	29,461	19,876	1,845	10	21,711
Certificates of deposit	1,041	1	1	1,041	2,781	4	2	2,783
Non-U.S. government debt securities	55,507	863	122	56,248	65,168	901	25	66,044
Corporate debt securities	21,043	498	29	21,512	37,999	694	84	38,609
Asset-backed securities:								
Collateralized loan obligations	28,130	236	136	28,230	27,483	465	52	27,896
Other	12,062	186	3	12,245	12,816	166	11	12,971
Total available-for-sale debt securities	322,253	7,198	2,616	326,835	357,142	11,482	250	368,374
Available-for-sale equity securities	3,125	17	—	3,142	2,750	21	—	2,771
Total available-for-sale securities	\$325,378	\$ 7,215	\$2,616	\$329,977	\$359,892	\$ 11,503	\$250	\$371,145
Total held-to-maturity securities <sup>(b)</sup>	\$24,026	\$ 22	\$317	\$23,731	\$7	\$ 1	\$—	\$8

<sup>(a)</sup> Includes total U.S. government-sponsored enterprise obligations with fair values of \$67.0 billion and \$84.0 billion at December 31, 2013 and 2012, respectively, which were predominantly mortgage-related.

<sup>(b)</sup> As of December 31, 2013, consists of MBS issued by U.S. government-sponsored enterprises with an amortized cost of \$23.1 billion and obligations of U.S. states and municipalities with an amortized cost of \$920 million.

## Securities impairment

The following tables present the fair value and gross unrealized losses for the investment securities portfolio by aging category at December 31, 2013 and 2012.

December 31, 2013 (in millions)	Securities with gross unrealized losses				Total fair value	Total gross unrealized losses
	Less than 12 months	Gross unrealized losses	12 months or more	Gross unrealized losses		
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	\$20,293	\$895	\$1,150	\$82	\$21,443	\$977
Residential:						
Prime and Alt-A	1,061	27	—	—	1,061	27
Subprime	152	1	—	—	152	1
Non-U.S.	—	—	158	1	158	1
Commercial	3,980	26	—	—	3,980	26
Total mortgage-backed securities	25,486	949	1,308	83	26,794	1,032
U.S. Treasury and government agencies	6,293	250	237	56	6,530	306
Obligations of U.S. states and municipalities	15,387	975	55	12	15,442	987
Certificates of deposit	988	1	—	—	988	1
Non-U.S. government debt securities	11,286	110	821	12	12,107	122
Corporate debt securities	1,580	21	505	8	2,085	29
Asset-backed securities:						
Collateralized loan obligations	18,369	129	393	7	18,762	136
Other	1,114	3	—	—	1,114	3
Total available-for-sale debt securities	80,503	2,438	3,319	178	83,822	2,616
Available-for-sale equity securities	—	—	—	—	—	—
Held-to-maturity securities	20,745	317	—	—	20,745	317
Total securities with gross unrealized losses	\$101,248	\$2,755	\$3,319	\$178	\$104,567	\$2,933

## Notes to consolidated financial statements

December 31, 2012 (in millions)	Securities with gross unrealized losses				Total fair value	Total gross unrealized losses
	Less than 12 months		12 months or more			
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses		
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	\$2,440	\$13	\$—	\$—	\$2,440	\$13
Residential:						
Prime and Alt-A	218	2	76	1	294	3
Subprime	—	—	—	—	—	—
Non-U.S.	2,442	6	734	23	3,176	29
Commercial	1,159	8	312	5	1,471	13
Total mortgage-backed securities	6,259	29	1,122	29	7,381	58
U.S. Treasury and government agencies	4,198	8	—	—	4,198	8
Obligations of U.S. states and municipalities	907	10	—	—	907	10
Certificates of deposit	741	2	—	—	741	2
Non-U.S. government debt securities	14,527	21	1,927	4	16,454	25
Corporate debt securities	2,651	10	5,641	74	8,292	84
Asset-backed securities:						
Collateralized loan obligations	6,328	17	2,063	35	8,391	52
Other	2,076	7	275	4	2,351	11
Total available-for-sale debt securities	37,687	104	11,028	146	48,715	250
Available-for-sale equity securities	—	—	—	—	—	—
Held-to-maturity securities	—	—	—	—	—	—
Total securities with gross unrealized losses	\$37,687	\$104	\$11,028	\$146	\$48,715	\$250

## Other-than-temporary impairment

The following table presents OTTI losses that are included in the securities gains and losses table above.

Year ended December 31, (in millions)	2013	2012	2011
Debt securities the Firm does not intend to sell that have credit losses			
Total OTTI <sup>(a)</sup>	\$(1 )	\$(113 )	\$(27 )
Losses recorded in/(reclassified from) AOCI	—	85	(49 )
Total credit losses recognized in income <sup>(b)</sup>	(1 )	(28 )	(76 )
Securities the Firm intends to sell	(20 ) <sup>(c)</sup>	(15 ) <sup>(c)</sup>	—
Total OTTI losses recognized in income	\$(21 )	\$(43 )	\$(76 )

For initial OTTI, represents the excess of the amortized cost over the fair value of AFS debt securities. For

(a) subsequent impairments of the same security, represents additional declines in fair value subsequent to previously recorded OTTI, if applicable.

(b) Subsequent credit losses may be recorded on securities without a corresponding further decline in fair value if there has been a decline in expected cash flows.

(c) Excludes realized losses of \$12 million and \$24 million for the years ended December 31, 2013 and 2012, respectively that had been previously reported as an OTTI loss due to the intention to sell the securities.

## Changes in the credit loss component of credit-impaired debt securities

The following table presents a rollforward for the years ended December 31, 2013, 2012 and 2011, of the credit loss component of OTTI losses that have been recognized in income, related to AFS debt securities that the Firm does not intend to sell.

Year ended December 31, (in millions)	2013	2012	2011
Balance, beginning of period	\$522	\$708	\$632
Additions:			
Newly credit-impaired securities	1	21	4
Losses reclassified from other comprehensive income on previously credit-impaired securities	—	7	72
Reductions:			
Sales and redemptions of credit-impaired securities	(522)	(214)	—
Balance, end of period	\$1	\$522	\$708

Gross unrealized losses, including those that have been in an unrealized loss position for 12 months or more, have generally increased since December 31, 2012. The Firm has recognized the unrealized losses on securities it intends to sell. As of December 31, 2013, the Firm does not intend to sell any securities with a loss position in AOCI, and it is not likely that the Firm will be required to sell these securities before recovery of their amortized cost basis. Except for the securities reported in the table above for which credit losses have been recognized in income, the Firm believes that the securities with an unrealized loss in AOCI are not other-than-temporarily impaired as of December 31, 2013.

## Notes to consolidated financial statements

## Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at December 31, 2013, of JPMorgan Chase's investment securities portfolio by contractual maturity.

By remaining maturity December 31, 2013 (in millions)	Due in one year or less	Due after one year through five years	Due after five years through 10 years	Due after 10 years <sup>(c)</sup>	Total	
Available-for-sale debt securities						
Mortgage-backed securities <sup>(a)</sup>						
Amortized cost	\$209	\$13,689	\$8,239	\$131,282	\$153,419	
Fair value	210	14,117	8,489	133,893	156,709	
Average yield <sup>(b)</sup>	2.17	%2.10	%2.83	%2.93	%2.85	%
U.S. Treasury and government agencies <sup>(a)</sup>						
Amortized cost	\$8,781	\$10,246	\$1,425	\$858	\$21,310	
Fair value	8,792	10,257	1,425	915	21,389	
Average yield <sup>(b)</sup>	0.36	%0.39	%0.34	%0.59	%0.38	%
Obligations of U.S. states and municipalities						
Amortized cost	\$57	\$479	\$1,644	\$27,561	\$29,741	
Fair value	58	505	1,664	27,234	29,461	
Average yield <sup>(b)</sup>	3.12	%4.91	%4.27	%6.19	%6.06	%
Certificates of deposit						
Amortized cost	\$990	\$51	\$—	\$—	\$1,041	
Fair value	988	53	—	—	1,041	
Average yield <sup>(b)</sup>	6.37	%3.28	%—	%—	%6.22	%
Non-U.S. government debt securities						
Amortized cost	\$11,210	\$16,999	\$24,735	\$2,563	\$55,507	
Fair value	11,223	17,191	25,166	2,668	56,248	
Average yield <sup>(b)</sup>	2.72	%2.26	%1.39	%1.64	%1.94	%
Corporate debt securities						
Amortized cost	\$2,871	\$12,318	\$5,854	\$—	\$21,043	
Fair value	2,873	12,638	6,001	—	21,512	
Average yield <sup>(b)</sup>	1.94	%2.41	%2.60	%—	%2.40	%
Asset-backed securities						
Amortized cost	\$42	\$2,412	\$15,135	\$22,603	\$40,192	
Fair value	42	2,438	15,258	22,737	40,475	
Average yield <sup>(b)</sup>	2.17	%1.98	%1.74	%1.80	%1.79	%
Total available-for-sale debt securities						
Amortized cost	\$24,160	\$56,194	\$57,032	\$184,867	\$322,253	
Fair value	24,186	57,199	58,003	187,447	326,835	
Average yield <sup>(b)</sup>	1.91	%1.93	%1.87	%3.25	%2.67	%
Available-for-sale equity securities						
Amortized cost	\$—	\$—	\$—	\$3,125	\$3,125	
Fair value	—	—	—	3,142	3,142	
Average yield <sup>(b)</sup>	—	%—	%—	%0.20	%0.20	%
Total available-for-sale securities						
Amortized cost	\$24,160	\$56,194	\$57,032	\$187,992	\$325,378	
Fair value	24,186	57,199	58,003	190,589	329,977	
Average yield <sup>(b)</sup>	1.91	%1.93	%1.87	%3.20	%2.65	%

Total held-to-maturity securities					
Amortized cost	\$—	\$3	\$1	\$24,022	\$24,026
Fair value	—	4	1	23,726	23,731
Average yield <sup>(b)</sup>	—	%6.86	%6.48	%3.53	%3.53

(a) U.S. government-sponsored enterprises were the only issuers whose securities exceeded 10% of JPMorgan Chase's total stockholders' equity at December 31, 2013.

(b) Average yield is computed using the effective yield of each security owned at the end of the period, weighted based on the amortized cost of each security. The effective yield considers the contractual coupon, amortization of premiums and accretion of discounts, and the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable. The effective yield excludes unscheduled principal prepayments; and accordingly, actual maturities of securities may differ from their contractual or expected maturities as certain securities may be prepaid.

(c) Includes securities with no stated maturity. Substantially all of the Firm's residential mortgage-backed securities and collateralized mortgage obligations are due in 10 years or more, based on contractual maturity. The estimated duration, which reflects anticipated future prepayments based on a consensus of dealers in the market, is approximately five years for agency residential mortgage-backed securities, two years for agency residential collateralized mortgage obligations and three years for nonagency residential collateralized mortgage obligations.

## Note 13 – Securities financing activities

JPMorgan Chase enters into resale agreements, repurchase agreements, securities borrowed transactions and securities loaned transactions (collectively, “securities financing agreements”) primarily to finance the Firm’s inventory positions, acquire securities to cover short positions, accommodate customers’ financing needs, and settle other securities obligations.

Securities financing agreements are treated as collateralized financings on the Firm’s Consolidated Balance Sheets. Resale and repurchase agreements are generally carried at the amounts at which the securities will be subsequently sold or repurchased. Securities borrowed and securities loaned transactions are generally carried at the amount of cash collateral advanced or received. Where appropriate under applicable accounting guidance, resale and repurchase agreements with the same counterparty are reported on a net basis. For further discussion of the offsetting of assets and liabilities, see Note 1 on pages 189–191 of this Annual Report. Fees received and paid in

connection with securities financing agreements are recorded in interest income and interest expense on the Consolidated Statements of Income.

The Firm has elected the fair value option for certain securities financing agreements. For further information regarding the fair value option, see Note 4 on pages 215–218 of this Annual Report. The securities financing agreements for which the fair value option has been elected are reported within securities purchased under resale agreements; securities loaned or sold under repurchase agreements; and securities borrowed on the Consolidated Balance Sheets. Generally, for agreements carried at fair value, current-period interest accruals are recorded within interest income and interest expense, with changes in fair value reported in principal transactions revenue. However, for financial instruments containing embedded derivatives that would be separately accounted for in accordance with accounting guidance for hybrid instruments, all changes in fair value, including any interest elements, are reported in principal transactions revenue.

The following table presents as of December 31, 2013 and 2012, the gross and net securities purchased under resale agreements and securities borrowed. Securities purchased under resale agreements have been presented on the Consolidated Balance Sheets net of securities sold under repurchase agreements where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement, and where the other relevant criteria have been met. Where such a legal opinion has not been either sought or obtained, the securities purchased under resale agreements are not eligible for netting and are shown separately in the table below. Securities borrowed are presented on a gross basis on the Consolidated Balance Sheets.

December 31, (in millions)	2013			2012		
	Gross asset balance	Amounts netted on the Consolidated Balance Sheets	Net asset balance	Gross asset balance	Amounts netted on the Consolidated Balance Sheets	Net asset balance
Securities purchased under resale agreements						
Securities purchased under resale agreements with an appropriate legal opinion	\$354,814	\$ (115,408 )	\$239,406	\$381,377	\$ (96,947 )	\$284,430
Securities purchased under resale agreements where an appropriate legal opinion has not been either sought or obtained	8,279		8,279	10,983		10,983
Total securities purchased under resale agreements	\$363,093	\$ (115,408 )	\$247,685 (a)	\$392,360	\$ (96,947 )	\$295,413 (a)

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Securities borrowed                      \$111,465   N/A                      \$111,465   (b)(c)   \$119,017   N/A                      \$119,017   (b)(c)

(a) At December 31, 2013 and 2012, included securities purchased under resale agreements of \$25.1 billion and \$24.3 billion, respectively, accounted for at fair value.

(b) At December 31, 2013 and 2012, included securities borrowed of \$3.7 billion and \$10.2 billion, respectively, accounted for at fair value.

(c) Included \$26.9 billion and \$28.4 billion at December 31, 2013 and 2012, respectively, of securities borrowed where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement. The prior period amounts have been revised with a corresponding impact in the table below. This revision had no impact on the Firm's Consolidated Balance Sheets or its results of operations.

## Notes to consolidated financial statements

The following table presents information as of December 31, 2013 and 2012, regarding the securities purchased under resale agreements and securities borrowed for which an appropriate legal opinion has been obtained with respect to the master netting agreement. The below table excludes information related to resale agreements and securities borrowed where such a legal opinion has not been either sought or obtained.

December 31, (in millions)	2013			2012				
	Net asset balance	Amounts not nettable on the Consolidated Balance Sheets <sup>(a)</sup>		Net asset balance	Amounts not nettable on the Consolidated Balance Sheets <sup>(a)</sup>			
		Financial instruments <sup>(b)</sup>	Cash collateral exposure		Financial instruments <sup>(b)</sup>	Cash collateral exposure	Net	
Securities purchased under resale agreements with an appropriate legal opinion	\$239,406	\$(234,495)	\$(98)	\$4,813	\$284,430	\$(282,468)	\$(998)	\$964
Securities borrowed	\$84,531	\$(81,127)	\$—	\$3,404	\$90,609	\$(87,651)	\$—	\$2,958

For some counterparties, the sum of the financial instruments and cash collateral not nettable on the Consolidated Balance Sheets may exceed the net asset balance. Where this is the case the total amounts reported in these two columns are limited to the balance of the net reverse repurchase agreement or securities borrowed asset with that counterparty. As a result a net exposure amount is reported even though the Firm, on an aggregate basis for its securities purchased under resale agreements and securities borrowed, has received securities collateral with a total fair value that is greater than the funds provided to counterparties.

<sup>(a)</sup> Includes financial instrument collateral received, repurchase liabilities and securities loaned liabilities with an appropriate legal opinion with respect to the master netting agreement; these amounts are not presented net on the Consolidated Balance Sheets because other U.S. GAAP netting criteria are not met.

The following table presents as of December 31, 2013 and 2012, the gross and net securities sold under repurchase agreements and securities loaned. Securities sold under repurchase agreements have been presented on the Consolidated Balance Sheets net of securities purchased under resale agreements where the Firm has obtained an appropriate legal opinion with respect to the master netting agreement, and where the other relevant criteria have been met. Where such a legal opinion has not been either sought or obtained, the securities sold under repurchase agreements are not eligible for netting and are shown separately in the table below. Securities loaned are presented on a gross basis on the Consolidated Balance Sheets.

December 31, (in millions)	2013			2012			
	Gross liability balance	Amounts netted on the Net Consolidated liability balance Sheets		Gross liability balance	Amounts netted on the Net Consolidated liability balance Sheets		
Securities sold under repurchase agreements							
Securities sold under repurchase agreements with an appropriate legal opinion	\$261,265	\$(115,408)	\$145,857	\$301,352	\$(96,947)	\$204,405	
Securities sold under repurchase agreements where an appropriate legal opinion has not been either sought or obtained <sup>(a)</sup>	14,508		14,508	11,155		11,155	
	\$275,773	\$(115,408)	\$160,365	\$312,507	\$(96,947)	\$215,560	<sup>(c)</sup>

Total securities sold under  
repurchase agreements

Securities loaned <sup>(b)</sup>	\$25,769	N/A	\$25,769	<sup>(d)(e)</sup>	\$30,458	N/A	\$30,458	<sup>(d)(e)</sup>
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(a) Includes repurchase agreements that are not subject to a master netting agreement but do provide rights to collateral.

(b) Included securities-for-securities borrow vs. pledge transactions of \$5.8 billion and \$6.9 billion at December 31, 2013 and 2012, respectively, when acting as lender and as presented within other liabilities in the Consolidated Balance Sheets.

(c) At December 31, 2013 and 2012, included securities sold under repurchase agreements of \$4.9 billion and \$3.9 billion, respectively, accounted for at fair value.

(d) At December 31, 2013 and 2012, included securities loaned of \$483 million and \$457 million, respectively, accounted for at fair value.

(e) Included \$397 million and \$889 million at December 31, 2013 and 2012, respectively, of securities loaned where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement.

The following table presents information as of December 31, 2013 and 2012, regarding the securities sold under repurchase agreements and securities loaned for which an appropriate legal opinion has been obtained with respect to the master netting agreement. The below table excludes information related to repurchase agreements and securities loaned where such a legal opinion has not been either sought or obtained.

December 31, (in millions)	2013			2012				
	Net liability balance	Amounts not nettable on the Consolidated balance sheets <sup>(a)</sup>		Net liability balance	Amounts not nettable on the Consolidated balance sheets <sup>(a)</sup>			
		Financial instruments <sup>(b)</sup>	Cash collateral amount <sup>(c)</sup>		Financial instruments <sup>(b)</sup>	Cash collateral amount <sup>(c)</sup>		
Securities sold under repurchase agreements with an appropriate legal opinion	\$145,857	\$(142,686)	\$(450)	\$2,721	\$204,405	\$(202,925)	\$(162)	\$1,318
Securities loaned	\$25,372	\$(25,125)	\$—	\$247	\$29,569	\$(28,465)	\$—	\$1,104

For some counterparties the sum of the financial instruments and cash collateral not nettable on the Consolidated Balance Sheets may exceed the net liability balance. Where this is the case the total amounts reported in these two columns are limited to the balance of the net repurchase agreement or securities loaned liability with that counterparty.

Includes financial instrument collateral transferred, reverse repurchase assets and securities borrowed assets with an appropriate legal opinion with respect to the master netting agreement; these amounts are not presented net on the Consolidated Balance Sheets because other U.S. GAAP netting criteria are not met.

(c) Net amount represents exposure of counterparties to the Firm.

JPMorgan Chase's policy is to take possession, where possible, of securities purchased under resale agreements and of securities borrowed. The Firm monitors the value of the underlying securities (primarily G7 government securities, U.S. agency securities and agency MBS, and equities) that it has received from its counterparties and either requests additional collateral or returns a portion of the collateral when appropriate in light of the market value of the underlying securities. Margin levels are established initially based upon the counterparty and type of collateral and monitored on an ongoing basis to protect against declines in collateral value in the event of default. JPMorgan Chase typically enters into master netting agreements and other collateral arrangements with its resale agreement and securities borrowed counterparties, which provide for the right to liquidate the purchased or borrowed securities in the event of a customer default. As a result of the Firm's credit risk mitigation practices with respect to resale and securities borrowed agreements as described above, the Firm did not hold any reserves for credit impairment with respect to these agreements as of December 31, 2013 and 2012.

For further information regarding assets pledged and collateral received in securities financing agreements, see Note 30 on page 325 of this Annual Report.

Transfers not qualifying for sale accounting

In addition, at December 31, 2013 and 2012, the Firm held \$14.6 billion and \$9.6 billion, respectively, of financial assets for which the rights have been transferred to third parties; however, the transfers did not qualify as a sale in accordance with U.S. GAAP. These transfers have been recognized as collateralized financing transactions. The transferred assets are recorded in trading assets, other assets and loans, and the corresponding liabilities are recorded in other borrowed funds, accounts payable and other liabilities, and long-term debt, on the Consolidated Balance Sheets.



## Notes to consolidated financial statements

## Note 14 – Loans

## Loan accounting framework

The accounting for a loan depends on management's strategy for the loan, and on whether the loan was credit-impaired at the date of acquisition. The Firm accounts for loans based on the following categories:

- Originated or purchased loans held-for-investment (i.e., "retained"), other than purchased credit-impaired ("PCI") loans

- Loans held-for-sale

- Loans at fair value

- PCI loans held-for-investment

The following provides a detailed accounting discussion of these loan categories:

## Loans held-for-investment (other than PCI loans)

Originated or purchased loans held-for-investment, other than PCI loans, are measured at the principal amount outstanding, net of the following: allowance for loan losses; net charge-offs; interest applied to principal (for loans accounted for on the cost recovery method); unamortized discounts and premiums; and net deferred loan fees or costs. Credit card loans also include billed finance charges and fees net of an allowance for uncollectible amounts.

## Interest income

Interest income on performing loans held-for-investment, other than PCI loans, is accrued and recognized as interest income at the contractual rate of interest. Purchase price discounts or premiums, as well as net deferred loan fees or costs, are amortized into interest income over the life of the loan to produce a level rate of return.

## Nonaccrual loans

Nonaccrual loans are those on which the accrual of interest has been suspended. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status and considered nonperforming when full payment of principal and interest is in doubt, which for consumer loans, excluding credit card, generally occurs when principal or interest is 90 days or more past due unless the loan is both well secured and in the process of collection. A loan is determined to be past due when the minimum payment is not received from the borrower by the contractually specified due date or for certain loans (e.g., residential real estate loans), when a monthly payment is due and unpaid for 30 days or more. Consumer, excluding credit card, loans that are less than 90 days past due may be placed on nonaccrual status when there is evidence that full payment of principal and interest is in doubt (e.g., performing junior liens that are subordinate to nonperforming senior liens). Finally, collateral-dependent loans are typically maintained on nonaccrual status.

On the date a loan is placed on nonaccrual status, all interest accrued but not collected is reversed against interest income. In addition, the amortization of deferred amounts is suspended. Interest income on nonaccrual loans may be recognized as cash interest payments are received (i.e., on a cash basis) if the recorded loan balance is deemed fully collectible; however, if there is doubt regarding the ultimate collectibility of the recorded loan balance, all interest cash receipts are applied to reduce the carrying value of the loan (the cost recovery method). For consumer loans, application of this policy typically results in the Firm recognizing interest income on nonaccrual consumer loans on a cash basis.

A loan may be returned to accrual status when repayment is reasonably assured and there has been demonstrated performance under the terms of the loan or, if applicable, the terms of the restructured loan.

As permitted by regulatory guidance, credit card loans are generally exempt from being placed on nonaccrual status; accordingly, interest and fees related to credit card loans continue to accrue until the loan is charged off or paid in full. However, the Firm separately establishes an allowance for the estimated uncollectible portion of accrued interest and fee income on credit card loans. The allowance is established with a charge to interest income and is reported as an offset to loans.

## Allowance for loan losses

The allowance for loan losses represents the estimated probable credit losses inherent in the held-for-investment loan portfolio at the balance sheet date. Changes in the allowance for loan losses are recorded in the provision for credit losses on the Firm's Consolidated Statements of Income. See Note 15 on pages 284–287 of this Annual Report for further information on the Firm's accounting policies for the allowance for loan losses.

Charge-offs

Consumer loans, other than risk-rated business banking, risk-rated auto and PCI loans, are generally charged off or charged down to the net realizable value of the underlying collateral (i.e., fair value less costs to sell), with an offset to the allowance for loan losses, upon reaching specified stages of delinquency in accordance with standards established by the Federal Financial Institutions Examination Council (“FFIEC”). Residential real estate loans, non-modified credit card loans and scored business banking loans are generally charged off at 180 days past due. In the second quarter of 2012, the Firm revised its policy to charge-off modified credit card loans that do not comply with their modified payment terms at 120 days past due rather than 180 days past due. Auto and student loans are charged off no later than 120 days past due.

Certain consumer loans will be charged off earlier than the FFIEC charge-off standards in certain circumstances as follows:

A charge-off is recognized when a loan is modified in a TDR if the loan is determined to be collateral-dependent. A loan is considered to be collateral-dependent when repayment of the loan is expected to be provided solely by the underlying collateral, rather than by cash flows from the borrower's operations, income or other resources.

Loans to borrowers who have experienced an event (e.g., bankruptcy) that suggests a loss is either known or highly certain are subject to accelerated charge-off standards. Residential real estate and auto loans are charged off when the loan becomes 60 days past due, or sooner if the loan is determined to be collateral-dependent. Credit card and scored business banking loans are charged off within 60 days of receiving notification of the bankruptcy filing or other event. Student loans are generally charged off when the loan becomes 60 days past due after receiving notification of a bankruptcy.

Auto loans are written down to net realizable value upon repossession of the automobile and after a redemption period (i.e., the period during which a borrower may cure the loan) has passed.

Other than in certain limited circumstances, the Firm typically does not recognize charge-offs on government-guaranteed loans.

Wholesale loans, risk-rated business banking loans and risk-rated auto loans are charged off when it is highly certain that a loss has been realized, including situations where a loan is determined to be both impaired and collateral-dependent. The determination of whether to recognize a charge-off includes many factors, including the prioritization of the Firm's claim in bankruptcy, expectations of the workout/restructuring of the loan and valuation of the borrower's equity or the loan collateral.

When a loan is charged down to the estimated net realizable value, the determination of the fair value of the collateral depends on the type of collateral (e.g., securities, real estate). In cases where the collateral is in the form of liquid securities, the fair value is based on quoted market prices or broker quotes. For illiquid securities or other financial assets, the fair value of the collateral is estimated using a discounted cash flow model.

For residential real estate loans, collateral values are based upon external valuation sources. When it becomes likely that a borrower is either unable or unwilling to pay, the Firm obtains a broker's price opinion of the home based on an exterior-only valuation ("exterior opinions"), which is then updated at least every six months thereafter. As soon as practicable after the Firm receives the property in satisfaction of a debt (e.g., by taking legal title or physical possession), generally, either through foreclosure or upon the execution of a deed in lieu of foreclosure transaction with the borrower, the Firm obtains an appraisal based on an inspection that includes the interior of the home ("interior appraisals"). Exterior opinions and interior appraisals are discounted based upon the Firm's experience with actual liquidation values as compared to the estimated values provided by exterior opinions and interior appraisals, considering state- and product-specific factors.

For commercial real estate loans, collateral values are generally based on appraisals from internal and external valuation sources. Collateral values are typically updated every six to twelve months, either by obtaining a new appraisal or by performing an internal analysis, in accordance with the Firm's policies. The Firm also considers both borrower- and market-specific factors, which may result in obtaining appraisal updates or broker price opinions at more frequent intervals.

#### Loans held-for-sale

Held-for-sale loans are measured at the lower of cost or fair value, with valuation changes recorded in noninterest revenue. For consumer loans, the valuation is performed on a portfolio basis. For wholesale loans, the valuation is performed on an individual loan basis.

Interest income on loans held-for-sale is accrued and recognized based on the contractual rate of interest.

Loan origination fees or costs and purchase price discounts or premiums are deferred in a contra loan account until the related loan is sold. The deferred fees and discounts or premiums are an adjustment to the basis of the loan and therefore are included in the periodic determination of the lower of cost or fair value adjustments and/or the gain or losses recognized at the time of sale.

Held-for-sale loans are subject to the nonaccrual policies described above.

Because held-for-sale loans are recognized at the lower of cost or fair value, the Firm's allowance for loan losses and charge-off policies do not apply to these loans.

## Notes to consolidated financial statements

## Loans at fair value

Loans used in a market-making strategy or risk managed on a fair value basis are measured at fair value, with changes in fair value recorded in noninterest revenue.

For these loans, the earned current contractual interest payment is recognized in interest income. Changes in fair value are recognized in noninterest revenue. Loan origination fees are recognized upfront in noninterest revenue. Loan origination costs are recognized in the associated expense category as incurred.

Because these loans are recognized at fair value, the Firm's nonaccrual, allowance for loan losses, and charge-off policies do not apply to these loans.

See Note 4 on pages 215–218 of this Annual Report for further information on the Firm's elections of fair value accounting under the fair value option. See Note 3 and Note 4 on pages 195–215 and 215–218 of this Annual Report for further information on loans carried at fair value and classified as trading assets.

## PCI loans

PCI loans held-for-investment are initially measured at fair value. PCI loans have evidence of credit deterioration since the loan's origination date and therefore it is probable, at acquisition, that all contractually required payments will not be collected. Because PCI loans are initially measured at fair value, which includes an estimate of future credit losses, no allowance for loan losses related to PCI loans is recorded at the acquisition date. See page 274 of this Note for information on accounting for PCI loans subsequent to their acquisition.

## Loan classification changes

Loans in the held-for-investment portfolio that management decides to sell are transferred to the held-for-sale portfolio at the lower of cost or fair value on the date of transfer. Credit-related losses are charged against the allowance for loan losses; losses due to changes in interest rates or foreign currency exchange rates are recognized in noninterest revenue.

In the event that management decides to retain a loan in the held-for-sale portfolio, the loan is transferred to the held-for-investment portfolio at the lower of cost or fair value on the date of transfer. These loans are subsequently assessed for impairment based on the Firm's allowance methodology. For a further discussion of the methodologies used in establishing the Firm's allowance for loan losses, see Note 15 on pages 284–287 of this Annual Report.

## Loan modifications

The Firm seeks to modify certain loans in conjunction with its loss-mitigation activities. Through the modification, JPMorgan Chase grants one or more concessions to a borrower who is experiencing financial difficulty in order to minimize the Firm's economic loss, avoid foreclosure or repossession of the collateral, and to ultimately maximize payments received by the Firm from the borrower. The concessions granted vary by program and by borrower-specific characteristics, and may include interest rate reductions, term extensions, payment deferrals, principal forgiveness, or the acceptance of equity or other assets in lieu of payments.

Such modifications are accounted for and reported as troubled debt restructurings ("TDRs"). A loan that has been modified in a TDR is generally considered to be impaired until it matures, is repaid, or is otherwise liquidated, regardless of whether the borrower performs under the modified terms. In certain limited cases, the effective interest rate applicable to the modified loan is at or above the current market rate at the time of the restructuring. In such circumstances, and assuming that the loan subsequently performs under its modified terms and the Firm expects to collect all contractual principal and interest cash flows, the loan is disclosed as impaired and as a TDR only during the year of the modification; in subsequent years, the loan is not disclosed as an impaired loan or as a TDR so long as repayment of the restructured loan under its modified terms is reasonably assured.

Loans, except for credit card loans, modified in a TDR are generally placed on nonaccrual status, although in many cases such loans were already on nonaccrual status prior to modification. These loans may be returned to performing status (the accrual of interest is resumed) if the following criteria are met: (a) the borrower has performed under the modified terms for a minimum of six months and/or six payments, and (b) the Firm has an expectation that repayment of the modified loan is reasonably assured based on, for example, the borrower's debt capacity and level of future earnings, collateral values, loan-to-value ("LTV") ratios, and other current market considerations. In certain limited and well-defined circumstances in which the loan is current at the modification date, such loans are not placed on

nonaccrual status at the time of modification.

Because loans modified in TDRs are considered to be impaired, these loans are measured for impairment using the Firm's established asset-specific allowance methodology, which considers the expected re-default rates for the modified loans. A loan modified in a TDR remains subject to the asset-specific allowance methodology throughout its remaining life, regardless of whether the loan is performing and has been returned to accrual status and/or the loan has been removed from the impaired loans disclosures (i.e., loans restructured at market rates). For further discussion of the methodology used to estimate the Firm's asset-specific allowance, see Note 15 on pages 284–287 of this Annual Report.

Foreclosed property

The Firm acquires property from borrowers through loan restructurings, workouts, and foreclosures. Property acquired may include real property (e.g., residential real estate, land, and buildings) and commercial and personal property (e.g., automobiles, aircraft, railcars, and ships).

The Firm recognizes foreclosed property upon receiving assets in satisfaction of a loan (e.g., by taking legal title or physical possession). For loans collateralized by real property, the Firm generally recognizes the asset received at foreclosure sale or upon the execution of a deed in lieu of

foreclosure transaction with the borrower. Foreclosed assets are reported in other assets on the Consolidated Balance Sheets and initially recognized at fair value less costs to sell. Each quarter the fair value of the acquired property is reviewed and adjusted, if necessary, to the lower of cost or fair value. Subsequent adjustments to fair value are charged/credited to noninterest revenue. Operating expense, such as real estate taxes and maintenance, are charged to other expense.

Loan portfolio

The Firm's loan portfolio is divided into three portfolio segments, which are the same segments used by the Firm to determine the allowance for loan losses: Consumer, excluding credit card; Credit card; and Wholesale. Within each portfolio segment, the Firm monitors and assesses the credit risk in the following classes of loans, based on the risk characteristics of each loan class:

Consumer, excluding credit card <sup>(a)</sup>	Credit card	Wholesale <sup>(c)</sup>
Residential real estate – excluding PCI		
<ul style="list-style-type: none"> <li>• Home equity – senior lien</li> <li>• Home equity – junior lien</li> <li>• Prime mortgage, including option ARMs</li> <li>• Subprime mortgage</li> </ul>		<ul style="list-style-type: none"> <li>• Commercial and industrial</li> </ul>
Other consumer loans		<ul style="list-style-type: none"> <li>• Real estate</li> </ul>
<ul style="list-style-type: none"> <li>• Auto<sup>(b)</sup></li> <li>• Business banking<sup>(b)</sup></li> <li>• Student and other</li> </ul>	<ul style="list-style-type: none"> <li>• Credit card loans</li> </ul>	<ul style="list-style-type: none"> <li>• Financial institutions</li> <li>• Government agencies</li> <li>• Other<sup>(d)</sup></li> </ul>
Residential real estate – PCI		
<ul style="list-style-type: none"> <li>• Home equity</li> <li>• Prime mortgage</li> <li>• Subprime mortgage</li> <li>• Option ARMs</li> </ul>		

<sup>(a)</sup> Includes loans held in CCB, and prime mortgage loans held in the AM business segment and in Corporate/Private Equity.

<sup>(b)</sup> Includes certain business banking and auto dealer risk-rated loans that apply the wholesale methodology for determining the allowance for loan losses; these loans are managed by CCB, and therefore, for consistency in presentation, are included with the other consumer loan classes.

<sup>(c)</sup> Includes loans held in CIB, CB and AM business segments and in Corporate/Private Equity. Classes are internally defined and may not align with regulatory definitions.

<sup>(d)</sup> Other primarily includes loans to SPEs and loans to private banking clients. See Note 1 on pages 189–191 of this Annual Report for additional information on SPEs.



## Notes to consolidated financial statements

The following tables summarize the Firm's loan balances by portfolio segment.

December 31, 2013 (in millions)	Consumer, excluding credit card	Credit card <sup>(a)</sup>	Wholesale	Total	
Retained	\$288,449	\$127,465	\$308,263	\$724,177	(b)
Held-for-sale	614	326	11,290	12,230	
At fair value	—	—	2,011	2,011	
Total	\$289,063	\$127,791	\$321,564	\$738,418	

December 31, 2012 (in millions)	Consumer, excluding credit card	Credit card <sup>(a)</sup>	Wholesale	Total	
Retained	\$292,620	\$127,993	\$306,222	\$726,835	(b)
Held-for-sale	—	—	4,406	4,406	
At fair value	—	—	2,555	2,555	
Total	\$292,620	\$127,993	\$313,183	\$733,796	

(a) Includes billed finance charges and fees net of an allowance for uncollectible amounts.

Loans (other than PCI loans and those for which the fair value option has been elected) are presented net of (b) unearned income, unamortized discounts and premiums, and net deferred loan costs of \$1.9 billion and \$2.5 billion at December 31, 2013 and 2012, respectively.

The following table provides information about the carrying value of retained loans purchased, sold and reclassified to held-for-sale during the periods indicated. These tables exclude loans recorded at fair value. The Firm manages its exposure to credit risk on an ongoing basis. Selling loans is one way that the Firm reduces its credit exposures.

Years ended December 31, (in millions)	2013				2012			
	Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	\$7,616	<sup>(a)(b)</sup> \$328	\$697	\$8,641	\$6,601	<sup>(a)(b)</sup> \$—	\$827	\$7,428
Sales	4,845	—	4,232	9,077	1,852	—	3,423	5,275
Retained loans reclassified to held-for-sale	1,261	309	5,641	7,211	—	1,043	504	1,547

Purchases predominantly represent the Firm's voluntary repurchase of certain delinquent loans from loan pools as permitted by Ginnie Mae guidelines. The Firm typically elects to repurchase these delinquent loans as it continues (a) to service them and/or manage the foreclosure process in accordance with applicable requirements of Ginnie Mae, the Federal Housing Administration ("FHA"), Rural Housing Services ("RHS") and/or the U.S. Department of Veterans Affairs ("VA").

Excluded retained loans purchased from correspondents that were originated in accordance with the Firm's (b) underwriting standards. Such purchases were \$5.7 billion and \$1.4 billion for the years ended December 31, 2013 and 2012, respectively.

The following table provides information about gains/(losses) on loan sales by portfolio segment.

Year ended December 31, (in millions)	2013	2012	2011
Net gains/(losses) on sales of loans (including lower of cost or fair value adjustments) <sup>(a)</sup>			
Consumer, excluding credit card	\$313	\$122	\$131
Credit card	3	(9	)(24
Wholesale	(76	)180	121
Total net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)	\$240	\$293	\$228

(a) Excludes sales related to loans accounted for at fair value.

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Consumer, excluding credit card, loan portfolio

Consumer loans, excluding credit card loans, consist primarily of residential mortgages, home equity loans and lines of credit, auto loans, business banking loans, and student and other loans, with a focus on serving the prime consumer credit market. The portfolio also includes home equity loans secured by junior liens, prime mortgage loans with an interest-only payment period, and certain payment-option loans originated by Washington Mutual that may result in negative amortization.

The table below provides information about retained consumer loans, excluding credit card, by class.

December 31, (in millions)	2013	2012
Residential real estate – excluding PCI		
Home equity:		
Senior lien	\$17,113	\$19,385
Junior lien	40,750	48,000
Mortgages:		
Prime, including option ARMs	87,162	76,256
Subprime	7,104	8,255
Other consumer loans		
Auto	52,757	49,913
Business banking	18,951	18,883
Student and other	11,557	12,191
Residential real estate – PCI		
Home equity	18,927	20,971
Prime mortgage	12,038	13,674
Subprime mortgage	4,175	4,626
Option ARMs	17,915	20,466
Total retained loans	\$288,449	\$292,620

Delinquency rates are a primary credit quality indicator for consumer loans. Loans that are more than 30 days past due provide an early warning of borrowers who may be experiencing financial difficulties and/or who may be unable or unwilling to repay the loan. As the loan continues to age, it becomes more clear that the borrower is likely either unable or unwilling to pay. In the case of residential real estate loans, late-stage delinquencies (greater than 150 days past due) are a strong indicator of loans that will ultimately result in a foreclosure or similar liquidation transaction. In addition to delinquency rates, other credit quality indicators for consumer loans vary based on the class of loan, as follows:

- For residential real estate loans, including both non-PCI and PCI portfolios, the current estimated LTV ratio, or the combined LTV ratio in the case of junior lien loans, is an indicator of the potential loss severity in the event of default. Additionally, LTV or combined LTV can provide

insight into a borrower's continued willingness to pay, as the delinquency rate of high-LTV loans tends to be greater than that for loans where the borrower has equity in the collateral. The geographic distribution of the loan collateral also provides insight as to the credit quality of the portfolio, as factors such as the regional economy, home price changes and specific events such as natural disasters, will affect credit quality. The borrower's current or "refreshed" FICO score is a secondary credit-quality indicator for certain loans, as FICO scores are an indication of the borrower's credit payment history. Thus, a loan to a borrower with a low FICO score (660 or below) is considered to be of higher risk than a loan to a borrower with a high FICO score. Further, a loan to a borrower with a high LTV ratio and a low FICO score is at greater risk of default than a loan to a borrower that has both a high LTV ratio and a high FICO score.

For scored auto, scored business banking and student loans, geographic distribution is an indicator of the credit performance of the portfolio. Similar to residential real estate loans, geographic distribution provides insights into the portfolio performance based on regional economic activity and events.

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Risk-rated business banking and auto loans are similar to wholesale loans in that the primary credit quality indicators are the risk rating that is assigned to the loan and whether the loans are considered to be criticized and/or nonaccrual. Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information about borrowers' ability to fulfill their obligations. For further information about risk-rated wholesale loan credit quality indicators, see page 279 of this Note.

Residential real estate – excluding PCI loans

The following table provides information by class for residential real estate – excluding retained PCI loans in the consumer, excluding credit card, portfolio segment.

The following factors should be considered in analyzing certain credit statistics applicable to the Firm's residential real estate – excluding PCI loans portfolio: (i) junior lien home equity loans may be fully charged off when the loan becomes 180 days past due, and the value of the collateral does not support the repayment of the loan, resulting in relatively high charge-off rates for this product class; and (ii) the lengthening of loss-mitigation timelines may result in higher delinquency rates for loans carried at the net realizable value of the collateral that remain on the Firm's Consolidated Balance Sheets.

## Notes to consolidated financial statements

## Residential real estate – excluding PCI loans

December 31, (in millions, except ratios)	Home equity		Junior lien		
	Senior lien				
	2013	2012	2013	2012	
Loan delinquency <sup>(a)</sup>					
Current	\$16,470	\$18,688	\$39,864	\$46,805	
30–149 days past due	298	330	662	960	
150 or more days past due	345	367	224	235	
Total retained loans	\$17,113	\$19,385	\$40,750	\$48,000	
% of 30+ days past due to total retained loans	3.76	% 3.60	% 2.17	% 2.49	%
90 or more days past due and still accruing	\$—	\$—	\$—	\$—	
90 or more days past due and government guaranteed <sup>(b)</sup>	—	—	—	—	
Nonaccrual loans	932	931	1,876	2,277	
Current estimated LTV ratios <sup>(c)(d)(e)</sup>					
Greater than 125% and refreshed FICO scores:					
Equal to or greater than 660	\$40	\$197	\$1,101	\$4,561	
Less than 660	22	93	346	1,338	
101% to 125% and refreshed FICO scores:					
Equal to or greater than 660	212	491	4,645	7,089	
Less than 660	107	191	1,407	1,971	
80% to 100% and refreshed FICO scores:					
Equal to or greater than 660	858	1,502	7,995	9,604	
Less than 660	326	485	2,128	2,279	
Less than 80% and refreshed FICO scores:					
Equal to or greater than 660	13,186	13,988	19,732	18,252	
Less than 660	2,362	2,438	3,396	2,906	
U.S. government-guaranteed	—	—	—	—	
Total retained loans	\$17,113	\$19,385	\$40,750	\$48,000	
Geographic region					
California	\$2,397	\$2,786	\$9,240	\$10,969	
New York	2,732	2,847	8,429	9,753	
Illinois	1,248	1,358	2,815	3,265	
Florida	847	892	2,167	2,572	
Texas	2,044	2,508	1,199	1,503	
New Jersey	630	652	2,442	2,838	
Arizona	1,019	1,183	1,827	2,151	
Washington	555	651	1,378	1,629	
Michigan	799	910	976	1,169	
Ohio	1,298	1,514	907	1,091	
All other <sup>(f)</sup>	3,544	4,084	9,370	11,060	
Total retained loans	\$17,113	\$19,385	\$40,750	\$48,000	

Individual delinquency classifications included mortgage loans insured by U.S. government agencies as follows:

(a) current included \$4.7 billion and \$3.8 billion; 30–149 days past due included \$2.4 billion and \$2.3 billion; and 150 or more days past due included \$6.6 billion and \$9.5 billion at December 31, 2013 and 2012, respectively.

(b) These balances, which are 90 days or more past due but insured by U.S. government agencies, are excluded from nonaccrual loans. In predominantly all cases, 100% of the principal balance of the loans is insured and interest is guaranteed at a specified reimbursement rate subject to meeting agreed-upon servicing guidelines. These amounts have been excluded from nonaccrual loans based upon the government guarantee. At December 31, 2013 and

2012, these balances included \$4.7 billion and \$6.8 billion, respectively, of loans that are no longer accruing interest because interest has been curtailed by the U.S. government agencies although, in predominantly all cases, 100% of the principal is still insured. For the remaining balance, interest is being accrued at the guaranteed reimbursement rate.

Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally

- (c) recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates.
- (d) Junior lien represents combined LTV, which considers all available lien positions, as well as unused lines, related to the property. All other products are presented without consideration of subordinate liens on the property.
- (e) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.
- (f) At December 31, 2013 and 2012, included mortgage loans insured by U.S. government agencies of \$13.7 billion and \$15.6 billion, respectively.
- (g) At December 31, 2013 and 2012, excluded mortgage loans insured by U.S. government agencies of \$9.0 billion and \$11.8 billion, respectively. These amounts have been excluded from nonaccrual loans based upon the government guarantee.

(table continued from previous page)

## Mortgages

Prime, including option ARMs		Subprime		Total residential real estate – excluding PCI		
2013	2012	2013	2012	2013	2012	
\$76,108	\$61,439	\$5,956	\$6,673	\$138,398	\$133,605	
3,155	3,237	646	727	4,761	5,254	
7,899	11,580	502	855	8,970	13,037	
\$87,162	\$76,256	\$7,104	\$8,255	\$152,129	\$151,896	
2.32	% (g) 3.97	% (g) 16.16	% 19.16	% 3.09	% (g) 4.28	% (g)
\$—	\$—	\$—	\$—	\$—	\$—	
7,823	10,625	—	—	7,823	10,625	
2,666	3,445	1,390	1,807	6,864	8,460	
\$1,084	\$2,573	\$52	\$236	\$2,277	\$7,567	
303	991	197	653	868	3,075	
1,433	3,697	249	457	6,539	11,734	
687	1,376	597	985	2,798	4,523	
4,528	7,070	614	726	13,995	18,902	
1,579	2,117	1,141	1,346	5,174	6,227	
58,477	38,281	1,961	1,793	93,356	72,314	
5,359	4,549	2,293	2,059	13,410	11,952	
13,712	15,602	—	—	13,712	15,602	
\$87,162	\$76,256	\$7,104	\$8,255	\$152,129	\$151,896	
\$21,876	\$17,539	\$1,069	\$1,240	\$34,582	\$32,534	
14,085	11,190	942	1,081	26,188	24,871	
5,216	3,999	280	323	9,559	8,945	
4,598	4,372	885	1,031	8,497	8,867	
3,565	2,927	220	257	7,028	7,195	
2,679	2,131	339	399	6,090	6,020	
1,385	1,162	144	165	4,375	4,661	
1,951	1,741	150	177	4,034	4,198	
998	866	178	203	2,951	3,148	
466	405	161	191	2,832	3,201	
30,343	29,924	2,736	3,188	45,993	48,256	
\$87,162	\$76,256	\$7,104	\$8,255	\$152,129	\$151,896	

## Notes to consolidated financial statements

The following tables represent the Firm's delinquency statistics for junior lien home equity loans and lines as of December 31, 2013 and 2012.

December 31, 2013 (in millions, except ratios) HELOCs: <sup>(a)</sup>	Delinquencies			Total loans	Total 30+ day delinquency rate	
	30–89 days past due	90–149 days past due	150+ days past due			
Within the revolving period <sup>(b)</sup>	\$341	\$104	\$162	\$31,848	1.91	%
Beyond the revolving period	84	21	46	4,980	3.03	
HELOANs	86	26	16	3,922	3.26	
Total	\$511	\$151	\$224	\$40,750	2.17	%
December 31, 2012 (in millions, except ratios) HELOCs: <sup>(a)</sup>	Delinquencies			Total loans	Total 30+ day delinquency rate	
	30–89 days past due	90–149 days past due	150+ days past due			
Within the revolving period <sup>(b)</sup>	\$514	\$196	\$185	\$40,794	2.19	%
Beyond the revolving period	48	19	27	2,127	4.42	
HELOANs	125	58	23	5,079	4.06	
Total	\$687	\$273	\$235	\$48,000	2.49	%

(a) These HELOCs are predominantly revolving loans for a 10-year period, after which time the HELOC converts to a loan with a 20-year amortization period, but also include HELOCs originated by Washington Mutual that require interest-only payments beyond the revolving period.

(b) The Firm manages the risk of HELOCs during their revolving period by closing or reducing the undrawn line to the extent permitted by law when borrowers are experiencing financial difficulty or when the collateral does not support the loan amount.

Home equity lines of credit (“HELOCs”) beyond the revolving period and home equity loans (“HELOANs”) have higher delinquency rates than do HELOCs within the revolving period. That is primarily because the fully-amortizing payment that is generally required for those products is higher than the minimum payment options

available for HELOCs within the revolving period. The higher delinquency rates associated with amortizing HELOCs and HELOANs are factored into the loss estimates produced by the Firm's delinquency roll-rate methodology, which estimates defaults based on the current delinquency status of a portfolio.

Impaired loans

The table below sets forth information about the Firm’s residential real estate impaired loans, excluding PCI loans. These loans are considered to be impaired as they have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15 on pages 284–287 of this Annual Report.

December 31, (in millions)	Home equity				Mortgages				Total residential real estate – excluding PCI	
	Senior lien		Junior lien		Prime, including option ARMs		Subprime		2013	2012
	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012
Impaired loans										
With an allowance	\$567	\$542	\$727	\$677	\$5,871	\$5,810	\$2,989	\$3,071	\$10,154	\$10,100
Without an allowance <sup>(a)</sup>	579	550	592	546	1,133	1,308	709	741	3,013	3,145
Total impaired loans <sup>(b)</sup>	\$1,146	\$1,092	\$1,319	\$1,223	\$7,004	\$7,118	\$3,698	\$3,812	\$13,167	\$13,245
Allowance for loan losses related to impaired loans	\$94	\$159	\$162	\$188	\$144	\$70	\$94	\$174	\$494	\$591
Unpaid principal balance of impaired loans <sup>(c)</sup>	1,515	1,408	2,625	2,352	8,990	9,095	5,461	5,700	18,591	18,555
Impaired loans on nonaccrual status <sup>(d)</sup>	641	607	666	599	1,737	1,888	1,127	1,308	4,171	4,402

Represents collateral-dependent residential mortgage loans that are charged off to the fair value of the underlying collateral less cost to sell. The Firm reports, in accordance with regulatory guidance, residential real estate loans that have been discharged under Chapter 7 bankruptcy and not reaffirmed by the borrower (“Chapter 7 loans”) as collateral-dependent nonaccrual TDRs, regardless of their delinquency status.

At December 31, 2013 and 2012, \$7.6 billion and \$7.5 billion, respectively, of loans modified subsequent to repurchase from Government National Mortgage Association (“Ginnie Mae”) in accordance with the standards of the appropriate government agency (i.e., FHA, VA, RHS) are not included in the table above. When such loans perform subsequent to modification in accordance with Ginnie Mae guidelines, they are generally sold back into Ginnie Mae loan pools. Modified loans that do not re-perform become subject to foreclosure.

Represents the contractual amount of principal owed at December 31, 2013 and 2012. The unpaid principal balance differs from the impaired loan balances due to various factors, including charge-offs, net deferred loan fees or costs; and unamortized discounts or premiums on purchased loans.

As of December 31, 2013 and 2012, nonaccrual loans included \$3.0 billion and \$2.9 billion, respectively, of TDRs for which the borrowers were less than 90 days past due. For additional information about loans modified in a TDR that are on nonaccrual status refer to the Loan accounting framework on pages 258–260 of this Note.

The following table presents average impaired loans and the related interest income reported by the Firm.

Year ended December 31, (in millions)	Average impaired loans			Interest income on impaired loans <sup>(a)</sup>			Interest income on impaired loans on a cash basis <sup>(a)</sup>		
	2013	2012	2011	2013	2012	2011	2013	2012	2011
Home equity									
Senior lien	\$1,151	\$610	\$287	\$59	\$27	\$10	\$40	\$12	\$1
Junior lien	1,297	848	521	82	42	18	55	16	2
Mortgages									

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Prime, including option ARMs	7,214	5,989	3,859	280	238	147	59	28	14
Subprime	3,798	3,494	3,083	200	183	148	55	31	16
Total residential real estate – excluding PCI	\$13,460	\$10,941	\$7,750	\$621	\$490	\$323	\$209	\$87	\$33

(a) Generally, interest income on loans modified in TDRs is recognized on a cash basis until such time as the borrower has made a minimum of six payments under the new terms.

## Notes to consolidated financial statements

## Loan modifications

As required under the terms of certain settlements, the Firm is required to provide borrower relief, which will include, for example, reductions of principal and forbearance. For further information on the global and RMBS settlements, see Business changes and developments in Note 2 on pages 192–194 of this Annual Report.

Modifications of residential real estate loans, excluding PCI loans, are generally accounted for and reported as TDRs. There were no additional commitments to lend to borrowers whose residential real estate loans, excluding PCI loans, have been modified in TDRs.

## TDR activity rollforward

The following table reconciles the beginning and ending balances of residential real estate loans, excluding PCI loans, modified in TDRs for the periods presented.

Year ended December 31, (in millions)	Home equity						Mortgages						Total exclud
	Senior lien			Junior lien			Prime, including option ARMs			Subprime			
	2013	2012	2011	2013	2012	2011	2013	2012	2011	2013	2012	2011	2013
Beginning balance of TDRs	\$1,092	\$335	\$226	\$1,223	\$657	\$283	\$7,118	\$4,877	\$2,084	\$3,812	\$3,219	\$2,751	\$13,2
New TDRs	210	835	138	388	711	518	770	2,918	3,268	319	1,043	883	1,687
Charge-offs post-modification <sup>(a)</sup>	(31	)(31	)(15	)(100	)(2	)(78	)(51	)(135	)(119	)(93	)(208	)(234	)(275
Foreclosures and other liquidations (e.g., short sales)	(18	)(5	)—	(24	)(21	)(11	)(145	)(138	)(108	)(73	)(113	)(82	)(260
Principal payments and other	(107	)(42	)(14	)(168	)(122	)(55	)(688	)(404	)(248	)(267	)(129	)(99	)(1,230
Ending balance of TDRs	\$1,146	\$1,092	\$335	\$1,319	\$1,223	\$657	\$7,004	\$7,118	\$4,877	\$3,698	\$3,812	\$3,219	\$13,1
Permanent modifications	\$1,107	\$1,058	\$285	\$1,313	\$1,218	\$634	\$6,838	\$6,834	\$4,601	\$3,596	\$3,661	\$3,029	\$12,8
Trial modifications	\$39	\$34	\$50	\$6	\$5	\$23	\$166	\$284	\$276	\$102	\$151	\$190	\$313

(a) Includes charge-offs on unsuccessful trial modifications.

Nature and extent of modifications

Making Home Affordable (“MHA”), as well as the Firm’s proprietary modification programs, generally provide various concessions to financially troubled borrowers including, but not limited to, interest rate reductions, term

or payment extensions and deferral of principal and/or interest payments that would otherwise have been required under the terms of the original agreement.

The following table provides information about how residential real estate loans, excluding PCI loans, were modified under the Firm’s loss mitigation programs during the periods presented. This table excludes Chapter 7 loans where the sole concession granted is the discharge of debt. At December 31, 2013, there were approximately 36,700 of such Chapter 7 loans, consisting of approximately 8,800 senior lien home equity loans, 21,700 junior lien home equity loans, 3,100 prime mortgage, including option ARMs, and 3,100 subprime mortgages.

Year ended Dec. 31,	Home equity						Mortgages						Total resi-	
	Senior lien			Junior lien			Prime, including option ARMs			Subprime			- excluding	
	2013	2012	2011	2013	2012	2011	2013	2012	2011	2013	2012	2011	2013	2012
Number of loans approved for a trial modification <sup>(a)</sup>	1,719	1,695	1,219	884	918	1,308	2,846	3,895	4,676	4,233	4,841	6,446	9,682	
Number of loans permanently modified	1,765	4,385	1,006	5,040	7,430	9,142	4,356	9,043	9,579	5,364	9,964	4,972	16,525	
Concession granted: <sup>(a)(b)</sup>														
Interest rate reduction	70	% 83	% 80	% 88	% 88	% 95	% 73	% 74	% 53	% 72	% 69	% 80	% 77	% 77
Term or payment extension	76	47	88	80	76	81	73	57	71	56	41	72	70	50
Principal and/or interest deferred	12	6	10	24	17	21	30	16	17	13	7	19	21	10
Principal forgiveness	38	11	7	32	23	20	38	29	2	48	42	13	39	20
Other <sup>(c)</sup>	—	—	29	—	—	7	23	29	68	14	8	26	11	10

(a) Prior period amounts have been revised to conform with the current presentation.

Represents concessions granted in permanent modifications as a percentage of the number of loans permanently modified. The sum of the percentages exceeds 100% because predominantly all of the modifications include more than one type of concession. A significant portion of trial modifications include interest rate reductions and/or term or payment extensions.

(c) Represents variable interest rate to fixed interest rate modifications.

Notes to consolidated financial statements

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the various concessions granted in modifications of residential real estate loans, excluding PCI, under the Firm's loss mitigation programs and about redefaults of certain loans modified in TDRs for the periods presented. Because the specific types and amounts of concessions offered to borrowers frequently change between the trial modification and the permanent modification, the following tables present only the financial effects of permanent modifications. These tables also exclude Chapter 7 loans where the sole concession granted is the discharge of debt.

Year ended December 31, (in millions, except weighted-average data and number of loans)	Home equity						Mortgages						Total residential real estate – excluding		
	Senior lien			Junior lien			Prime, including option ARMs			Subprime					
	2013	2012	2011	2013	2012	2011	2013	2012	2011	2013	2012	2011	2013	2012	2011
Weighted-average interest rate of loans with interest rate reductions – before TDR	6.35%	7.20%	7.25%	5.05%	5.45%	5.46%	5.28%	6.14%	5.98%	7.33%	7.73%	8.25%	5.88%	6.57%	6.4%
Weighted-average interest rate of loans with interest rate reductions – after TDR	3.23	4.61	3.51	2.14	1.94	1.49	2.77	3.67	3.34	3.52	4.14	3.46	2.92	3.69	3.0
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR	19	18	18	20	20	21	25	25	25	24	24	23	23	24	24
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR	31	28	30	34	32	34	37	36	35	35	32	34	36	34	35
Charge-offs recognized upon permanent modification	\$7	\$8	\$1	\$70	\$65	\$117	\$16	\$35	\$61	\$5	\$29	\$19	\$98	\$137	\$1
Principal deferred	7	4	4	24	23	35	129	133	167	43	43	61	203	203	26
Principal forgiven	30	20	1	51	58	62	206	249	20	218	324	46	505	651	12
Number of loans that redefaulted within one year of	404	374	222	1,069	1,436	1,310	673	920	1,142	1,072	1,426	1,989	3,218	4,156	4,6

permanent  
modification<sup>(a)</sup>

Balance of loans  
that redefaulted

within one year of \$26 \$30 \$18 \$20 \$46 \$52 \$164 \$255 \$340 \$106 \$156 \$281 \$316 \$487 \$6

permanent  
modification<sup>(a)</sup>

Represents loans permanently modified in TDRs that experienced a payment default in the periods presented, and for which the payment default occurred within one year of the modification. The dollar amounts presented represent the balance of such loans at the end of the reporting period in which such loans defaulted. For residential (a) real estate loans modified in TDRs, payment default is deemed to occur when the loan becomes two contractual payments past due. In the event that a modified loan redefaults, it is probable that the loan will ultimately be liquidated through foreclosure or another similar type of liquidation transaction. Redefaults of loans modified within the last 12 months may not be representative of ultimate redefault levels.

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Approximately 85% of the trial modifications approved on or after July 1, 2010 (the approximate date on which substantial revisions were made to the HAMP program), that are seasoned more than six months have been successfully converted to permanent modifications.

The primary performance indicator for TDRs is the rate at which permanently modified loans redefault. At December 31, 2013, the cumulative redefault rates of residential real estate loans that have been modified under the Firm's loss mitigation programs, excluding PCI loans, based upon permanent modifications that were completed after October 1, 2009, and that are seasoned more than six months, are 20% for senior lien home equity, 20% for junior lien home equity, 15% for prime mortgages, including option ARMs, and 26% for subprime mortgages.

Default rates of Chapter 7 loans vary significantly based on the delinquency status of the loan and overall economic conditions at the time of discharge. Default rates for

Chapter 7 residential real estate loans that were less than 60 days past due at the time of discharge have ranged between approximately 10% and 40% in recent years based on the economic conditions at the time of discharge. At December 31, 2013, Chapter 7 residential real estate loans included approximately 20% of senior lien home equity, 11% of junior lien home equity, 33% of prime mortgages, including option ARMs, and 23% of subprime mortgages that were 30 days or more past due.

At December 31, 2013, the weighted-average estimated remaining lives of residential real estate loans, excluding PCI loans, permanently modified in TDRs were 6 years for senior lien home equity, 7 years for junior lien home equity, 10 years for prime mortgages, including option ARMs and 8 years for subprime mortgage. The estimated remaining lives of these loans reflect estimated prepayments, both voluntary and involuntary (i.e., foreclosures and other forced liquidations).

#### Other consumer loans

The table below provides information for other consumer retained loan classes, including auto, business banking and student loans.

December 31, (in millions, except ratios)	Auto		Business banking		Student and other		Total other consumer		
	2013	2012	2013	2012	2013	2012	2013	2012	
Loan delinquency <sup>(a)</sup>									
Current	\$52,152	\$49,290	\$18,511	\$18,482	\$10,529	\$11,038	\$81,192	\$78,810	
30–119 days past due	599	616	280	263	660	709	1,539	1,588	
120 or more days past due	6	7	160	138	368	444	534	589	
Total retained loans	\$52,757	\$49,913	\$18,951	\$18,883	\$11,557	\$12,191	\$83,265	\$80,987	
% of 30+ days past due to total retained loans	1.15	% 1.25	% 2.32	% 2.12	% 2.52	% <sup>(d)</sup> 2.12	% <sup>(d)</sup> 1.60	% <sup>(d)</sup> 1.58	% <sup>(d)</sup>
90 or more days past due and still accruing <sup>(b)</sup>	\$—	\$—	\$—	\$—	\$428	\$525	\$428	\$525	
Nonaccrual loans	161	163	385	481	86	70	632	714	
Geographic region									

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California	\$5,615	\$4,962	\$2,374	\$1,983	\$1,112	\$1,108	\$9,101	\$8,053
New York	3,898	3,742	3,084	2,981	1,218	1,202	8,200	7,925
Illinois	2,917	2,738	1,341	1,404	740	748	4,998	4,890
Florida	2,012	1,922	646	527	539	556	3,197	3,005
Texas	5,310	4,739	2,646	2,749	878	891	8,834	8,379
New Jersey	2,014	1,921	392	379	397	409	2,803	2,709
Arizona	1,855	1,719	1,046	1,139	252	265	3,153	3,123
Washington	950	824	234	202	227	287	1,411	1,313
Michigan	1,902	2,091	1,383	1,368	513	548	3,798	4,007
Ohio	2,229	2,462	1,316	1,443	708	770	4,253	4,675
All other	24,055	22,793	4,489	4,708	4,973	5,407	33,517	32,908
Total retained loans	\$52,757	\$49,913	\$18,951	\$18,883	\$11,557	\$12,191	\$83,265	\$80,987
Loans by risk ratings <sup>(c)</sup>								
Noncriticized	\$9,968	\$8,882	\$13,622	\$13,336	NA	NA	\$23,590	\$22,218
Criticized performing	54	130	711	713	NA	NA	765	843
Criticized nonaccrual	38	4	316	386	NA	NA	354	390

Individual delinquency classifications included loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") as follows: current included \$4.9 billion and \$5.4 billion; 30-119 days past due included \$387 million and \$466 million; and 120 or more days past due included \$350 million and \$428 million at December 31, 2013 and 2012, respectively.

(a) These amounts represent student loans, which are insured by U.S. government agencies under the FFELP. These amounts were accruing as reimbursement of insured amounts is proceeding normally.

## Notes to consolidated financial statements

(c) For risk-rated business banking and auto loans, the primary credit quality indicator is the risk rating of the loan, including whether the loans are considered to be criticized and/or nonaccrual.

December 31, 2013 and 2012, excluded loans 30 days or more past due and still accruing, which are insured by (d) U.S. government agencies under the FFELP, of \$737 million and \$894 million, respectively. These amounts were excluded as reimbursement of insured amounts is proceeding normally.

## Other consumer impaired loans and loan modifications

The table below sets forth information about the Firm's other consumer impaired loans, including risk-rated business banking and auto loans that have been placed on nonaccrual status, and loans that have been modified in TDRs.

December 31, (in millions)	Auto		Business banking		Total other consumer <sup>(c)</sup>	
	2013	2012	2013	2012	2013	2012
Impaired loans						
With an allowance	\$96	\$78	\$475	\$543	\$571	\$621
Without an allowance <sup>(a)</sup>	47	72	—	—	47	72
Total impaired loans	\$143	\$150	\$475	\$543	\$618	\$693
Allowance for loan losses related to impaired loans	\$13	\$12	\$94	\$126	\$107	\$138
Unpaid principal balance of impaired loans <sup>(b)</sup>	235	259	553	624	788	883
Impaired loans on nonaccrual status	113	109	328	394	441	503

When discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the (a) loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged off and/or there have been interest payments received and applied to the loan balance.

Represents the contractual amount of principal owed at December 31, 2013 and 2012. The unpaid principal balance (b) differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the principal balance; net deferred loan fees or costs; and unamortized discounts or premiums on purchased loans.

(c) There were no impaired student and other loans at December 31, 2013 and 2012.

The following table presents average impaired loans for the periods presented.

Year ended December 31, (in millions)	Average impaired loans <sup>(b)</sup>		
	2013	2012	2011
Auto	\$132	\$111	\$92
Business banking	516	622	760
Total other consumer <sup>(a)</sup>	\$648	\$733	\$852

(a) There were no impaired student and other loans for the years ended 2013, 2012 and 2011.

(b) The related interest income on impaired loans, including those on a cash basis, was not material for the years ended 2013, 2012 and 2011.

## Loan modifications

The following table provides information about the Firm's other consumer loans modified in TDRs. All of these TDRs are reported as impaired loans in the tables above.

December 31, (in millions)	Auto		Business banking		Total other consumer <sup>(c)</sup>	
	2013	2012	2013	2012	2013	2012
Loans modified in troubled debt restructurings <sup>(a)(b)</sup>	\$107	\$150	\$271	\$352	\$378	\$502
TDRs on nonaccrual status	77	109	124	203	201	312

(a) These modifications generally provided interest rate concessions to the borrower or term or payment extensions.

(b)

Additional commitments to lend to borrowers whose loans have been modified in TDRs as of December 31, 2013 and 2012 were immaterial.

(c) There were no student and other loans modified in TDRs at December 31, 2013 and 2012.

## TDR activity rollforward

The following table reconciles the beginning and ending balances of other consumer loans modified in TDRs for the periods presented.

Year ended December 31, (in millions)	Auto			Business banking			Total other consumer		
	2013	2012	2011	2013	2012	2011	2013	2012	2011
Beginning balance of TDRs	\$ 150	\$ 88	\$ 91	\$ 352	\$ 415	\$ 395	\$ 502	\$ 503	\$ 486
New TDRs	90	145	54	66	104	195	156	249	249
Charge-offs post-modification	(10 )	(9 )	(5 )	(10 )	(9 )	(11 )	(20 )	(18 )	(16 )
Foreclosures and other liquidations	—	—	—	—	(1 )	(3 )	—	(1 )	(3 )
Principal payments and other	(123 )	(74 )	(52 )	(137 )	(157 )	(161 )	(260 )	(231 )	(213 )
Ending balance of TDRs	\$ 107	\$ 150	\$ 88	\$ 271	\$ 352	\$ 415	\$ 378	\$ 502	\$ 503

## Financial effects of modifications and redefaults

For auto loans, TDRs typically occur in connection with the bankruptcy of the borrower. In these cases, the loan is modified with a revised repayment plan that typically incorporates interest rate reductions and, to a lesser extent, principal forgiveness. Beginning September 30, 2012, Chapter 7 auto loans are also considered TDRs.

For business banking loans, concessions are dependent on individual borrower circumstances and can be of a short-term nature for borrowers who need temporary relief or longer term for borrowers experiencing more fundamental financial difficulties. Concessions are predominantly term or payment extensions, but also may include interest rate reductions.

The balance of business banking loans modified in TDRs that experienced a payment default, and for which the payment default occurred within one year of the modification, was \$43 million, \$42 million and \$80 million, during the years ended December 31, 2013, 2012 and 2011, respectively. The balance of auto loans modified in TDRs that experienced a payment default, and for which the payment default occurred within one year of the modification, was \$54 million and \$46 million during the years ended December 31, 2013 and 2012, respectively. The corresponding amount for the year ended December 31, 2011 was insignificant. A payment default is deemed to occur as follows: (1) for scored auto and business banking loans, when the loan is two payments past due; and (2) for risk-rated business banking loans and auto loans, when the borrower has not made a loan payment by its scheduled due date after giving effect to the contractual grace period, if any.

The following table provides information about the financial effects of the various concessions granted in modifications of other consumer loans for the periods presented.

Year ended December 31,	Auto			Business banking			
	2013	2012	2011	2013	2012	2011	
Weighted-average interest rate of loans with interest rate reductions – before TDR	13.66	% 12.64	% 12.45	% 8.37	% 7.33	% 7.55	%
Weighted-average interest rate of loans with interest rate reductions – after TDR	4.94	4.83	5.70	6.05	5.49	5.52	
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR	NM	NM	NM	1.1	1.4	1.4	
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR	NM	NM	NM	3.1	2.4	2.6	



## Notes to consolidated financial statements

## Purchased credit-impaired loans

PCI loans are initially recorded at fair value at acquisition; PCI loans acquired in the same fiscal quarter may be aggregated into one or more pools, provided that the loans have common risk characteristics. A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows. With respect to the Washington Mutual transaction, all of the consumer PCI loans were aggregated into pools of loans with common risk characteristics.

On a quarterly basis, the Firm estimates the total cash flows (both principal and interest) expected to be collected over the remaining life of each pool. These estimates incorporate assumptions regarding default rates, loss severities, the amounts and timing of prepayments and other factors that reflect then-current market conditions. Probable decreases in expected cash flows (i.e., increased credit losses) trigger the recognition of impairment, which is then measured as the present value of the expected principal loss plus any related foregone interest cash flows, discounted at the pool's effective interest rate. Impairments are recognized through the provision for credit losses and an increase in the allowance for loan losses. Probable and significant increases in expected cash flows (e.g., decreased credit losses, the net benefit of modifications) would first reverse any previously recorded allowance for loan losses with any remaining increases recognized prospectively as a yield adjustment over the remaining estimated lives of the underlying loans. The impacts of (i) prepayments, (ii) changes in variable interest rates, and (iii) any other changes in the timing of expected cash flows are recognized prospectively as adjustments to interest income.

The Firm continues to modify certain PCI loans. The impact of these modifications is incorporated into the Firm's quarterly assessment of whether a probable and significant change in expected cash flows has occurred, and the loans continue to be accounted for and reported as PCI loans. In evaluating the effect of modifications on expected cash flows, the Firm incorporates the effect of any foregone interest and also considers the potential for redefault. The Firm develops product-specific probability of default estimates, which are used to compute expected credit losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment based upon industry-wide data. The Firm also considers its own historical loss experience to-date based on actual redefaulted modified PCI loans.

The excess of cash flows expected to be collected over the carrying value of the underlying loans is referred to as the accretable yield. This amount is not reported on the Firm's Consolidated Balance Sheets but is accreted into interest income at a level rate of return over the remaining estimated lives of the underlying pools of loans.

If the timing and/or amounts of expected cash flows on PCI loans were determined not to be reasonably estimable, no interest would be accreted and the loans would be reported as nonaccrual loans; however, since the timing and amounts of expected cash flows for the Firm's PCI consumer loans are reasonably estimable, interest is being accreted and the loans are being reported as performing loans.

The liquidation of PCI loans, which may include sales of loans, receipt of payment in full by the borrower, or foreclosure, results in removal of the loans from the underlying PCI pool. When the amount of the liquidation proceeds (e.g., cash, real estate), if any, is less than the unpaid principal balance of the loan, the difference is first applied against the PCI pool's nonaccretable difference for principal losses (i.e., the lifetime credit loss estimate established as a purchase accounting adjustment at the acquisition date). When the nonaccretable difference for a particular loan pool has been fully depleted, any excess of the unpaid principal balance of the loan over the liquidation proceeds is written off against the PCI pool's allowance for loan losses. Because the Firm's PCI loans are accounted for at a pool level, the Firm does not recognize charge-offs of PCI loans when they reach specified stages of delinquency (i.e., unlike non-PCI consumer loans, these loans are not charged off based on FFIEC standards).

The PCI portfolio affects the Firm's results of operations primarily through: (i) contribution to net interest margin; (ii) expense related to defaults and servicing resulting from the liquidation of the loans; and (iii) any provision for loan losses. The PCI loans acquired in the Washington Mutual transaction were funded based on the interest rate characteristics of the loans. For example, variable-rate loans were funded with variable-rate liabilities and fixed-rate loans were funded with fixed-rate liabilities with a similar maturity profile. A net spread will be earned on the declining balance of the portfolio, which is estimated as of December 31, 2013, to have a remaining weighted-average life of 8 years.



## Residential real estate – PCI loans

The table below sets forth information about the Firm's consumer, excluding credit card, PCI loans.

December 31, (in millions, except ratios)	Home equity		Prime mortgage		Subprime mortgage		Option ARMs		Total PCI	
	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012
Carrying value <sup>(a)</sup>	\$18,927	\$20,971	\$12,038	\$13,674	\$4,175	\$4,626	\$17,915	\$20,466	\$53,055	\$59,737
Related allowance for loan losses <sup>(b)</sup>	1,758	1,908	1,726	1,929	180	380	494	1,494	4,158	5,711
Loan delinquency (based on unpaid principal balance)										
Current	\$18,135	\$20,331	\$10,118	\$11,078	\$4,012	\$4,198	\$15,501	\$16,415	\$47,766	\$52,022
30–149 days past due	583	803	589	740	662	698	1,006	1,314	2,840	3,555
150 or more days past due	1,112	1,209	1,169	2,066	797	1,430	2,716	4,862	5,794	9,567
Total loans	\$19,830	\$22,343	\$11,876	\$13,884	\$5,471	\$6,326	\$19,223	\$22,591	\$56,400	\$65,144
% of 30+ days past due to total loans	8.55	%9.01	%14.80	%20.21	%26.67	%33.64	%19.36	%27.34	%15.31	%20.14
Current estimated LTV ratios (based on unpaid principal balance) <sup>(c)(d)</sup>										
Greater than 125% and refreshed FICO scores:										
Equal to or greater than 660	\$1,168	\$4,508	\$240	\$1,478	\$115	\$375	\$301	\$1,597	\$1,824	\$7,958
Less than 660	662	2,344	290	1,449	459	1,300	575	2,729	1,986	7,822
101% to 125% and refreshed FICO scores:										
Equal to or greater than	3,248	4,966	1,017	2,968	316	434	1,164	3,281	5,745	11,649

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660											
Less than 660	1,541	2,098	884	1,983	919	1,256	1,563	3,200	4,907	8,537	
80% to 100% and refreshed FICO scores:											
Equal to or greater than 660	4,473	3,531	2,787	1,872	544	416	3,311	3,794	11,115	9,613	
Less than 660	1,782	1,305	1,699	1,378	1,197	1,182	2,769	2,974	7,447	6,839	
Lower than 80% and refreshed FICO scores:											
Equal to or greater than 660	5,077	2,524	2,897	1,356	521	255	5,671	2,624	14,166	6,759	
Less than 660	1,879	1,067	2,062	1,400	1,400	1,108	3,869	2,392	9,210	5,967	
Total unpaid principal balance	\$19,830	\$22,343	\$11,876	\$13,884	\$5,471	\$6,326	\$19,223	\$22,591	\$56,400	\$65,144	
Geographic region (based on unpaid principal balance)											
California	\$11,937	\$13,493	\$6,845	\$7,877	\$1,293	\$1,444	\$10,419	\$11,889	\$30,494	\$34,703	
New York	962	1,067	807	927	563	649	1,196	1,404	3,528	4,047	
Illinois	451	502	353	433	283	338	481	587	1,568	1,860	
Florida	1,865	2,054	826	1,023	526	651	1,817	2,480	5,034	6,208	
Texas	327	385	106	148	328	368	100	118	861	1,019	
New Jersey	381	423	334	401	213	260	701	854	1,629	1,938	
Arizona	361	408	187	215	95	105	264	305	907	1,033	
Washington	1,072	1,215	266	328	112	142	463	563	1,913	2,248	
Michigan	62	70	189	211	145	163	206	235	602	679	
Ohio	23	27	55	71	84	100	75	89	237	287	
All other	2,389	2,699	1,908	2,250	1,829	2,106	3,501	4,067	9,627	11,122	
Total unpaid principal balance	\$19,830	\$22,343	\$11,876	\$13,884	\$5,471	\$6,326	\$19,223	\$22,591	\$56,400	\$65,144	

(a) Carrying value includes the effect of fair value adjustments that were applied to the consumer PCI portfolio at the date of acquisition.

(b) Management concluded as part of the Firm's regular assessment of the PCI loan pools that it was probable that higher expected credit losses would result in a decrease in expected cash flows. As a result, an allowance for loan losses for impairment of these pools has been recognized.

(c) Represents the aggregate unpaid principal balance of loans divided by the estimated current property value. Current property values are estimated, at a minimum, quarterly, based on home valuation models using nationally recognized home price index valuation estimates incorporating actual data to the extent available and forecasted data where actual data is not available. These property values do not represent actual appraised loan level collateral

values; as such, the resulting ratios are necessarily imprecise and should be viewed as estimates. Current estimated combined LTV for junior lien home equity loans considers all available lien positions, as well as unused lines, related to the property.

(d) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.

## Notes to consolidated financial statements

Approximately 20% of the PCI home equity portfolio are senior lien loans; the remaining balance are junior lien HELOANs or HELOCs. The following tables set forth delinquency statistics for PCI junior lien home equity loans and lines of credit based on unpaid principal balance as of December 31, 2013 and 2012.

December 31, 2013 (in millions, except ratios) HELOCs: <sup>(a)</sup>	Delinquencies			Total loans	Total 30+ day delinquency rate	
	30–89 days past due	90–149 days past due	150+ days past due			
Within the revolving period <sup>(b)</sup>	\$243	\$88	\$526	\$12,670	6.76	%
Beyond the revolving period <sup>(c)</sup>	54	21	82	2,336	6.72	
HELOANs	24	11	39	908	8.15	
Total	\$321	\$120	\$647	\$15,914	6.84	%
December 31, 2012 (in millions, except ratios) HELOCs: <sup>(a)</sup>	Delinquencies			Total loans	Total 30+ day delinquency rate	
	30–89 days past due	90–149 days past due	150+ days past due			
Within the revolving period <sup>(b)</sup>	\$361	\$175	\$591	\$15,915	7.08	%
Beyond the revolving period <sup>(c)</sup>	30	13	20	666	9.46	
HELOANs	37	18	44	1,085	9.12	
Total	\$428	\$206	\$655	\$17,666	7.30	%

(a) In general, these HELOCs are revolving loans for a 10-year period, after which time the HELOC converts to an interest-only loan with a balloon payment at the end of the loan's term.

(b) Substantially all undrawn HELOCs within the revolving period have been closed.

(c) Includes loans modified into fixed-rate amortizing loans.

The table below sets forth the accretable yield activity for the Firm's PCI consumer loans for the years ended December 31, 2013, 2012 and 2011, and represents the Firm's estimate of gross interest income expected to be earned over the remaining life of the PCI loan portfolios. The table excludes the cost to fund the PCI portfolios, and therefore the accretable yield does not represent net interest income expected to be earned on these portfolios.

Year ended December 31, (in millions, except ratios)	Total PCI		
	2013	2012	2011
Beginning balance	\$18,457	\$19,072	\$19,097
Accretion into interest income	(2,201)	(2,491)	(2,767)
Changes in interest rates on variable-rate loans	(287)	(449)	(573)
Other changes in expected cash flows <sup>(a)</sup>	198	2,325	3,315
Balance at December 31	\$16,167	\$18,457	\$19,072
Accretable yield percentage	4.31	4.38	4.33

Other changes in expected cash flows may vary from period to period as the Firm continues to refine its cash flow model and periodically updates model assumptions. For the year ended December 31, 2013, other changes in expected cash flows were due to refining the expected interest cash flows on HELOCs with balloon payments, partially offset by changes in prepayment assumptions. For the years ended December 31, 2012 and December 31, 2011, other changes in expected cash flows were principally driven by the impact of modifications, but also related to changes in prepayment assumptions.

The factors that most significantly affect estimates of gross cash flows expected to be collected, and accordingly the accretable yield balance, include: (i) changes in the benchmark interest rate indices for variable-rate products such as option ARM and home equity loans; and (ii) changes in prepayment assumptions.

Since the date of acquisition, the decrease in the accretable yield percentage has been primarily related to a decrease in interest rates on variable-rate loans and, to a lesser extent, extended loan liquidation periods. Certain events, such as extended or shortened loan liquidation periods, affect the timing of expected cash flows and the accretable yield

percentage, but not the amount of cash expected to be received (i.e., the accretable yield balance). While extended loan liquidation periods reduce the accretable yield percentage (because the same accretable yield balance is recognized against a higher-than-expected loan balance over a longer-than-expected period of time), shortened loan liquidation periods would have the opposite effect.

## Credit card loan portfolio

The credit card portfolio segment includes credit card loans originated and purchased by the Firm. Delinquency rates are the primary credit quality indicator for credit card loans as they provide an early warning that borrowers may be experiencing difficulties (30 days past due); information on those borrowers that have been delinquent for a longer period of time (90 days past due) is also considered. In addition to delinquency rates, the geographic distribution of the loans provides insight as to the credit quality of the portfolio based on the regional economy.

While the borrower's credit score is another general indicator of credit quality, the Firm does not view credit scores as a primary indicator of credit quality because the borrower's credit score tends to be a lagging indicator. However, the distribution of such scores provides a general indicator of credit quality trends within the portfolio. Refreshed FICO score information, which is obtained at least quarterly, for a statistically significant random sample of the credit card portfolio is indicated in the table below; FICO is considered to be the industry benchmark for credit scores.

The Firm generally originates new card accounts to prime consumer borrowers. However, certain cardholders' FICO scores may decrease over time, depending on the performance of the cardholder and changes in credit score technology.

The table below sets forth information about the Firm's credit card loans.

As of or for the year ended December 31, (in millions, except ratios)	2013	2012	
Net charge-offs	\$3,879	\$4,944	
% of net charge-offs to retained loans	3.14	%3.95	%
Loan delinquency			
Current and less than 30 days past due and still accruing	\$125,335	\$125,309	
30–89 days past due and still accruing	1,108	1,381	
90 or more days past due and still accruing	1,022	1,302	
Nonaccrual loans	—	1	
Total retained credit card loans	\$127,465	\$127,993	
Loan delinquency ratios			
% of 30+ days past due to total retained loans	1.67	%2.10	%
% of 90+ days past due to total retained loans	0.80	1.02	
Credit card loans by geographic region			
California	\$17,194	\$17,115	
New York	10,497	10,379	
Texas	10,400	10,209	
Illinois	7,412	7,399	
Florida	7,178	7,231	
New Jersey	5,554	5,503	
Ohio	4,881	4,956	
Pennsylvania	4,462	4,549	
Michigan	3,618	3,745	
Virginia	3,239	3,193	
All other	53,030	53,714	
Total retained credit card loans	\$127,465	\$127,993	
Percentage of portfolio based on carrying value with estimated refreshed FICO scores			
Equal to or greater than 660	85.1	%84.1	%
Less than 660	14.9	15.9	



## Notes to consolidated financial statements

## Credit card impaired loans and loan modifications

The table below sets forth information about the Firm's impaired credit card loans. All of these loans are considered to be impaired as they have been modified in TDRs.

December 31, (in millions)	2013	2012
Impaired credit card loans with an allowance <sup>(a)(b)</sup>		
Credit card loans with modified payment terms <sup>(c)</sup>	\$2,746	\$4,189
Modified credit card loans that have reverted to pre-modification payment terms <sup>(d)</sup>	369	573
Total impaired credit card loans	\$3,115	\$4,762
Allowance for loan losses related to impaired credit card loans	\$971	\$1,681

(a) The carrying value and the unpaid principal balance are the same for credit card impaired loans.

(b) There were no impaired loans without an allowance.

(c) Represents credit card loans outstanding to borrowers enrolled in a credit card modification program as of the date presented.

(d) Represents credit card loans that were modified in TDRs but that have subsequently reverted back to the loans' pre-modification payment terms. At December 31, 2013 and 2012, \$226 million and \$341 million, respectively, of loans have reverted back to the pre-modification payment terms of the loans due to noncompliance with the terms of the modified loans. The remaining \$143 million and \$232 million at December 31, 2013 and 2012, respectively, of these loans are to borrowers who have successfully completed a short-term modification program. The Firm continues to report these loans as TDRs since the borrowers' credit lines remain closed.

The following table presents average balances of impaired credit card loans and interest income recognized on those loans.

Year ended December 31, (in millions)	2013	2012	2011
Average impaired credit card loans	\$3,882	\$5,893	\$8,499
Interest income on impaired credit card loans	198	308	463

## Loan modifications

JPMorgan Chase may offer one of a number of loan modification programs to credit card borrowers who are experiencing financial difficulty. Most of the credit card loans have been modified under long-term programs for borrowers who are experiencing financial difficulties. Modifications under long-term programs involve placing the customer on a fixed payment plan, generally for 60 months. The Firm may also offer short-term programs for borrowers who may be in need of temporary relief; however, none are currently being offered. Modifications under all short- and long-term programs typically include reducing the interest rate on the credit card. Substantially all modifications are considered to be TDRs.

If the cardholder does not comply with the modified payment terms, then the credit card loan agreement reverts back to its pre-modification payment terms. Assuming that the cardholder does not begin to perform in accordance with those payment terms, the loan continues to age and will ultimately be charged-off in accordance with the Firm's standard charge-off policy. In addition, if a borrower successfully completes a short-term modification program, then the loan reverts back to its pre-modification payment terms. However, in most cases, the Firm does not reinstate the borrower's line of credit.

The following table provides information regarding the nature and extent of modifications of credit card loans for the periods presented.

Year ended December 31, (in millions)	New enrollments		
	2013	2012	2011
Short-term programs	\$—	\$47	\$167

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Long-term programs	1,180	1,607	2,523
Total new enrollments	\$1,180	\$1,654	\$2,690

Financial effects of modifications and redefaults

The following table provides information about the financial effects of the concessions granted on credit card loans modified in TDRs and redefaults for the periods presented.

Year ended December 31,

(in millions, except weighted-average data)	2013	2012	2011	
Weighted-average interest rate of loans – before TDR	15.37	% 15.67	% 16.05	%
Weighted-average interest rate of loans – after TDR	4.38	5.19	5.28	
Loans that redefaulted within one year of modification <sup>(a)</sup>	\$ 167	\$ 309	\$ 687	

Represents loans modified in TDRs that experienced a payment default in the periods presented, and for which the (a) payment default occurred within one year of the modification. The amounts presented represent the balance of such loans as of the end of the quarter in which they defaulted.

For credit card loans modified in TDRs, payment default is deemed to have occurred when the loans become two payments past due. A substantial portion of these loans is expected to be charged-off in accordance with the Firm's standard charge-off policy. Based on historical experience, the estimated weighted-average default rate was expected to be 30.72%, 38.23% and 35.47% for credit card loans modified as of December 31, 2013, 2012 and 2011, respectively.

#### Wholesale loan portfolio

Wholesale loans include loans made to a variety of customers, ranging from large corporate and institutional clients to high-net-worth individuals.

The primary credit quality indicator for wholesale loans is the risk rating assigned each loan. Risk ratings are used to identify the credit quality of loans and differentiate risk within the portfolio. Risk ratings on loans consider the probability of default (“PD”) and the loss given default (“LGD”). PD is the likelihood that a loan will default and not be repaid. The LGD is the estimated loss on the loan that would be realized upon the default of the borrower and takes into consideration collateral and structural support for each credit facility.

Management considers several factors to determine an appropriate risk rating, including the obligor’s debt capacity and financial flexibility, the level of the obligor’s earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. The Firm’s definition of criticized aligns with the banking regulatory definition of criticized exposures, which consist of special mention, substandard and doubtful categories. Risk ratings generally represent ratings profiles similar to those defined by S&P and Moody’s. Investment-grade ratings range from “AAA/Aaa” to “BBB-/Baa3.” Noninvestment-grade ratings are classified as noncriticized (“BB+/Ba1 and B-/B3”) and criticized (“CCC+”/“Caa1 and below”), and the criticized portion is further subdivided into performing and nonaccrual loans, representing management’s assessment of the collectibility of principal and interest. Criticized loans have a higher probability of default than noncriticized loans.

Risk ratings are reviewed on a regular and ongoing basis by Credit Risk Management and are adjusted as necessary for updated information affecting the obligor’s ability to fulfill its obligations.

As noted above, the risk rating of a loan considers the industry in which the obligor conducts its operations. As part of the overall credit risk management framework, the Firm focuses on the management and diversification of its industry and client exposures, with particular attention paid to industries with actual or potential credit concern. See Note 5 on page 219 in this Annual Report for further detail on industry concentrations.

## Notes to consolidated financial statements

The table below provides information by class of receivable for the retained loans in the Wholesale portfolio segment.

As of or for the year ended December 31, (in millions, except ratios)	Commercial and industrial		Real estate		
	2013	2012	2013	2012	
Loans by risk ratings					
Investment grade	\$57,690	\$61,870	\$52,195	\$41,796	
Noninvestment grade:					
Noncriticized	43,477	44,651	14,381	14,567	
Criticized performing	2,385	2,636	2,229	3,857	
Criticized nonaccrual	294	708	346	520	
Total noninvestment grade	46,156	47,995	16,956	18,944	
Total retained loans	\$103,846	\$109,865	\$69,151	\$60,740	
% of total criticized to total retained loans	2.58	% 3.04	% 3.72	% 7.21	%
% of nonaccrual loans to total retained loans	0.28	0.64	0.50	0.86	
Loans by geographic distribution <sup>(a)</sup>					
Total non-U.S.	\$34,440	\$35,494	\$1,369	\$1,533	
Total U.S.	69,406	74,371	67,782	59,207	
Total retained loans	\$103,846	\$109,865	\$69,151	\$60,740	
Net charge-offs/(recoveries)	\$99	\$(212)	\$6	\$54	
% of net charge-offs/(recoveries) to end-of-period retained loans	0.10	%(0.19)	% 0.01	% 0.09	%
Loan delinquency <sup>(b)</sup>					
Current and less than 30 days past due and still accruing	\$103,357	\$109,019	\$68,627	\$59,829	
30–89 days past due and still accruing	181	119	164	322	
90 or more days past due and still accruing <sup>(c)</sup>	14	19	14	69	
Criticized nonaccrual	294	708	346	520	
Total retained loans	\$103,846	\$109,865	\$69,151	\$60,740	

(a) The U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.

The credit quality of wholesale loans is assessed primarily through ongoing review and monitoring of an obligor's (b) ability to meet contractual obligations rather than relying on the past due status, which is generally a lagging indicator of credit quality. For a discussion of more significant risk factors, see page 279 of this Note.

(c) Represents loans that are considered well-collateralized and therefore still accruing interest.

(d) Other primarily includes loans to SPEs and loans to private banking clients. See Note 1 on pages 189–191 of this (d) Annual Report for additional information on SPEs.

The following table presents additional information on the real estate class of loans within the Wholesale portfolio segment for the periods indicated. The real estate class primarily consists of secured commercial loans mainly to borrowers for multi-family and commercial lessor properties. Multifamily lending specifically finances apartment buildings. Commercial lessors receive financing specifically for real estate leased to retail, office and industrial tenants. Commercial construction and development loans represent financing for the construction of apartments, office and professional buildings and malls. Other real estate loans include lodging, real estate investment trusts ("REITs"), single-family, homebuilders and other real estate.

December 31, (in millions, except ratios)	Multifamily		Commercial lessors		
	2013	2012	2013	2012	
Real estate retained loans	\$44,389	\$38,030	\$15,949	\$14,668	
Criticized	1,142	2,118	1,323	1,951	
% of criticized to total real estate retained loans	2.57	% 5.57	% 8.30	% 13.30	%

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Criticized nonaccrual	\$191	\$249	\$143	\$207	
% of criticized nonaccrual to total real estate retained loans	0.43	%0.65	% 0.90	% 1.41	%

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(table continued from previous page)

Financial institutions		Government agencies		Other <sup>(d)</sup>		Total retained loans		
2013	2012	2013	2012	2013	2012	2013	2012	
\$26,712	\$22,064	\$9,979	\$9,183	\$79,494	\$79,533	\$226,070	\$214,446	
6,674	13,760	440	356	10,992	9,914	75,964	83,248	
272	395	42	5	480	201	5,408	7,094	
25	8	1	—	155	198	821	1,434	
6,971	14,163	483	361	11,627	10,313	82,193	91,776	
\$33,683	\$36,227	\$10,462	\$9,544	\$91,121	\$89,846	\$308,263	\$306,222	
0.88	% 1.11	% 0.41	% 0.05	% 0.70	% 0.44	% 2.02	% 2.78	%
0.07	0.02	0.01	—	0.17	0.22	0.27	0.47	
\$22,726	\$26,326	\$2,146	\$1,582	\$43,376	\$39,421	\$104,057	\$104,356	
10,957	9,901	8,316	7,962	47,745	50,425	204,206	201,866	
\$33,683	\$36,227	\$10,462	\$9,544	\$91,121	\$89,846	\$308,263	\$306,222	
\$(99	) \$(36	) \$1	\$2	\$9	\$14	\$16	\$(178	)
(0.29	)% (0.10	)% 0.01	% 0.02	% 0.01	% 0.02	% 0.01	% (0.06	)%
\$33,426	\$36,151	\$10,421	\$9,516	\$89,717	\$88,177	\$305,548	\$302,692	
226	62	40	28	1,233	1,427	1,844	1,958	
6	6	—	—	16	44	50	138	
25	8	1	—	155	198	821	1,434	
\$33,683	\$36,227	\$10,462	\$9,544	\$91,121	\$89,846	\$308,263	\$306,222	

(table continued from previous page)

Commercial construction and development		Other		Total real estate loans		
2013	2012	2013	2012	2013	2012	
\$3,674	\$2,989	\$5,139	\$5,053	\$69,151	\$60,740	
81	119	29	189	2,575	4,377	
2.20	% 3.98	% 0.56	% 3.74	% 3.72	% 7.21	%
\$3	\$21	\$9	\$43	\$346	\$520	
0.08	% 0.70	% 0.18	% 0.85	% 0.50	% 0.86	%



## Notes to consolidated financial statements

## Wholesale impaired loans and loan modifications

Wholesale impaired loans are comprised of loans that have been placed on nonaccrual status and/or that have been modified in a TDR. All impaired loans are evaluated for an asset-specific allowance as described in Note 15 on pages 284–287 of this Annual Report.

The table below sets forth information about the Firm's wholesale impaired loans.

December 31, (in millions)	Commercial and industrial		Real estate		Financial institutions		Government agencies		Other		Total retained loans	
	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012	2013	2012
Impaired loans												
With an allowance	\$236	\$588	\$258	\$375	\$17	\$6	\$1	\$—	\$85	\$122	\$597	\$1,091
Without an allowance <sup>(a)</sup>	58	173	109	133	8	2	—	—	73	76	248	384
Total impaired loans	\$294	\$761	\$367	\$508	\$25	\$8	\$1	\$—	\$158	\$198	\$845	\$1,475
Allowance for loan losses related to impaired loans	\$75	\$205	\$63	\$82	\$16	\$2	\$—	\$—	\$27	\$30	\$181	\$319
Unpaid principal balance of impaired loans <sup>(b)</sup>	448	957	454	626	24	22	1	—	241	318	1,168	1,923

When the discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the (a) loan, the loan does not require an allowance. This typically occurs when the impaired loans have been partially charged-off and/or there have been interest payments received and applied to the loan balance.

Represents the contractual amount of principal owed at December 31, 2013 and 2012. The unpaid principal balance (b) differs from the impaired loan balances due to various factors, including charge-offs; interest payments received and applied to the carrying value; net deferred loan fees or costs; and unamortized discount or premiums on purchased loans.

The following table presents the Firm's average impaired loans for the years ended 2013, 2012 and 2011.

Year ended December 31, (in millions)	2013	2012	2011
Commercial and industrial	\$412	\$873	\$1,309
Real estate	484	784	1,813
Financial institutions	17	17	84
Government agencies	—	9	20
Other	211	277	634
Total <sup>(a)</sup>	\$1,124	\$1,960	\$3,860

The related interest income on accruing impaired loans and interest income recognized on a cash basis were not (a) material for the years ended December 31, 2013, 2012 and 2011.

## Loan modifications

Certain loan modifications are considered to be TDRs as they provide various concessions to borrowers who are experiencing financial difficulty. All TDRs are reported as impaired loans in the tables above.

The following table provides information about the Firm's wholesale loans that have been modified in TDRs, including a reconciliation of the beginning and ending balances of such loans and information regarding the nature and extent of modifications during the periods presented.

Years ended December 31, (in millions)	Commercial and industrial			Real estate			Other <sup>(b)</sup>			Total		
	2013	2012	2011	2013	2012	2011	2013	2012	2011	2013	2012	2011
Beginning balance of TDRs	\$575	\$531	\$212	\$99	\$176	\$907	\$22	\$43	\$24	\$696	\$750	\$1,143
New TDRs	60	\$162	\$665	43	43	113	50	73	32	153	278	810
Increases to existing TDRs	4	183	96	—	—	16	—	—	—	4	183	112
Charge-offs post-modification	(9	)(27	)(30	)(3	)(2	)(146	—	(7	)—	(12	)(36	)(176
Sales and other <sup>(a)</sup>	(553	)(274	)(412	)(51	)(118	)(714	(39	)(87	)(13	)(643	)(479	)(1,139
Ending balance of TDRs	\$77	\$575	\$531	\$88	\$99	\$176	\$33	\$22	\$43	\$198	\$696	\$750
TDRs on nonaccrual status	\$77	\$522	\$415	\$61	\$92	\$128	\$30	\$22	\$35	\$168	\$636	\$578
Additional commitments to lend to borrowers whose loans have been modified in TDRs	19	44	147	—	—	—	—	2	—	19	46	147

Sales and other are largely sales and paydowns, but also includes performing loans restructured at market rates that were removed from the reported TDR balance of \$12 million, \$44 million and \$152 million during the years ended (a)December 31, 2013, 2012 and 2011 respectively. Loans that have been removed continue to be evaluated along with other impaired loans to determine the asset-specific component of the allowance for loan losses (see page 260 of this Note).

(b)Includes loans to Financial institutions, Government agencies and Other.

## Financial effects of modifications and redefaults

Wholesale loans modified as TDRs are typically term or payment extensions and, to a lesser extent, deferrals of principal and/or interest on commercial and industrial and real estate loans. For the years ended December 31, 2013, 2012 and 2011, the average term extension granted on wholesale loans with term or payment extensions was 2.1 years, 1.1 years and 3.3 years, respectively. The weighted-average remaining term for all loans modified during these

periods was 2.0 years, 3.6 years and 4.5 years respectively. Wholesale TDR loans that redefaulted within one year of the modification were \$1 million, \$56 million and \$96 million during the years ended December 31, 2013, 2012 and 2011, respectively. A payment default is deemed to occur when the borrower has not made a loan payment by its scheduled due date after giving effect to any contractual grace period.



## Notes to consolidated financial statements

## Note 15 – Allowance for credit losses

JPMorgan Chase's allowance for loan losses covers the consumer, including credit card, portfolio segments (primarily scored); and wholesale (risk-rated) portfolio, and represents management's estimate of probable credit losses inherent in the Firm's loan portfolio. The allowance for loan losses includes an asset-specific component, a formula-based component and a component related to PCI loans, as described below. Management also estimates an allowance for wholesale and consumer lending-related commitments using methodologies similar to those used to estimate the allowance on the underlying loans. During 2013, the Firm did not make any significant changes to the methodologies or policies used to determine its allowance for credit losses; such policies are described in the following paragraphs. The asset-specific component of the allowance relates to loans considered to be impaired, which includes loans that have been modified in TDRs as well as risk-rated loans that have been placed on nonaccrual status. To determine the asset-specific component of the allowance, larger loans are evaluated individually, while smaller loans are evaluated as pools using historical loss experience for the respective class of assets. Scored loans (i.e., consumer loans) are pooled by product type, while risk-rated loans (primarily wholesale loans) are segmented by risk rating. The Firm generally measures the asset-specific allowance as the difference between the recorded investment in the loan and the present value of the cash flows expected to be collected, discounted at the loan's original effective interest rate. Subsequent changes in impairment are reported as an adjustment to the provision for loan losses. In certain cases, the asset-specific allowance is determined using an observable market price, and the allowance is measured as the difference between the recorded investment in the loan and the loan's fair value. Impaired collateral-dependent loans are charged down to the fair value of collateral less costs to sell and therefore may not be subject to an asset-specific reserve as for other impaired loans. See Note 14 on pages 258–283 of this Annual Report for more information about charge-offs and collateral-dependent loans.

The asset-specific component of the allowance for impaired loans that have been modified in TDRs incorporates the effects of foregone interest, if any, in the present value calculation and also incorporates the effect of the modification on the loan's expected cash flows, which considers the potential for redefault. For residential real estate loans modified in TDRs, the Firm develops product-specific probability of default estimates, which are applied at a loan level to compute expected losses. In developing these probabilities of default, the Firm considers the relationship between the credit quality characteristics of the underlying loans and certain assumptions about home prices and unemployment, based upon industry-wide data. The Firm also considers its own historical loss experience to date based on actual redefaulted modified loans. For credit card loans modified in TDRs, expected losses incorporate projected redefaults based on the Firm's historical experience by type of modification program. For wholesale loans modified in TDRs, expected losses incorporate redefaults based on management's expectation of the borrower's ability to repay under the modified terms.

The formula-based component is based on a statistical calculation to provide for incurred credit losses in performing risk-rated loans and all consumer loans, except for any loans restructured in TDRs and PCI loans. See Note 14 on pages 258–283 of this Annual Report for more information on PCI loans.

For scored loans, the statistical calculation is performed on pools of loans with similar risk characteristics (e.g., product type) and generally computed by applying loss factors to outstanding principal balances over an estimated loss emergence period. The loss emergence period represents the time period between the date at which the loss is estimated to have been incurred and the ultimate realization of that loss (through a charge-off). Estimated loss emergence periods may vary by product and may change over time; management applies judgment in estimating loss emergence periods, using available credit information and trends.

Loss factors are statistically derived and sensitive to changes in delinquency status, credit scores, collateral values and other risk factors. The Firm uses a number of different forecasting models to estimate both the PD and the loss severity, including delinquency roll rate models and credit loss severity models. In developing PD and loss severity assumptions, the Firm also considers known and anticipated changes in the economic environment, including changes in home prices, unemployment rates and other risk indicators.

A nationally recognized home price index measure is used to estimate both the PD and the loss severity on residential real estate loans at the metropolitan statistical areas (“MSA”) level. Loss severity estimates are regularly validated by comparison to actual losses recognized on defaulted loans, market-specific real estate appraisals and property sales activity. The economic impact of potential modifications of residential real estate loans is not included in the statistical calculation because of the uncertainty regarding the type and results of such modifications.

For risk-rated loans, the statistical calculation is the product of an estimated PD and an estimated LGD. These factors are differentiated by risk rating and expected maturity. In assessing the risk rating of a particular loan, among the factors considered are the obligor’s debt capacity and financial flexibility, the level of the obligor’s earnings, the amount and sources for repayment, the level and nature of contingencies, management strength, and the industry and geography in which the obligor operates. These factors are based on an evaluation of historical and current information, and involve subjective assessment and interpretation. Emphasizing one factor over another or considering additional factors could impact the risk rating assigned by the Firm to that loan. PD estimates are based on observable external through-the-cycle data, using credit-rating agency default statistics. LGD estimates are based on the Firm’s history of actual credit losses over more than one credit cycle.

Management applies judgment within an established framework to adjust the results of applying the statistical calculation described above. The determination of the appropriate adjustment is based on management’s view of loss events that have occurred but that are not yet reflected in the loss factors and that relate to current macroeconomic and political conditions, the quality of underwriting standards and other relevant internal and external factors affecting the credit quality of the portfolio. For the scored loan portfolios, adjustments to the statistical calculation are accomplished in part by analyzing the historical loss experience for each major product segment. Factors related to unemployment, home prices, borrower behavior and lien position, the estimated effects of the mortgage foreclosure-related settlement with federal and state officials and uncertainties regarding the ultimate success of loan modifications are incorporated into the calculation, as appropriate. For junior lien products, management considers the delinquency and/or modification status of any senior liens in determining the adjustment. In addition, for the risk-rated portfolios, any adjustments made to the statistical calculation also consider concentrated and deteriorating industries. Management establishes an asset-specific allowance for lending-related commitments that are considered impaired and computes a formula-based allowance for performing consumer and wholesale lending-related commitments. These are computed using a methodology similar to that used for the wholesale loan portfolio, modified for expected maturities and probabilities of drawdown.

Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. Subsequent evaluations of the loan portfolio, in light of the factors then prevailing, may result in significant changes in the allowances for loan losses and lending-related commitments in future periods. At least quarterly, the allowance for credit losses is reviewed by the Chief Risk Officer, the Chief Financial Officer and the Controller of the Firm and discussed with the Risk Policy and Audit Committees of the Board of Directors of the Firm. As of December 31, 2013, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb probable credit losses inherent in the portfolio).

## Notes to consolidated financial statements

## Allowance for credit losses and loans and lending-related commitments by impairment methodology

The table below summarizes information about the allowance for loan losses, loans by impairment methodology, the allowance for lending-related commitments and lending-related commitments by impairment methodology.

Year ended December 31, (in millions)	2013			
	Consumer, excluding credit card	Credit card	Wholesale	Total
Allowance for loan losses				
Beginning balance at January 1,	\$12,292	\$5,501	\$4,143	\$21,936
Gross charge-offs	2,754	4,472	241	7,467
Gross recoveries	(847 )	(593 )	(225 )	(1,665 )
Net charge-offs/(recoveries)	1,907	3,879	16	5,802
Write-offs of PCI loans <sup>(a)</sup>	53	—	—	53
Provision for loan losses	(1,872 )	2,179	(119 )	188
Other	(4 )	(6 )	5	(5 )
Ending balance at December 31,	\$8,456	\$3,795	\$4,013	\$16,264

## Allowance for loan losses by impairment methodology

Asset-specific <sup>(b)</sup>	\$601	\$971	<sup>(c)</sup> \$181	\$1,753
Formula-based	3,697	2,824	3,832	10,353
PCI	4,158	—	—	4,158
Total allowance for loan losses	\$8,456	\$3,795	\$4,013	\$16,264

## Loans by impairment methodology

Asset-specific	\$13,785	\$3,115	\$845	\$17,745
Formula-based	221,609	124,350	307,412	653,371
PCI	53,055	—	6	53,061
Total retained loans	\$288,449	\$127,465	\$308,263	\$724,177

## Impaired collateral-dependent loans

Net charge-offs	\$235	\$—	\$37	\$272
Loans measured at fair value of collateral less cost to sell	3,105	—	362	3,467

## Allowance for lending-related commitments

Beginning balance at January 1,	\$7	\$—	\$661	\$668
Provision for lending-related commitments	1	—	36	37
Other	—	—	—	—
Ending balance at December 31,	\$8	\$—	\$697	\$705

## Allowance for lending-related commitments by impairment methodology

Asset-specific	\$—	\$—	\$60	\$60
Formula-based	8	—	637	645
Total allowance for lending-related commitments	\$8	\$—	\$697	\$705

## Lending-related commitments by impairment methodology

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Asset-specific	\$—	\$—	\$206	\$206
Formula-based	56,057	529,383	446,026	1,031,466
Total lending-related commitments	\$56,057	\$529,383	\$446,232	\$1,031,672

Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed (a) estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. Any write-offs of PCI loans are recognized when the underlying loan is removed from a pool (e.g., upon liquidation).

(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.

The asset-specific credit card allowance for loan losses is related to loans that have been modified in a TDR; such (c) allowance is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.

(d) Consumer, excluding credit card, charge-offs for the year ended December 31, 2012, included \$747 million of charge-offs for Chapter 7 residential real estate loans and \$53 million of charge-offs for Chapter 7 auto loans.

(table continued from previous page)

2012				2011			
Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
\$16,294	\$6,999	\$4,316	\$27,609	\$16,471	\$11,034	\$4,761	\$32,266
4,805	(d) 5,755	346	10,906	5,419	8,168	916	14,503
(508	) (811	) (524	)(1,843	) (547	) (1,243	) (476	)(2,266
4,297	(d) 4,944	(178	)9,063	4,872	6,925	440	12,237
—	—	—	—	—	—	—	—
302	3,444	(359	)3,387	4,670	2,925	17	7,612
(7	) 2	8	3	25	(35	) (22	)(32
\$12,292	\$5,501	\$4,143	\$21,936	\$16,294	\$6,999	\$4,316	\$27,609
\$729	\$1,681	(c) \$319	\$2,729	\$828	\$2,727	(c) \$516	\$4,071
5,852	3,820	3,824	13,496	9,755	4,272	3,800	17,827
5,711	—	—	5,711	5,711	—	—	5,711
\$12,292	\$5,501	\$4,143	\$21,936	\$16,294	\$6,999	\$4,316	\$27,609
\$13,938	\$4,762	\$1,475	\$20,175	\$9,892	\$7,214	\$2,549	\$19,655
218,945	123,231	304,728	646,904	232,989	124,961	275,825	633,775
59,737	—	19	59,756	65,546	—	21	65,567
\$292,620	\$127,993	\$306,222	\$726,835	\$308,427	\$132,175	\$278,395	\$718,997
\$973	(c) \$—	\$77	\$1,050	\$110	\$—	\$128	\$238
3,272	—	445	3,717	830	—	833	1,663
\$7	\$—	\$666	\$673	\$6	\$—	\$711	\$717
—	—	(2	)(2	) 2	—	(40	)(38
—	—	(3	)(3	) (1	) —	(5	)(6
\$7	\$—	\$661	\$668	\$7	\$—	\$666	\$673
\$—	\$—	\$97	\$97	\$—	\$—	\$150	\$150
7	—	564	571	7	—	516	523
\$7	\$—	\$661	\$668	\$7	\$—	\$666	\$673
\$—	\$—	\$355	\$355	\$—	\$—	\$865	\$865
60,156	533,018	434,459	1,027,633	62,307	530,616	381,874	974,797
\$60,156	\$533,018	\$434,814	\$1,027,988	\$62,307	\$530,616	\$382,739	\$975,662



## Notes to consolidated financial statements

## Note 16 – Variable interest entities

For a further description of JPMorgan Chase’s accounting policies regarding consolidation of VIEs, see Note 1 on pages 189–191 of this Annual Report.

The following table summarizes the most significant types of Firm-sponsored VIEs by business segment. The Firm considers a “sponsored” VIE to include any entity where: (1) JPMorgan Chase is the principal beneficiary of the structure; (2) the VIE is used by JPMorgan Chase to securitize Firm assets; (3) the VIE issues financial instruments with the JPMorgan Chase name; or (4) the entity is a JPMorgan Chase–administered asset-backed commercial paper conduit.

Line-of-Business	Transaction Type	Activity	Annual Report page references
CCB	Credit card securitization trusts	Securitization of both originated and purchased credit card receivables	289
	Other securitization trusts	Securitization of originated student loans	290-292
	Mortgage securitization trusts	Securitization of originated and purchased residential mortgages	290-292
CIB	Mortgage and other securitization trusts	Securitization of both originated and purchased residential and commercial mortgages, automobile and student loans	290-292
	Multi-seller conduits	Assist clients in accessing the financial markets in a cost-efficient manner and structures transactions to meet investor needs	292-296
	Investor intermediation activities:		
	Municipal bond vehicles		293-294
	Credit-related note and asset swap vehicles		294-296

The Firm’s other business segments are also involved with VIEs, but to a lesser extent, as follows:

**Asset Management:** Sponsors and manages certain funds that are deemed VIEs. As asset manager of the funds, AM earns a fee based on assets managed; the fee varies with each fund’s investment objective and is competitively priced. For fund entities that qualify as VIEs, AM’s interests are, in certain cases, considered to be significant variable interests that result in consolidation of the financial results of these entities.

**Commercial Banking:** CB makes investments in and provides lending to community development entities that may meet the definition of a VIE. In addition, CB provides financing and lending related services to certain client-sponsored VIEs. In general, CB does not control the activities of these entities and does not consolidate these entities.

**Corporate/Private Equity:** The Private Equity business, within Corporate/Private Equity, may be involved with entities that are deemed VIEs. However, the Firm’s private equity business is subject to specialized investment company accounting, which does not require the consolidation of investments, including VIEs.

The Firm also invests in and provides financing and other services to VIEs sponsored by third parties, as described on page 296 of this Note.

#### Significant Firm-sponsored variable interest entities

##### Credit card securitizations

The Card business securitizes originated and purchased credit card loans, primarily through the Chase Issuance Trust (the "Trust"). The Firm's continuing involvement in credit card securitizations includes servicing the receivables, retaining an undivided seller's interest in the receivables, retaining certain senior and subordinated securities and maintaining escrow accounts.

The Firm is considered to be the primary beneficiary of these Firm-sponsored credit card securitization trusts based on the Firm's ability to direct the activities of these VIEs through its servicing responsibilities and other duties, including making decisions as to the receivables that are transferred into those trusts and as to any related modifications and workouts. Additionally, the nature and extent of the Firm's other continuing involvement with the trusts, as indicated above, obligates the Firm to absorb losses and gives the Firm the right to receive certain benefits from these VIEs that could potentially be significant.

The underlying securitized credit card receivables and other assets of the securitization trusts are available only for payment of the beneficial interests issued by the securitization trusts; they are not available to pay the Firm's other obligations or the claims of the Firm's other creditors.

The agreements with the credit card securitization trusts require the Firm to maintain a minimum undivided interest in the credit card trusts (which is generally 4%). As of December 31, 2013 and 2012, the Firm held undivided interests in Firm-sponsored credit card securitization trusts of \$14.3 billion and \$15.8 billion, respectively. The Firm maintained an average undivided interest in principal receivables owned by those trusts of approximately 30% and 28% for the years ended December 31, 2013 and 2012, respectively. The Firm also retained \$130 million and \$362 million of senior securities and \$5.5 billion and \$4.6 billion of subordinated securities in certain of its credit card securitization trusts as of December 31, 2013 and 2012, respectively. The Firm's undivided interests in the credit card trusts and securities retained are eliminated in consolidation.

##### Firm-sponsored mortgage and other securitization trusts

The Firm securitizes (or has securitized) originated and purchased residential mortgages, commercial mortgages and other consumer loans (including automobile and student loans) primarily in its CIB and CCB businesses. Depending on the particular transaction, as well as the respective business involved, the Firm may act as the servicer of the loans and/or retain certain beneficial interests in the securitization trusts.

## Notes to consolidated financial statements

The following table presents the total unpaid principal amount of assets held in Firm-sponsored private-label securitization entities, including those in which the Firm has continuing involvement, and those that are consolidated by the Firm. Continuing involvement includes servicing the loans, holding senior interests or subordinated interests, recourse or guarantee arrangements, and derivative transactions. In certain instances, the Firm's only continuing involvement is servicing the loans. See Securitization activity on page 297 of this Note for further information regarding the Firm's cash flows with and interests retained in nonconsolidated VIEs, and pages 297–298 of this Note for information on the Firm's loan sales to U.S. government agencies.

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs <sup>(d)(e)(f)</sup>		
	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
December 31, 2013 <sup>(a)</sup> (in billions)						
Securitization-related						
Residential mortgage:						
Prime/Alt-A and Option ARMs	\$ 109.2	\$ 3.2	\$ 90.4	\$0.5	\$0.3	\$0.8
Subprime	32.1	1.3	28.0	0.1	—	0.1
Commercial and other <sup>(b)</sup>	130.4	—	98.0	0.5	3.5	4.0
Total	\$271.7	\$ 4.5	\$ 216.4	\$1.1	\$3.8	\$4.9

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs <sup>(d)(e)(f)</sup>		
	Total assets held by securitization VIEs	Assets held in consolidated securitization VIEs	Assets held in nonconsolidated securitization VIEs with continuing involvement	Trading assets	AFS securities	Total interests held by JPMorgan Chase
December 31, 2012 <sup>(a)</sup> (in billions)						
Securitization-related						
Residential mortgage:						
Prime/Alt-A and Option ARMs <sup>(c)</sup>	\$ 133.5	\$ 2.7	\$ 106.7	\$0.3	\$—	\$0.3
Subprime	34.5	1.3	31.3	0.1	—	0.1
Commercial and other <sup>(b)</sup>	127.8	—	81.8	1.5	2.8	4.3
Total	\$295.8	\$ 4.0	\$ 219.8	\$1.9	\$2.8	\$4.7

(a) Excludes U.S. government agency securitizations. See pages 297–298 of this Note for information on the Firm's loan sales to U.S. government agencies.

(b) Consists of securities backed by commercial loans (predominantly real estate) and non-mortgage-related consumer receivables purchased from third parties. The Firm generally does not retain a residual interest in its sponsored commercial mortgage securitization transactions.

(c) The prior period has been reclassified to conform with the current presentation methodology.

(d) The table above excludes the following: retained servicing (see Note 17 on pages 299–304 of this Annual Report for a discussion of MSRs); securities retained from loans sales to U.S. government agencies; interest rate and foreign exchange derivatives primarily used to manage interest rate and foreign exchange risks of securitization entities (See Note 6 on pages 220–233 of this Annual Report for further information on derivatives); senior and subordinated securities of \$151 million and \$30 million, respectively, at December 31, 2013, and \$131 million and

\$45 million, respectively, at December 31, 2012, which the Firm purchased in connection with CIB's secondary market-making activities.

(e) Includes interests held in re-securitization transactions.

As of December 31, 2013 and 2012, 69% and 74%, respectively, of the Firm's retained securitization interests, which are carried at fair value, were risk-rated "A" or better, on an S&P-equivalent basis. The retained interests in prime residential mortgages consisted of \$551 million and \$170 million of investment-grade and \$260 million and

(f) \$171 million of noninvestment-grade retained interests at December 31, 2013 and 2012, respectively. The retained interests in commercial and other securitizations trusts consisted of \$3.9 billion and \$4.1 billion of investment-grade and \$80 million and \$164 million of noninvestment-grade retained interests at December 31, 2013 and 2012, respectively.

### Residential mortgage

The Firm securitizes residential mortgage loans originated by CCB, as well as residential mortgage loans purchased from third parties by either CCB or CIB. CCB generally retains servicing for all residential mortgage loans originated or purchased by CCB, and for certain mortgage loans purchased by CIB. For securitizations serviced by CCB, the Firm has the power to direct the significant activities of the VIE because it is responsible for decisions related to loan modifications and workouts. CCB may also retain an interest upon securitization.

In addition, CIB engages in underwriting and trading activities involving securities issued by Firm-sponsored securitization trusts. As a result, CIB at times retains senior and/or subordinated interests (including residual interests) in residential mortgage securitizations upon securitization, and/or reacquires positions in the secondary market in the normal course of business. In certain instances, as a result of the positions retained or reacquired by CIB or held by CCB, when considered together with the servicing arrangements entered into by CCB, the Firm is deemed to be the primary beneficiary of certain securitization trusts. See the table on page 296 of this Note for more information on consolidated residential mortgage securitizations.

The Firm does not consolidate a residential mortgage securitization (Firm-sponsored or third-party-sponsored) when it is not the servicer (and therefore does not have the power to direct the most significant activities of the trust) or does not hold a beneficial interest in the trust that could potentially be significant to the trust. At December 31, 2013 and 2012, the Firm did not consolidate the assets of certain Firm-sponsored residential mortgage securitization VIEs, in which the Firm had continuing involvement, primarily due to the fact that the Firm did not hold an interest in these trusts that could potentially be significant to the trusts. See the table on page 296 of this Note for more information on the consolidated residential mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated residential mortgage securitizations.

### Commercial mortgages and other consumer securitizations

CIB originates and securitizes commercial mortgage loans, and engages in underwriting and trading activities involving the securities issued by securitization trusts. CIB may retain unsold senior and/or subordinated interests in commercial mortgage securitizations at the time of securitization but, generally, the Firm does not service commercial loan securitizations. For commercial mortgage securitizations the power to direct the significant activities of the VIE generally is held by the servicer or investors in a specified class of securities (“controlling class”). See the table on page 296 of this Note for more information on the consolidated commercial mortgage securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

The Firm also securitizes student loans. The Firm retains servicing responsibilities for all originated and certain purchased student loans and has the power to direct the activities of these VIEs through these servicing responsibilities. See the table on page 296 of this Note for more information on the consolidated student loan securitizations, and the table on the previous page of this Note for further information on interests held in nonconsolidated securitizations.

### Re-securitizations

The Firm engages in certain re-securitization transactions in which debt securities are transferred to a VIE in exchange for new beneficial interests. These transfers occur in connection with both agency (Fannie Mae, Freddie Mac and Ginnie Mae) and nonagency (private-label) sponsored VIEs, which may be backed by either residential or commercial mortgages. The Firm’s consolidation analysis is largely dependent on the Firm’s role and interest in the re-securitization trusts. During the years ended December 31, 2013, 2012 and 2011, the Firm transferred \$25.3 billion, \$10.0 billion and \$24.9 billion, respectively, of securities to agency VIEs, and \$55 million, \$286 million and \$381 million, respectively, of securities to private-label VIEs.

Most re-securitizations with which the Firm is involved are client-driven transactions in which a specific client or group of clients are seeking a specific return or risk profile. For these transactions, the Firm has concluded that the decision-making power of the entity is shared between the Firm and its client(s), considering the joint effort and decisions in establishing the re-securitization trust and its assets, as well as the significant economic interest the client holds in the re-securitization trust; therefore the Firm does not consolidate the re-securitization VIE.



## Notes to consolidated financial statements

In more limited circumstances, the Firm creates a re-securitization trust independently and not in conjunction with specific clients. In these circumstances, the Firm is deemed to have the unilateral ability to direct the most significant activities of the re-securitization trust because of the decisions made during the establishment and design of the trust; therefore, the Firm consolidates the re-securitization VIE if the Firm holds an interest that could potentially be significant.

Additionally, the Firm may invest in beneficial interests of third-party securitizations and generally purchases these interests in the secondary market. In these circumstances, the Firm does not have the unilateral ability to direct the most significant activities of the re-securitization trust, either because it wasn't involved in the initial design of the trust, or the Firm is involved with an independent third party sponsor and demonstrates shared power over the creation of the trust; therefore, the Firm does not consolidate the re-securitization VIE.

As of December 31, 2013 and 2012, the Firm did not consolidate any agency re-securitizations. As of December 31, 2013 and 2012, the Firm consolidated \$86 million and \$76 million, respectively, of assets, and \$23 million and \$5 million, respectively, of liabilities of private-label re-securitizations. See the table on page 296 of this Note for more information on the consolidated re-securitization transactions.

As of December 31, 2013 and 2012, total assets (including the notional amount of interest-only securities) of nonconsolidated Firm-sponsored private-label re-securitization entities in which the Firm has continuing involvement were \$2.8 billion and \$4.6 billion, respectively. At December 31, 2013 and 2012, the Firm held approximately \$1.3 billion and \$2.0 billion, respectively, of interests in nonconsolidated agency re-securitization entities, and \$6 million and \$61 million, respectively, of senior and subordinated interests in nonconsolidated private-label re-securitization entities. See the table on page 290 of this Note for further information on interests held in nonconsolidated securitizations.

#### Multi-seller conduits

Multi-seller conduit entities are separate bankruptcy remote entities that purchase interests in, and make loans secured by, pools of receivables and other financial assets pursuant to agreements with customers of the Firm. The conduits fund their purchases and loans through the issuance of highly rated commercial paper. The primary source of repayment of the commercial paper is the cash flows from the pools of assets. In most instances, the assets are structured with deal-specific credit enhancements provided to the conduits by the customers (i.e., sellers) or other third parties. Deal-specific credit enhancements are generally structured to cover a multiple of historical losses expected on the pool of assets, and are typically in the form of overcollateralization provided by the seller. The deal-specific credit enhancements mitigate the Firm's potential losses on its agreements with the conduits.

To ensure timely repayment of the commercial paper, and to provide the conduits with funding to purchase interests in or make loans secured by pools of receivables in the event that the conduits do not obtain funding in the commercial paper market, each asset pool financed by the conduits has a minimum 100% deal-specific liquidity facility associated with it provided by JPMorgan Chase Bank, N.A. JPMorgan Chase Bank, N.A. also provides the multi-seller conduit vehicles with uncommitted program-wide liquidity facilities and program-wide credit enhancement in the form of standby letters of credit. The amount of program-wide credit enhancement required is based upon commercial paper issuance and approximates 10% of the outstanding balance.

The Firm consolidates its Firm-administered multi-seller conduits, as the Firm has both the power to direct the significant activities of the conduits and a potentially significant economic interest in the conduits. As administrative agent and in its role in structuring transactions, the Firm makes decisions regarding asset types and credit quality, and manages the commercial paper funding needs of the conduits. The Firm's interests that could potentially be significant to the VIEs include the fees received as administrative agent and liquidity and program-wide credit enhancement provider, as well as the potential exposure created by the liquidity and credit enhancement facilities provided to the conduits. See page 296 of this Note for further information on consolidated VIE assets and liabilities.



In the normal course of business, JPMorgan Chase makes markets in and invests in commercial paper, including commercial paper issued by the Firm-administered multi-seller conduits. The Firm held \$4.1 billion and \$8.3 billion of the commercial paper issued by the Firm-administered multi-seller conduits at December 31, 2013 and 2012, respectively. The Firm's investments were not driven by market illiquidity and the Firm is not obligated under any agreement to purchase the commercial paper issued by the Firm-administered multi-seller conduits.

Deal-specific liquidity facilities, program-wide liquidity and credit enhancement provided by the Firm have been eliminated in consolidation. The Firm or the Firm-administered multi-seller conduits provide lending-related commitments to certain clients of the Firm-administered multi-seller conduits. The unfunded portion of these commitments was \$9.1 billion and \$10.8 billion at December 31, 2013 and 2012, respectively, and are reported as off-balance sheet lending-related commitments. For more information on off-balance sheet lending-related commitments, see Note 29 on pages 318–324 of this Annual Report.

#### VIEs associated with investor intermediation activities

As a financial intermediary, the Firm creates certain types of VIEs and also structures transactions with these VIEs, typically using derivatives, to meet investor needs. The Firm may also provide liquidity and other support. The risks inherent in the derivative instruments or liquidity commitments are managed similarly to other credit, market or liquidity risks to which the Firm is exposed. The principal types of VIEs for which the Firm is engaged in on behalf of clients are municipal bond vehicles, credit-related note vehicles and asset swap vehicles.

#### Municipal bond vehicles

The Firm has created a series of trusts that provide short-term investors with qualifying tax-exempt investments, and that allow investors in tax-exempt securities to finance their investments at short-term tax-exempt rates. In a typical transaction, the vehicle purchases fixed-rate longer-term highly rated municipal bonds and funds the purchase by issuing two types of securities: (1) puttable floating-rate certificates and (2) inverse floating-rate residual interests ("residual interests"). The maturity of each of the puttable floating-rate certificates and the residual interests is equal to the life of the vehicle, while the maturity of the underlying municipal bonds is typically longer. Holders of the puttable floating-rate certificates may "put," or tender, the certificates if the remarketing agent cannot successfully remarket the floating-rate certificates to another investor. A liquidity facility conditionally obligates the liquidity provider to fund the purchase of the tendered floating-rate certificates. Upon termination of the vehicle, proceeds from the sale of the underlying municipal bonds would first repay any funded liquidity facility or outstanding floating-rate certificates and the remaining amount, if any, would be paid to the residual interests. If the proceeds from the sale of the underlying municipal bonds are not sufficient to repay the

liquidity facility, in certain transactions the liquidity provider has recourse to the residual interest holders for reimbursement. Certain residual interest holders may be required to post collateral with the Firm, as liquidity provider, to support such reimbursement obligations should the market value of the municipal bonds decline.

JPMorgan Chase Bank, N.A. often serves as the sole liquidity provider, and J.P. Morgan Securities LLC serves as remarketing agent, of the puttable floating-rate certificates. The liquidity provider's obligation to perform is conditional and is limited by certain termination events, which include bankruptcy or failure to pay by the municipal bond issuer or credit enhancement provider, an event of taxability on the municipal bonds or the immediate downgrade of the municipal bond to below investment grade. In addition, the Firm's exposure as liquidity provider is further limited by the high credit quality of the underlying municipal bonds, the excess collateralization in the vehicle, or in certain transactions, the reimbursement agreements with the residual interest holders.

The long-term credit ratings of the puttable floating rate certificates are directly related to the credit ratings of the underlying municipal bonds, the credit rating of any insurer of the underlying municipal bond, and the Firm's short-term credit rating as liquidity provider. A downgrade in any of these ratings would affect the rating of the puttable floating-rate certificates and could cause demand for these certificates by investors to decline or disappear. However, a downgrade of JPMorgan Chase Bank, N.A.'s short-term rating does not affect the Firm's obligation under the liquidity facility.

As remarketing agent, the Firm may hold puttable floating-rate certificates of the municipal bond vehicles. At December 31, 2013 and 2012, the Firm held \$262 million and \$252 million, respectively, of these certificates on its

Consolidated Balance Sheets. The largest amount held by the Firm at any time during 2013 was \$470 million, or 4.8%, of the municipal bond vehicles' aggregate outstanding puttable floating-rate certificates. The Firm did not have and continues not to have any intent to protect any residual interest holder from potential losses on any of the municipal bond holdings.

## Notes to consolidated financial statements

The Firm consolidates municipal bond vehicles if it owns the residual interest. The residual interest generally allows the owner to make decisions that significantly impact the economic performance of the municipal bond vehicle, primarily by directing the sale of the municipal bonds owned by the vehicle. In addition, the residual interest owners have the right to receive benefits and bear losses that could potentially be significant to the municipal bond

vehicle. The Firm does not consolidate municipal bond vehicles if it does not own the residual interests, since the Firm does not have the power to make decisions that significantly impact the economic performance of the municipal bond vehicle. See page 296 of this Note for further information on consolidated municipal bond vehicles.

The Firm's exposure to nonconsolidated municipal bond VIEs at December 31, 2013 and 2012, including the ratings profile of the VIEs' assets, was as follows.

December 31, (in billions)	Fair value of assets held by VIEs	Liquidity facilities	Excess/(deficit) <sup>(a)</sup>	Maximum exposure
Nonconsolidated municipal bond vehicles				
2013	\$ 11.8	\$ 6.9	\$ 4.9	\$ 6.9
2012	14.2	8.0	6.2	8.0

December 31, (in billions, except where otherwise noted)	Ratings profile of VIE assets <sup>(b)</sup>					Fair value of assets held by VIEs	Wt. avg. expected life of assets (years)		
	Investment-grade	Noninvestment grade	AAA to AAA-	AA+ to AA-	A+ to A- BBB+ to BBB-			BB+ and below	
2013			\$2.7	\$8.9	\$0.2	\$—	\$—	\$ 11.8	7.2
2012			3.1	11.0	0.1	—	—	14.2	5.9

(a) Represents the excess/(deficit) of the fair values of municipal bond assets available to repay the liquidity facilities, if drawn.

(b) The ratings scale is presented on an S&P-equivalent basis. The prior period has been reclassified to conform with the current presentation.

## Credit-related note and asset swap vehicles

## Credit-related note vehicles

The Firm structures transactions with credit-related note vehicles in which the VIE purchases highly rated assets, such as asset-backed securities, and enters into a credit derivative contract with the Firm to obtain exposure to a referenced credit which the VIE otherwise does not hold. The VIE then issues credit-linked notes ("CLNs") with maturities predominantly ranging from one to ten years in order to transfer the risk of the referenced credit to the VIE's investors. Clients and investors often prefer using a CLN vehicle since the CLNs issued by the VIE generally carry a higher credit rating than such notes would if issued directly by JPMorgan Chase. As a derivative counterparty in a credit-related note structure, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its Consolidated Balance Sheets at fair value. The collateral purchased by such VIEs is predominantly investment grade. The Firm divides its credit-related note structures broadly into two types: static and managed.

In a static credit-related note structure, the CLNs and associated credit derivative contract either reference a single credit (e.g., a multi-national corporation), or all or part of a fixed portfolio of credits. In a managed credit-related note structure, the CLNs and associated credit

derivative generally reference all or part of an actively managed portfolio of credits. An agreement exists between a portfolio manager and the VIE that gives the portfolio manager the ability to substitute each referenced credit in the

portfolio for an alternative credit. The Firm does not act as portfolio manager; its involvement with the VIE is generally limited to being a derivative counterparty. As a net buyer of credit protection, in both static and managed credit-related note structures, the Firm pays a premium to the VIE in return for the receipt of a payment (up to the notional of the derivative) if one or more of the credits within the portfolio defaults, or if the losses resulting from the default of reference credits exceed specified levels. The Firm does not provide any additional contractual financial support to the VIE. In addition, the Firm has not historically provided any financial support to the CLN vehicles over and above its contractual obligations. Since each CLN is established to the specifications of the investors, the investors have the power over the activities of that VIE that most significantly affect the performance of the CLN. Furthermore, the Firm does not generally have a variable interest that could potentially be significant. Accordingly, the Firm does not generally consolidate these credit-related note entities. As a derivative counterparty, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its Consolidated Balance Sheets at fair value. Substantially all of the assets purchased by such VIEs are investment-grade.

## Asset swap vehicles

The Firm structures and executes transactions with asset swap vehicles on behalf of investors. In such transactions, the VIE purchases a specific asset or assets and then enters into a derivative with the Firm in order to tailor the interest rate or foreign exchange currency risk, or both, according to investors' requirements. Generally, the assets are held by the VIE to maturity, and the tenor of the derivatives would match the maturity of the assets. Investors typically invest in the notes issued by such VIEs in order to obtain exposure to the credit risk of the specific assets, as well as exposure to foreign exchange and interest rate risk that is tailored to their specific needs. The derivative transaction between the Firm and the VIE may include currency swaps to hedge assets held by the VIE denominated in foreign currency into the investors' local currency or interest rate swaps to hedge the interest rate risk of assets held by the VIE; to add additional interest rate exposure into the VIE in order to increase the return on the issued notes; or to convert an interest-bearing asset into a zero-coupon bond.

The Firm's exposure to asset swap vehicles is generally limited to its rights and obligations under the interest rate and/or foreign exchange derivative contracts. The Firm historically has not provided any financial support to the asset swap vehicles over and above its contractual obligations. The Firm does not generally consolidate these asset swap vehicles, since the Firm does not have the power to direct the significant activities of these entities and does not have a variable interest that could potentially be significant. As a derivative counterparty, the Firm has a senior claim on the collateral of the VIE and reports such derivatives on its Consolidated Balance Sheets at fair value. Substantially all of the assets purchased by such VIEs are investment-grade.

Exposure to nonconsolidated credit-related note and asset swap VIEs at December 31, 2013 and 2012, was as follows.

December 31, 2013 (in billions)	Net derivative receivables	Total exposure	Par value of collateral held by VIEs <sup>(a)</sup>
Credit-related notes			
Static structure	\$—	\$—	\$4.8
Managed structure	—	—	3.9
Total credit-related notes	—	—	8.7
Asset swaps	0.4	0.4	7.7
Total	\$0.4	\$0.4	\$16.4
December 31, 2012 (in billions)	Net derivative receivables	Total exposure	Par value of collateral held by VIEs <sup>(a)</sup>
Credit-related notes			
Static structure	\$0.5	\$0.5	\$7.3
Managed structure	0.6	0.6	5.6
Total credit-related notes	1.1	1.1	12.9
Asset swaps	0.4	0.4	7.9
Total	\$1.5	\$1.5	\$20.8

The Firm's maximum exposure arises through the derivatives executed with the VIEs; the exposure varies over time with changes in the fair value of the derivatives. The Firm relies on the collateral held by the VIEs to pay any amounts due under the derivatives; the vehicles are structured at inception so that the par value of the collateral is expected to be sufficient to pay amounts due under the derivative contracts.

## Notes to consolidated financial statements

The Firm consolidated Firm-sponsored and third-party credit-related note vehicles with collateral fair values of \$311 million and \$483 million, at December 31, 2013 and 2012, respectively. These consolidated VIEs included some that were structured by the Firm where the Firm provides the credit derivative, and some that have been structured by third parties where the Firm is not the credit derivative provider. The Firm consolidated these vehicles, because it held positions in these entities that provided the Firm with control of certain vehicles. The Firm did not consolidate any asset swap vehicles at December 31, 2013 and 2012.

## VIEs sponsored by third parties

## VIE used in FRBNY transaction

In conjunction with the Bear Stearns merger in June 2008, the Federal Reserve Bank of New York (“FRBNY”) took control, through an LLC formed for this purpose, of a portfolio of \$30.0 billion in assets, based on the value of the portfolio as of March 14, 2008. The assets of the LLC were funded by a \$28.85 billion term loan from the FRBNY

and a \$1.15 billion subordinated loan from JPMorgan Chase. The JPMorgan Chase loan was subordinated to the FRBNY loan and bore the first \$1.15 billion of any losses of the portfolio. Any remaining assets in the portfolio after repayment of the FRBNY loan, repayment of the JPMorgan Chase loan and the expense of the LLC was for the account of the FRBNY. The extent to which the FRBNY and JPMorgan Chase loans were repaid depended on the value of the assets in the portfolio and the liquidation strategy directed by the FRBNY. The Firm did not consolidate the LLC, as it did not have the power to direct the activities of the VIE that most significantly impact the VIE’s economic performance. In June 2012, the FRBNY loan was repaid in full and in November 2012, the JPMorgan Chase loan was repaid in full. During the year ended December 31, 2012, JPMorgan Chase recognized a pretax gain of \$665 million reflecting the recovery on the \$1.15 billion subordinated loan plus contractual interest.

## Consolidated VIE assets and liabilities

The following table presents information on assets and liabilities related to VIEs consolidated by the Firm as of December 31, 2013 and 2012.

December 31, 2013 (in billions) <sup>(a)</sup>	Assets				Liabilities		
	Trading assets – debt and equity instruments	Loans	Other <sup>(d)</sup>	Total assets <sup>(e)</sup>	Beneficial interests in VIE assets <sup>(f)</sup>	Other <sup>(g)</sup>	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	\$—	\$46.9	\$1.1	\$48.0	\$26.6	\$—	\$26.6
Firm-administered multi-seller conduits	—	19.0	0.1	19.1	14.9	—	14.9
Municipal bond vehicles	3.4	—	—	3.4	2.9	—	2.9
Mortgage securitization entities <sup>(b)</sup>	2.3	1.7	—	4.0	2.9	0.9	3.8
Other <sup>(c)</sup>	0.7	2.5	1.0	4.2	2.3	0.2	2.5
Total	\$6.4	\$70.1	\$2.2	\$78.7	\$49.6	\$1.1	\$50.7
December 31, 2012 (in billions) <sup>(a)</sup>	Assets				Liabilities		
	Trading assets – debt and equity instruments	Loans	Other <sup>(d)</sup>	Total assets <sup>(e)</sup>	Beneficial interests in	Other <sup>(g)</sup>	Total liabilities

VIE program type					VIE assets <sup>(f)</sup>		
Firm-sponsored credit card trusts	\$—	\$51.9	\$0.8	\$52.7	\$30.1	\$—	\$30.1
Firm-administered multi-seller conduits	—	25.4	0.1	25.5	17.2	—	17.2
Municipal bond vehicles	9.8	—	0.1	9.9	11.0	—	11.0
Mortgage securitization entities <sup>(b)</sup>	1.4	2.0	—	3.4	2.3	1.1	3.4
Other <sup>(c)</sup>	0.8	3.4	1.1	5.3	2.6	0.1	2.7
Total	\$12.0	\$82.7	\$2.1	\$96.8	\$63.2	\$1.2	\$64.4

(a) Excludes intercompany transactions which were eliminated in consolidation.

(b) Includes residential and commercial mortgage securitizations as well as re-securitizations.

(c) Primarily comprises student loan securitization entities. The Firm consolidated \$2.5 billion and \$3.3 billion of student loan securitization entities as of December 31, 2013 and 2012, respectively.

(d) Includes assets classified as cash, derivative receivables, AFS securities, and other assets within the Consolidated Balance Sheets.

The assets of the consolidated VIEs included in the program types above are used to settle the liabilities of those (e) entities. The difference between total assets and total liabilities recognized for consolidated VIEs represents the Firm's interest in the consolidated VIEs for each program type.

The interest-bearing beneficial interest liabilities issued by consolidated VIEs are classified in the line item on the Consolidated Balance Sheets titled, "Beneficial interests issued by consolidated variable interest entities." The holders of these beneficial interests do not have recourse to the general credit of JPMorgan Chase. Included in (f) beneficial interests in VIE assets are long-term beneficial interests of \$31.8 billion and \$35.0 billion at December 31, 2013 and 2012, respectively. The maturities of the long-term beneficial interests as of December 31, 2013, were as follows: \$3.8 billion under one year, \$20.6 billion between one and five years, and \$7.4 billion over five years, all respectively.

(g) Includes liabilities classified as accounts payable and other liabilities in the Consolidated Balance Sheets.

## Supplemental information on loan securitizations

The Firm has securitized and sold a variety of loans, including residential mortgage, credit card, automobile, student and commercial (primarily related to real estate) loans, as well as debt securities. The primary purposes of these securitization transactions were to satisfy investor demand and to generate liquidity for the Firm.

For loan securitizations in which the Firm is not required to consolidate the trust, the Firm records the transfer of the loan receivable to the trust as a sale when the accounting criteria for a sale are met. Those criteria are: (1) the transferred financial assets are legally isolated from the Firm's creditors; (2) the transferee or beneficial interest

holder can pledge or exchange the transferred financial assets; and (3) the Firm does not maintain effective control over the transferred financial assets (e.g., the Firm cannot repurchase the transferred assets before their maturity and it does not have the ability to unilaterally cause the holder to return the transferred assets).

For loan securitizations accounted for as a sale, the Firm recognizes a gain or loss based on the difference between the value of proceeds received (including cash, beneficial interests, or servicing assets received) and the carrying value of the assets sold. Gains and losses on securitizations are reported in noninterest revenue.

## Securitization activity

The following tables provide information related to the Firm's securitization activities for the years ended December 31, 2013, 2012 and 2011, related to assets held in JPMorgan Chase-sponsored securitization entities that were not consolidated by the Firm, and where sale accounting was achieved based on the accounting rules in effect at the time of the securitization.

Year ended December 31, (in millions, except rates) <sup>(a)</sup>	2013		2012		2011	
	Residential mortgage <sup>(d)</sup>	Commercial and other <sup>(f)(g)</sup>	Residential mortgage <sup>(d)(e)</sup>	Commercial and other <sup>(f)(g)</sup>	Residential mortgage <sup>(d)(e)</sup>	Commercial and other <sup>(f)(g)</sup>
Principal securitized	\$1,404	\$11,318	\$—	\$5,421	\$—	\$5,961
All cash flows during the period:						
Proceeds from new securitizations <sup>(b)</sup>	\$1,410	\$11,507	\$—	\$5,705	\$—	\$6,142
Servicing fees collected	576	5	662	4	755	4
Purchases of previously transferred financial assets (or the underlying collateral) <sup>(c)</sup>	294	—	222	—	772	—
Cash flows received on interests	156	325	185	163	235	178

(a) Excludes re-securitization transactions.

Proceeds from residential mortgage securitizations were received in the form of securities. During 2013, \$1.4 billion of residential mortgage securitizations were classified in level 2 of the fair value hierarchy. Proceeds from commercial mortgage securitizations were received as securities and cash. During 2013, \$11.3 billion of commercial mortgage securitizations were classified in level 2 of the fair value hierarchy, and \$207 million of proceeds from commercial mortgage securitizations were received as cash. During 2012, \$5.7 billion of commercial mortgage securitizations were classified in level 2 of the fair value hierarchy. During 2011, \$4.0 billion and \$2.1 billion commercial mortgage securitizations were classified in levels 2 and 3 of the fair value hierarchy, respectively.

(b) Includes cash paid by the Firm to reacquire assets from off-balance sheet, nonconsolidated entities – for example, loan repurchases due to representation and warranties and servicer clean-up calls

(c) Includes prime, Alt-A, subprime, and option ARMs. Excludes sales for which the Firm did not securitize the loan (including loans sold to Ginnie Mae, Fannie Mae and Freddie Mac).

(d) There were no residential mortgage securitizations during 2012 and 2011.

(e) Includes commercial and student loan securitizations.

Key assumptions used to measure retained interests originated during the year included weighted-average life (in years) of 8.3, 8.8 and 1.7 for the years ended December 31, 2013, 2012, and 2011, respectively, and (g) weighted-average discount rate of 3.2%, 3.6% and 3.5% for the years ended December 31, 2013, 2012, and 2011, respectively.

Loans and excess mortgage servicing rights sold to agencies and other third-party-sponsored securitization entities. In addition to the amounts reported in the securitization activity tables above, the Firm, in the normal course of business, sells originated and purchased mortgage loans and certain originated excess mortgage servicing rights on a nonrecourse basis, predominantly to Ginnie Mae, Fannie Mae and Freddie Mac (the "Agencies"). These loans and excess mortgage servicing rights are sold primarily for the purpose of securitization by the Agencies, which also provide credit enhancement of the loans and excess

mortgage servicing rights through certain guarantee provisions. The Firm does not consolidate these securitization vehicles as it is not the primary beneficiary. For a limited number of loan sales, the Firm is obligated to share a portion of the credit risk associated with the sold loans with the purchaser. See Note 29 on pages 318–324 of this Annual Report for additional information about the Firm's loan sales- and securitization-related indemnifications. See Note 17 on pages 299–304 of this Annual Report for additional information about the impact of the Firm's sale of certain excess mortgage servicing rights.

## Notes to consolidated financial statements

The following table summarizes the activities related to loans sold to U.S. government-sponsored agencies and third-party-sponsored securitization entities.

Year ended December 31, (in millions)	2013	2012 <sup>(e)</sup>	2011 <sup>(e)</sup>
Carrying value of loans sold <sup>(a)</sup>	\$166,028	\$179,008	\$149,247
Proceeds received from loan sales as cash	\$782	\$195	\$122
Proceeds from loan sales as securities <sup>(b)</sup>	163,373	176,592	146,704
Total proceeds received from loan sales <sup>(c)</sup>	\$164,155	\$176,787	\$146,826
Gains on loan sales <sup>(d)</sup>	302	141	133

(a) Predominantly to U.S. government agencies.

(b) Predominantly includes securities from U.S. government agencies that are generally sold shortly after receipt.

(c) Excludes the value of MSR retained upon the sale of loans. Gains on loan sales include the value of MSR.

(d) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.

(e) Prior periods have been revised to conform with the current presentation.

## Options to repurchase delinquent loans

In addition to the Firm's obligation to repurchase certain loans due to material breaches of representations and warranties as discussed in Note 29 on pages 318–324 of this Annual Report, the Firm also has the option to repurchase delinquent loans that it services for Ginnie Mae loan pools, as well as for other U.S. government agencies under certain arrangements. The Firm typically elects to repurchase delinquent loans from Ginnie Mae loan pools as it continues to service them and/or manage the foreclosure process in accordance with the applicable requirements, and such loans continue to be insured or guaranteed. When the Firm's repurchase option becomes exercisable, such loans must be reported on the Consolidated Balance Sheets as a loan with a corresponding liability. As of December 31, 2013 and 2012, the Firm had recorded on its Consolidated Balance Sheets \$14.3 billion and \$15.6 billion, respectively, of loans that either had been repurchased or for which the Firm had an option to repurchase.

Predominantly all of these amounts relate to loans that have been repurchased from Ginnie Mae loan pools.

Additionally, real estate owned resulting from voluntary repurchases of loans was \$2.0 billion and \$1.6 billion as of December 31, 2013 and 2012, respectively. Substantially all of these loans and real estate owned are insured or guaranteed by U.S. government agencies. For additional information, refer to Note 14 on pages 258–283 of this Annual Report.

## JPMorgan Chase's interest in securitized assets held at fair value

The following table outlines the key economic assumptions used to determine the fair value, as of December 31, 2013 and 2012, of certain of the Firm's retained interests in nonconsolidated VIEs (other than MSRs), that are valued using modeling techniques. The table also outlines the sensitivities of those fair values to immediate 10% and 20% adverse changes in assumptions used to determine fair value. For a discussion of MSRs, see Note 17 on pages 299–304 of this Annual Report.

December 31, (in millions, except rates and where otherwise noted) <sup>(a)</sup>	Commercial and other	
	2013	2012
JPMorgan Chase interests in securitized assets <sup>(b)</sup>	\$520	\$1,488
Weighted-average life (in years)	5.5	6.1
Weighted-average discount rate <sup>(b)</sup>	3.8	%4.1
Impact of 10% adverse change	\$(9	) \$(34
Impact of 20% adverse change	(18	) (65

The Firm's interests in prime mortgage securitizations were \$552 million and \$341 million, as of December 31, 2013 and 2012, respectively. These include retained interests in Alt-A loans and re-securitization transactions. The Firm's interests in subprime mortgage securitizations were \$91 million and \$68 million, as of December 31, 2013 and 2012, respectively.

(b) Incorporates the Firm's weighted-average loss assumption.

The sensitivity analysis in the preceding table is hypothetical. Changes in fair value based on a 10% or 20% variation in assumptions generally cannot be extrapolated easily, because the relationship of the change in the assumptions to the change in fair value may not be linear. Also, in the table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other assumption. In reality, changes in one factor may result in changes in another, which might counteract or magnify the sensitivities. The above sensitivities also do not reflect risk management practices the Firm may undertake to mitigate such risks.

## Loan delinquencies and liquidation losses

The table below includes information about components of nonconsolidated securitized financial assets, in which the Firm has continuing involvement, and delinquencies as of December 31, 2013 and 2012.

As of or for the year ended December 31, (in millions)	Securitized assets		90 days past due		Liquidation losses	
	2013	2012	2013	2012	2013	2012
Securitized loans <sup>(a)</sup>						
Residential mortgage:						
Prime/ Alt-A & Option ARMs	\$90,381	\$106,667	\$14,882	\$22,865	\$4,688	\$9,118
Subprime mortgage	28,008	31,264	7,726	10,570	2,420	3,013
Commercial and other	98,018	81,834	2,350	4,077	1,003	1,265
Total loans securitized <sup>(b)</sup>	\$216,407	\$219,765	\$24,958	\$37,512	\$8,111	\$13,396

Total assets held in securitization-related SPEs were \$271.7 billion and \$295.8 billion, respectively, at December 31, 2013 and 2012. The \$216.4 billion and \$219.8 billion, respectively, of loans securitized at (a) December 31, 2013 and 2012, excludes: \$50.8 billion and \$72.0 billion, respectively, of securitized loans in which the Firm has no continuing involvement, and \$4.5 billion and \$4.0 billion, respectively, of loan securitizations consolidated on the Firm's Consolidated Balance Sheets at December 31, 2013 and 2012.

(b) Includes securitized loans that were previously recorded at fair value and classified as trading assets.

## Note 17 – Goodwill and other intangible assets

Goodwill and other intangible assets consist of the following.

December 31, (in millions)	2013	2012	2011
Goodwill	\$48,081	\$48,175	\$48,188
Mortgage servicing rights	9,614	7,614	7,223
Other intangible assets:			
Purchased credit card relationships	\$131	\$295	\$602
Other credit card-related intangibles	173	229	488
Core deposit intangibles	159	355	594
Other intangibles	1,155	1,356	1,523
Total other intangible assets	\$1,618	\$2,235	\$3,207

## Goodwill

Goodwill is recorded upon completion of a business combination as the difference between the purchase price and the fair value of the net assets acquired. Subsequent to initial recognition, goodwill is not amortized but is tested for impairment during the fourth quarter of each fiscal year, or more often if events or circumstances, such as adverse changes in the business climate, indicate there may be impairment.

The goodwill associated with each business combination is allocated to the related reporting units, which are determined based on how the Firm's businesses are managed and how they are reviewed by the Firm's Operating Committee. The following table presents goodwill attributed to the business segments.

December 31, (in millions)	2013	2012	2011
Consumer & Community Banking	\$30,985	\$31,048	\$30,996
Corporate & Investment Bank	6,888	6,895	6,944
Commercial Banking	2,862	2,863	2,864
Asset Management	6,969	6,992	7,007
Corporate/Private Equity	377	377	377
Total goodwill	\$48,081	\$48,175	\$48,188

The following table presents changes in the carrying amount of goodwill.

Year ended December 31, (in millions)	2013	2012	2011
Balance at beginning of period <sup>(a)</sup>	\$48,175	\$48,188	\$48,854

Changes during the period from:

Business combinations	64	43	97
Dispositions	(5	) (4	) (685
Other <sup>(b)</sup>	(153	) (52	) (78
Balance at December 31, <sup>(a)</sup>	\$48,081	\$48,175	\$48,188

(a) Reflects gross goodwill balances as the Firm has not recognized any impairment losses to date.

(b) Includes foreign currency translation adjustments and other tax-related adjustments.

Impairment testing

Goodwill was not impaired at December 31, 2013 or 2012, nor was any goodwill written off due to impairment during 2013, 2012 or 2011.

The goodwill impairment test is performed in two steps. In the first step, the current fair value of each reporting unit is compared with its carrying value, including goodwill. If the fair value is in excess of the carrying value (including goodwill), then the reporting unit's goodwill is considered not to be impaired. If the fair value is less than the carrying value (including goodwill), then a second step is performed. In the second step, the implied current fair value of the reporting unit's goodwill is determined by comparing the fair value of the reporting unit (as determined in step one) to the fair value of the net assets of the reporting unit, as if the reporting unit were being acquired in a business combination. The resulting implied current fair value of goodwill is then compared with the carrying value of the reporting unit's goodwill. If the carrying value of the goodwill exceeds its implied current fair value, then an impairment charge is recognized for the excess. If the carrying value of goodwill is less than its implied current fair value, then no goodwill impairment is recognized.

## Notes to consolidated financial statements

The Firm uses the reporting units' allocated equity plus goodwill capital as a proxy for the carrying amounts of equity for the reporting units in the goodwill impairment testing. Reporting unit equity is determined on a similar basis as the allocation of equity to the Firm's lines of business, which takes into consideration the capital the business segment would require if it were operating independently, incorporating sufficient capital to address regulatory capital requirements (including Basel III), economic risk measures and capital levels for similarly rated peers. Proposed line of business equity levels are incorporated into the Firm's annual budget process, which is reviewed by the Firm's Board of Directors. Allocated equity is further reviewed on a periodic basis and updated as needed.

The primary method the Firm uses to estimate the fair value of its reporting units is the income approach. The models project cash flows for the forecast period and use the perpetuity growth method to calculate terminal values. These cash flows and terminal values are then discounted using an appropriate discount rate. Projections of cash flows are based on the reporting units' earnings forecasts, which include the estimated effects of regulatory and legislative changes (including, but not limited to the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act")), and which are reviewed with the Operating Committee of the Firm. The discount rate used for each reporting unit represents an estimate of the cost of equity for that reporting unit and is determined considering the Firm's overall estimated cost of equity (estimated using the Capital Asset Pricing Model), as adjusted for the risk characteristics specific to each reporting unit (for example, for higher levels of risk or uncertainty associated with the business or management's forecasts and assumptions). To assess the reasonableness of the discount rates used for each reporting unit management compares the discount rate to the estimated cost of equity for publicly traded institutions with similar businesses and risk characteristics. In addition, the weighted average cost of equity (aggregating the various reporting units) is compared with the Firm's overall estimated cost of equity to ensure reasonableness. The valuations derived from the discounted cash flow models are then compared with market-based trading and transaction multiples for relevant competitors. Trading and transaction comparables are used as general indicators to assess the general reasonableness of the estimated fair values, although precise conclusions generally cannot be drawn due to the differences that naturally exist between the Firm's businesses and competitor institutions. Management also takes into consideration a comparison between the aggregate fair value of the Firm's reporting units and JPMorgan Chase's market capitalization. In evaluating this comparison, management considers several factors, including (a) a control premium that would exist in a market transaction, (b) factors related to the level of execution risk that would exist at the firmwide level that do

not exist at the reporting unit level and (c) short-term market volatility and other factors that do not directly affect the value of individual reporting units.

While no impairment of goodwill was recognized, the Firm's Mortgage Banking business in CCB remains at an elevated risk of goodwill impairment due to its exposure to U.S. consumer credit risk and the effects of economic, regulatory and legislative changes. The valuation of this business is particularly dependent upon economic conditions (including primary mortgage interest rates, lower mortgage origination volume, new unemployment claims and home prices), regulatory and legislative changes (for example, those related to residential mortgage servicing, foreclosure and loss mitigation activities), and the amount of equity capital required. The assumptions used in the discounted cash flow valuation models including the amount of capital necessary given the risk of business activities to meet regulatory capital requirements were determined using management's best estimates. The cost of equity reflected the related risks and uncertainties, and was evaluated in comparison to relevant market peers. Deterioration in these assumptions could cause the estimated fair values of these reporting units and their associated goodwill to decline, which may result in a material impairment charge to earnings in a future period related to some portion of the associated goodwill.

#### Mortgage servicing rights

Mortgage servicing rights represent the fair value of expected future cash flows for performing servicing activities for others. The fair value considers estimated future servicing fees and ancillary revenue, offset by estimated costs to service the loans, and generally declines over time as net servicing cash flows are received, effectively amortizing the MSR asset against contractual servicing and ancillary fee income. MSRs are either purchased from third parties or recognized upon sale or securitization of mortgage loans if servicing is retained.

As permitted by U.S. GAAP, the Firm elected to account for its MSRs at fair value. The Firm treats its MSRs as a single class of servicing assets based on the availability of market inputs used to measure the fair value of its MSR asset and its treatment of MSRs as one aggregate pool for risk management purposes. The Firm estimates the fair value of MSRs using an option-adjusted spread (“OAS”) model, which projects MSR cash flows over multiple interest rate scenarios in conjunction with the Firm’s prepayment model, and then discounts these cash flows at risk-adjusted rates. The model considers portfolio characteristics, contractually specified servicing fees, prepayment assumptions, delinquency rates, costs to service, late charges and other ancillary revenue, and other economic factors. The Firm compares fair value estimates and assumptions to observable market data where available, and also considers recent market activity and actual portfolio experience.

The fair value of MSR is sensitive to changes in interest rates, including their effect on prepayment speeds. MSRs typically decrease in value when interest rates decline because declining interest rates tend to increase prepayments and therefore reduce the expected life of the net servicing cash flows that comprise the MSR asset. Conversely, securities (e.g., mortgage-backed securities), principal-only certificates and certain derivatives (i.e.,

those for which the Firm receives fixed-rate interest payments) increase in value when interest rates decline. JPMorgan Chase uses combinations of derivatives and securities to manage changes in the fair value of MSRs. The intent is to offset any interest-rate related changes in the fair value of MSRs with changes in the fair value of the related risk management instruments.

The following table summarizes MSR activity for the years ended December 31, 2013, 2012 and 2011.

As of or for the year ended December 31, (in millions, except where otherwise noted)	2013	2012	2011
Fair value at beginning of period	\$7,614	\$7,223	\$13,649
MSR activity:			
Originations of MSRs	2,214	2,376	2,570
Purchase of MSRs	1	457	33
Disposition of MSRs <sup>(a)</sup>	(725)	(579)	—
Net additions	1,490	2,254	2,603
Changes due to collection/realization of expected cash flows <sup>(b)</sup>	(1,102)	(1,228)	(1,910)
Changes in valuation due to inputs and assumptions:			
Changes due to market interest rates and other <sup>(c)</sup>	2,122	(589)	(5,392)
Changes in valuation due to other inputs and assumptions:			
Projected cash flows (e.g., cost to service) <sup>(d)</sup>	109	(452)	(1,757)
Discount rates	(78)	(98)	(1,238)
Prepayment model changes and other <sup>(e)</sup>	(541)	504	1,268
Total changes in valuation due to other inputs and assumptions	(510)	(46)	(1,727)
Total changes in valuation due to inputs and assumptions <sup>(b)</sup>	\$1,612	\$(635)	\$(7,119)
Fair value at December 31, <sup>(f)</sup>	\$9,614	\$7,614	\$7,223
Change in unrealized gains/(losses) included in income related to MSRs held at December 31,	\$1,612	\$(635)	\$(7,119)
Contractual service fees, late fees and other ancillary fees included in income	\$3,309	\$3,783	\$3,977
Third-party mortgage loans serviced at December 31, (in billions)	\$822	\$867	\$910
Servicer advances, net of an allowance for uncollectible amounts, at December 31, (in billions) <sup>(g)</sup>	\$9.6	\$10.9	\$11.1

Predominantly represents excess mortgage servicing rights transferred to agency-sponsored trusts in exchange for stripped mortgage backed securities (“SMBS”). In each transaction, a portion of the SMBS was acquired by third parties at the transaction date; the Firm acquired and has retained the remaining balance of those SMBS as trading securities. Also includes sales of MSRs in 2013 and 2012.

<sup>(a)</sup> Included changes related to commercial real estate of \$(5) million, \$(8) million and \$(9) million for the years ended December 31, 2013, 2012 and 2011, respectively.

<sup>(b)</sup> Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

<sup>(c)</sup> For the year ended December 31, 2013, the increase was driven by the inclusion in the MSR valuation model of servicing fees receivable on certain delinquent loans.

<sup>(d)</sup>

Represents changes in prepayments other than those attributable to changes in market interest rates. For the year ended December 31, 2013, the decrease was driven by changes in the inputs and assumptions used to derive prepayment speeds, primarily increases in home prices.

(f) Included \$18 million, \$23 million and \$31 million related to commercial real estate at December 31, 2013, 2012, and 2011, respectively.

Represents amounts the Firm pays as the servicer (e.g., scheduled principal and interest to a trust, taxes and insurance), which will generally be reimbursed within a short period of time after the advance from future cash flows from the trust or the underlying loans. The Firm's credit risk associated with these advances is minimal

(g) because reimbursement of the advances is typically senior to all cash payments to investors. In addition, the Firm maintains the right to stop payment to investors if the collateral is insufficient to cover the advance. However, certain of these servicer advances may not be recoverable if they were not made in accordance with applicable rules and agreements.

## Notes to consolidated financial statements

During the year ended December 31, 2011, the fair value of the MSR decreased by \$6.4 billion. This decrease was predominantly due to a decline in market interest rates, which resulted in a loss in fair value of \$5.4 billion. These losses were offset by gains of \$5.6 billion on derivatives used to hedge the MSR asset; these derivatives are recognized on the Consolidated Balance Sheets separately from the MSR asset. Also contributing to the decline in fair value of the MSR asset was a \$1.7 billion decrease related to revised cost to service and ancillary income assumptions incorporated in the MSR valuation. The increased cost to service assumptions reflected the estimated impact of higher servicing costs to enhance servicing processes, particularly loan modification and foreclosure procedures, including costs to comply with Consent Orders entered into with banking regulators. The increase in the cost to service assumption contemplated significant and prolonged increases in staffing levels in the core and default servicing functions. The decreased ancillary income assumption was similarly related to a reassessment of business practices in consideration of the Consent Orders and the existing industry-wide regulatory environment, which was broadly affecting market participants.

Also in the fourth quarter of 2011, the Firm revised its OAS assumption and updated its proprietary prepayment model; these changes had generally offsetting effects. The Firm's OAS assumption is based upon capital and return requirements that the Firm believes a market participant would consider, taking into account factors such as the pending Basel III capital rules. Consequently, the OAS assumption for the Firm's portfolio increased by approximately 400 basis points and decreased the fair value of the MSR asset by approximately \$1.2 billion.

Finally, in the fourth quarter of 2011, the Firm further enhanced its proprietary prepayment model to incorporate: (i) the impact of the Home Affordable Refinance Program ("HARP") 2.0, and (ii) assumptions that to limit modeled refinancings due to the combined influences of relatively strict underwriting standards and reduced levels of expected home price appreciation. In the aggregate, these refinements increased the fair value of the MSR asset by approximately \$1.2 billion.

The following table presents the components of mortgage fees and related income (including the impact of MSR risk management activities) for the years ended December 31, 2013, 2012 and 2011.

Year ended December 31, (in millions)	2013	2012	2011
CCB mortgage fees and related income			
Net production revenue:			
Production revenue	\$2,673	\$5,783	\$3,395
Repurchase losses	331	(272)	(1,347)
Net production revenue	3,004	5,511	2,048
Net mortgage servicing revenue			
Operating revenue:			
Loan servicing revenue	3,552	3,772	4,134
Changes in MSR asset fair value due to collection/realization of expected cash flows	(1,094)	(1,222)	(1,904)
Total operating revenue	2,458	2,550	2,230
Risk management:			
Changes in MSR asset fair value due to market interest rates and other <sup>(a)</sup>	2,119	(587)	(5,390)
Other changes in MSR asset fair value due to other inputs and assumptions in model <sup>(b)</sup>	(511)	(46)	(1,727)
Change in derivative fair value and other	(1,875)	1,252	5,553
Total risk management	(267)	619	(1,564)
Total CCB net mortgage servicing revenue	2,191	3,169	666
All other	10	7	7
Mortgage fees and related income	\$5,205	\$8,687	\$2,721

(a) Represents both the impact of changes in estimated future prepayments due to changes in market interest rates, and the difference between actual and expected prepayments.

Represents the aggregate impact of changes in model inputs and assumptions such as projected cash flows (e.g., cost to service), discount rates and changes in prepayments other than those attributable to changes in market

(b) interest rates (e.g., changes in prepayments due to changes in home prices). For the year ended December 31, 2013, the decrease was driven by changes in the inputs and assumptions used to derive prepayment speeds, primarily increases in home prices.

The table below outlines the key economic assumptions used to determine the fair value of the Firm's MSRs at December 31, 2013 and 2012, and outlines the sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

December 31, (in millions, except rates)	2013	2012
Weighted-average prepayment speed assumption ("CPR")	8.07	% 13.04
Impact on fair value of 10% adverse change	\$(362)	\$(517)
Impact on fair value of 20% adverse change	(705)	(1,009)
Weighted-average option adjusted spread	7.77	% 7.61
Impact on fair value of 100 basis points adverse change	\$(389)	\$(306)
Impact on fair value of 200 basis points adverse change	(750)	(591)

CPR: Constant prepayment rate.

The sensitivity analysis in the preceding table is hypothetical and should be used with caution. Changes in fair value based on variation in assumptions generally cannot be easily extrapolated, because the relationship of the change in the assumptions to the change in fair value are often highly interrelated and may not be linear. In this table, the effect that a change in a particular assumption may have on the fair value is calculated without changing any other

assumption. In reality, changes in one factor may result in changes in another, which would either magnify or counteract the impact of the initial change.

## Notes to consolidated financial statements

## Other intangible assets

Other intangible assets are recorded at their fair value upon completion of a business combination or certain other transactions, and generally represent the value of customer relationships or arrangements. Subsequently, the Firm's intangible assets with finite lives, including core deposit intangibles, purchased credit card relationships, and other intangible assets, are amortized over their useful lives in a manner that best reflects the economic benefits of the intangible asset. The \$617 million decrease in other intangible assets during 2013 was predominantly due to \$637 million in amortization.

The components of credit card relationships, core deposits and other intangible assets were as follows.

December 31, (in millions)	2013			2012		
	Gross amount <sup>(a)</sup>	Accumulated amortization <sup>(a)</sup>	Net carrying value	Gross amount	Accumulated amortization	Net carrying value
Purchased credit card relationships	\$3,540	\$ 3,409	\$131	\$3,775	\$3,480	\$295
Other credit card-related intangibles	542	369	173	850	621	229
Core deposit intangibles	4,133	3,974	159	4,133	3,778	355
Other intangibles <sup>(b)</sup>	2,374	1,219	1,155	2,390	1,034	1,356

(a) The decrease in the gross amount and accumulated amortization from December 31, 2012, was due to the removal of fully amortized assets.

(b) Includes intangible assets of approximately \$600 million consisting primarily of asset management advisory contracts, which were determined to have an indefinite life and are not amortized.

## Amortization expense

The following table presents amortization expense related to credit card relationships, core deposits and other intangible assets.

Year ended December 31, (in millions)	2013	2012	2011
Purchased credit card relationships	\$195	\$309	\$295
Other credit card-related intangibles	58	265	106
Core deposit intangibles	196	239	285
Other intangibles	188	144	162
Total amortization expense	\$637	\$957	\$848
Future amortization expense			

The following table presents estimated future amortization expense related to credit card relationships, core deposits and other intangible assets at December 31, 2013.

Year ended December 31, (in millions)	Purchased credit card relationships	Other credit card-related intangibles	Core deposit intangibles	Other intangibles	Total
2014	\$96	\$51	\$102	\$111	\$360
2015	12	39	26	92	169
2016	9	34	14	86	143
2017	5	29	7	61	102
2018	3	20	5	52	80

## Impairment testing

The Firm's intangible assets are tested for impairment annually or more often if events or changes in circumstances indicate that the asset might be impaired.

The impairment test for a finite-lived intangible asset compares the undiscounted cash flows associated with the use or disposition of the intangible asset to its carrying value. If the sum of the undiscounted cash flows exceeds its carrying value, then no impairment charge is recorded. If the sum of the undiscounted cash flows is less than its carrying value, then an impairment charge is recognized in amortization expense to the extent the carrying amount of the asset exceeds its fair value.

The impairment test for indefinite-lived intangible assets compares the fair value of the intangible asset to its carrying amount. If the carrying value exceeds the fair value, then an impairment charge is recognized in amortization expense for the difference.

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## Note 18 – Premises and equipment

Premises and equipment, including leasehold improvements, are carried at cost less accumulated depreciation and amortization. JPMorgan Chase computes depreciation using the straight-line method over the estimated useful life of an asset. For leasehold improvements, the Firm uses the straight-line method computed over the lesser of the remaining term of the leased facility or the estimated useful life of the leased asset. JPMorgan Chase has recorded immaterial asset retirement obligations related to asbestos remediation in those cases where it has sufficient information to estimate the obligations' fair value.

JPMorgan Chase capitalizes certain costs associated with the acquisition or development of internal-use software. Once the software is ready for its intended use, these costs are amortized on a straight-line basis over the software's expected useful life and reviewed for impairment on an ongoing basis.

## Note 19 – Deposits

At December 31, 2013 and 2012, noninterest-bearing and interest-bearing deposits were as follows.

December 31, (in millions)	2013	2012
U.S. offices		
Noninterest-bearing	\$ 389,863	\$ 380,320
Interest-bearing		
Demand <sup>(a)</sup>	84,631	53,980
Savings <sup>(b)</sup>	450,405	407,710
Time (included \$5,995 and \$5,140 at fair value) <sup>(c)</sup>	91,356	90,416
Total interest-bearing deposits	626,392	552,106
Total deposits in U.S. offices	1,016,255	932,426
Non-U.S. offices		
Noninterest-bearing	17,611	17,845
Interest-bearing		
Demand	214,391	195,395
Savings	1,083	1,004
Time (included \$629 and \$593 at fair value) <sup>(c)</sup>	38,425	46,923
Total interest-bearing deposits	253,899	243,322
Total deposits in non-U.S. offices	271,510	261,167
Total deposits	\$ 1,287,765	\$ 1,193,593

(a) Includes Negotiable Order of Withdrawal (“NOW”) accounts, and certain trust accounts.

(b) Includes Money Market Deposit Accounts (“MMDAs”).

(c) Includes structured notes classified as deposits for which the fair value option has been elected. For further discussion, see Note 4 on pages 215–218 of this Annual Report.

At December 31, 2013 and 2012, time deposits in denominations of \$100,000 or more were as follows.

December 31, (in millions)	2013	2012
U.S. offices	\$ 74,804	\$ 70,008
Non-U.S. offices	38,412	46,890
Total	\$ 113,216	\$ 116,898

At December 31, 2013, the maturities of interest-bearing time deposits were as follows.

December 31, 2013 (in millions)	U.S.	Non-U.S.	Total
2014	\$ 73,130	\$ 37,394	\$ 110,524
2015	5,395	361	5,756
2016	6,274	402	6,676
2017	1,387	55	1,442
2018	1,845	201	2,046
After 5 years	3,325	12	3,337

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Total	\$91,356	\$38,425	\$129,781
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Note 20 – Accounts payable and other liabilities

Accounts payable and other liabilities consist of payables to customers; payables to brokers, dealers and clearing organizations; payables from failed securities purchases; income taxes payables; accrued expense, including interest-bearing liabilities; and all other liabilities, including litigation reserves and obligations to return securities received as collateral.

The following table details the components of accounts payable and other liabilities.

December 31, (in millions)	2013	2012
Brokerage payables <sup>(a)</sup>	\$116,391	\$108,398
Accounts payable and other liabilities <sup>(b)</sup>	78,100	86,842
Total	\$194,491	\$195,240

(a) Includes payables to customers, brokers, dealers and clearing organizations, and securities fails.

(b) Includes \$25 million and \$36 million accounted for at fair value at December 31, 2013 and 2012, respectively.

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Notes to consolidated financial statements

Note 21 – Long-term debt

JPMorgan Chase issues long-term debt denominated in various currencies, although predominantly U.S. dollars, with both fixed and variable interest rates. Included in senior and subordinated debt below are various equity-linked or other indexed instruments, which the Firm has elected to measure at fair value. Changes in fair value are recorded in principal transactions revenue in the Consolidated Statements of Income. The following table is a summary of long-term debt carrying values (including unamortized original issue discount, valuation adjustments and fair value adjustments, where applicable) by remaining contractual maturity as of December 31, 2013.

By remaining maturity at December 31,  (in millions, except rates)	2013				2012	
		Under 1 year	1-5 years	After 5 years	Total	Total
<b>Parent company</b>						
Senior debt:	Fixed rate	\$ 11,100	\$49,241	\$40,733	\$ 101,074	\$ 99,716
	Variable rate	12,411	22,790	5,829	41,030	38,765
	Interest rates <sup>(a)</sup>	0.38-6.25%	0.35-7.25%	0.19-6.40%	0.19-7.25%	0.26-7.25%
Subordinated debt:	Fixed rate	\$ 2,904	\$4,966	\$7,328	\$ 15,198	\$ 16,312
	Variable rate	—	4,557	9	4,566	3,440
	Interest rates <sup>(a)</sup>	1.92-5.13%	0.63-6.13%	3.38-8.53%	0.63-8.53%	0.61-8.53%
	Subtotal	\$26,415	\$81,554	\$53,899	\$ 161,868	\$ 158,233
<b>Subsidiaries</b>						
Federal Home Loan Banks ("FHLB") advances:	Fixed rate	\$ 1,029	\$2,022	\$ 185	\$ 3,236	\$ 4,712
	Variable rate	11,050	39,590	8,000	58,640	37,333
	Interest rates <sup>(a)</sup>	0.20-1.54%	0.16-2.04%	0.36-0.43%	0.16-2.04%	0.30-2.04%
Senior debt:	Fixed rate	\$ 347	\$ 1,655	\$ 3,426	\$ 5,428	\$ 6,761
	Variable rate	6,593	14,117	2,748	23,458	21,607
	Interest rates <sup>(a)</sup>	0.12-3.75%	0.21-8.00%	7.28 %	0.12-8.00%	0.16-7.28%
Subordinated debt:	Fixed rate	\$—	\$5,445	\$1,841	\$ 7,286	\$ 7,513
	Variable rate	—	2,528	—	2,528	2,466
	Interest rates <sup>(a)</sup>	— %	0.57-6.00%	4.38-8.25%	0.57-8.25%	0.64-8.25%
	Subtotal	\$19,019	\$65,357	\$16,200	\$ 100,576	\$ 80,392
Junior subordinated debt:	Fixed rate	\$—	\$—	\$2,176	\$ 2,176	\$ 7,131
	Variable rate	—	—	3,269	3,269	3,268
	Interest rates <sup>(a)</sup>	— %	— %	0.74-8.75%	0.74-8.75%	0.81-8.75%
	Subtotal	\$—	\$—	\$5,445	\$ 5,445	\$ 10,399
Total long-term debt <sup>(b)(c)(d)</sup>		\$45,434	\$146,911	\$75,544	\$ 267,889	<sup>(f)(g)</sup> \$ 249,024
<b>Long-term beneficial interests:</b>						
	Fixed rate	\$ 353	\$7,537	\$3,068	\$ 10,958	\$ 10,393
	Variable rate	3,438	13,056	4,378	20,872	24,579
	Interest rates	0.19-5.63%	0.19-5.35%	0.04-15.93%	0.04-15.93%	0.23-13.91%
Total long-term beneficial interests <sup>(e)</sup>		\$3,791	\$20,593	\$7,446	\$ 31,830	\$ 34,972

The interest rates shown are the range of contractual rates in effect at year-end, including non-U.S. dollar fixed- and variable-rate issuances, which excludes the effects of the associated derivative instruments used in hedge accounting relationships, if applicable. The use of these derivative instruments modifies the Firm's exposure to the contractual interest rates disclosed in the table above. Including the effects of the hedge accounting derivatives, the range of modified rates in effect at December 31, 2013, for total long-term debt was (0.18)% to 8.00%, versus the contractual range of 0.12% to 8.75% presented in the table above. The interest rate ranges shown exclude structured notes accounted for at fair value.

Included long-term debt of \$68.4 billion and \$48.0 billion secured by assets totaling \$131.3 billion and \$112.8 billion at December 31, 2013 and 2012, respectively. The amount of long-term debt secured by assets does not include amounts related to hybrid instruments.

Included \$28.9 billion and \$30.8 billion of long-term debt accounted for at fair value at December 31, 2013 and 2012, respectively.

Included \$2.7 billion and \$1.6 billion of outstanding zero-coupon notes at December 31, 2013 and 2012, respectively. The aggregate principal amount of these notes at their respective maturities is \$4.5 billion and \$3.0 billion, respectively.

Included on the Consolidated Balance Sheets in beneficial interests issued by consolidated VIEs. Also included \$2.0 billion and \$1.2 billion of outstanding structured notes accounted for at fair value at December 31, 2013 and 2012, respectively. Excluded short-term commercial paper and other short-term beneficial interests of \$17.8 billion and \$28.2 billion at December 31, 2013 and 2012, respectively.

At December 31, 2013, long-term debt in the aggregate of \$24.6 billion was redeemable at the option of JPMorgan Chase, in whole or in part, prior to maturity, based on the terms specified in the respective notes.

The aggregate carrying values of debt that matures in each of the five years subsequent to 2013 is \$45.4 billion in 2014, \$43.3 billion in 2015, \$36.3 billion in 2016, \$32.5 billion in 2017 and \$34.8 billion in 2018.

The weighted-average contractual interest rates for total long-term debt excluding structured notes accounted for at fair value were 2.56% and 3.09% as of December 31, 2013 and 2012, respectively. In order to modify exposure to interest rate and currency exchange rate movements, JPMorgan Chase utilizes derivative instruments, primarily interest rate and cross-currency interest rate swaps, in conjunction with some of its debt issues. The use of these instruments modifies the Firm's interest expense on the associated debt. The modified weighted-average interest rates for total long-term debt, including the effects of related derivative instruments, were 1.54% and 2.33% as of December 31, 2013 and 2012, respectively.

The Parent Company has guaranteed certain long-term debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's market-making activities. These guarantees rank on parity with all of the Firm's other unsecured and unsubordinated indebtedness. Guaranteed liabilities were \$478 million and \$1.7 billion at December 31, 2013 and 2012, respectively.

The Firm's unsecured debt does not contain requirements that would call for an acceleration of payments, maturities or changes in the structure of the existing debt, provide any limitations on future borrowings or require additional collateral, based on unfavorable changes in the Firm's credit ratings, financial ratios, earnings or stock price. Junior subordinated deferrable interest debentures held by trusts that issued guaranteed capital debt securities On May 8, 2013, the Firm redeemed approximately \$5.0 billion, or 100% of the liquidation amount, of the following

eight series of guaranteed capital debt securities ("trust preferred securities"): JPMorgan Chase Capital X, XI, XII, XIV, XVI, XIX and XXIV, and BANK ONE Capital VI. Other income for the year ended December 31, 2013, reflected a modest loss related to the redemption of trust preferred securities. On July 12, 2012, the Firm redeemed \$9.0 billion, or 100% of the liquidation amount, of the following nine series of trust preferred securities: JPMorgan Chase Capital XV, XVII, XVIII, XX, XXII, XXV, XXVI, XXVII and XXVIII. Other income for the year ended December 31, 2012, reflected \$888 million of pretax extinguishment gains related to adjustments applied to the cost basis of the redeemed trust preferred securities during the period they were in a qualified hedge accounting relationship.

At December 31, 2013, the Firm had outstanding 9 wholly owned Delaware statutory business trusts ("issuer trusts") that had issued guaranteed capital debt securities.

The junior subordinated deferrable interest debentures issued by the Firm to the issuer trusts, totaling \$5.4 billion and \$10.4 billion at December 31, 2013 and 2012, respectively, were reflected on the Firm's Consolidated Balance Sheets in long-term debt, and in the table on the preceding page under the caption "Junior subordinated debt" (i.e., trust preferred securities). The Firm also records the common capital securities issued by the issuer trusts in other assets in its Consolidated Balance Sheets at December 31, 2013 and 2012. The debentures issued to the issuer trusts by the Firm, less the common capital securities of the issuer trusts, qualified as Tier 1 capital as of December 31, 2013 and 2012.

## Notes to consolidated financial statements

The following is a summary of the outstanding trust preferred securities, including unamortized original issue discount, issued by each trust, and the junior subordinated deferrable interest debenture issued to each trust, as of December 31, 2013.

December 31, 2013 (in millions)	Amount of trust preferred securities issued by trust <sup>(a)</sup>	Principal amount of debenture issued to trust <sup>(b)</sup>	Issue date	Stated maturity of trust preferred securities and debentures	Earliest redemption date	Interest rate of trust preferred securities and debentures	Interest payment/distribution dates
Bank One Capital III	\$474	\$675	2000	2030	Any time	8.75%	Semiannually
Chase Capital II	482	498	1997	2027	Any time	LIBOR + 0.50%	Quarterly
Chase Capital III	296	305	1997	2027	Any time	LIBOR + 0.55%	Quarterly
Chase Capital VI	241	249	1998	2028	Any time	LIBOR + 0.625%	Quarterly
First Chicago NBD Capital I	249	257	1997	2027	Any time	LIBOR + 0.55%	Quarterly
JPMorgan Chase Capital XIII	465	480	2004	2034	2014	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XXI	836	837	2007	2037	Any time	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XXIII	643	644	2007	2047	Any time	LIBOR + 1.00%	Quarterly
JPMorgan Chase Capital XXIX	1,500	1,500	2010	2040	2015	6.70%	Quarterly
Total	\$5,186	\$5,445					

(a) Represents the amount of trust preferred securities issued to the public by each trust, including unamortized original issue discount.

(b) Represents the principal amount of JPMorgan Chase debentures issued to each trust, including unamortized original-issue discount. The principal amount of debentures issued to the trusts includes the impact of hedging and purchase accounting fair value adjustments that were recorded on the Firm's Consolidated Financial Statements.

## Note 22 – Preferred stock

At December 31, 2013 and 2012, JPMorgan Chase was authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of \$1 per share.

In the event of a liquidation or dissolution of the Firm, JPMorgan Chase's preferred stock then outstanding takes precedence over the Firm's common stock for the payment of dividends and the distribution of assets.

The following is a summary of JPMorgan Chase's preferred stock outstanding as of December 31, 2013 and 2012.

	Contractual rate in effect at December 31, 2013		Shares at December 31, <sup>(a)</sup>		Carrying value (in millions) at December 31,		Earliest redemption date	Share value and redemption price per share <sup>(b)</sup>
			2013	2012	2013	2012		
Fixed-to-Floating Rate								
Non-Cumulative Perpetual Preferred Stock, Series I 8.625%	7.900	%	600,000	600,000	\$6,000	\$6,000	4/30/2018	\$10,000
Non-Cumulative Perpetual Preferred Stock, Series J 5.50%	N/A		—	180,000	—	1,800	9/1/2013	10,000
Non-Cumulative Perpetual Preferred Stock, Series O 5.45%	5.500	%	125,750	125,750	1,258	1,258	9/1/2017	10,000
Non-Cumulative Perpetual Preferred Stock, Series P	5.450	%	90,000	—	900	—	3/1/2018	10,000
Fixed-to-Floating Rate								
Non-Cumulative Perpetual Preferred Stock, Series Q	5.150	%	150,000	—	1,500	—	5/1/2023	10,000
Fixed-to-Floating Rate								
Non-Cumulative Perpetual Preferred Stock, Series R	6.000	%	150,000	—	1,500	—	8/1/2023	10,000
Total preferred stock			1,115,750	905,750	\$11,158	\$9,058		

(a) Represented by depositary shares.

(b) The redemption price includes the amount shown in the table plus any accrued but unpaid dividends.

Dividends on the Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series I shares are payable semiannually at a fixed annual dividend rate of 7.90% through April 2018, and then become payable quarterly at an annual dividend rate of three-month LIBOR plus 3.47%. Dividends on the 5.50% Non-Cumulative Preferred Stock,

Series O and the 5.45% Non-Cumulative Preferred Stock, Series P are payable quarterly. Dividends on the Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series Q shares are payable semi-annually at a fixed annual rate of 5.15% through April 2023, and then become payable at a dividend rate of three-month LIBOR plus 3.25%. Dividends on the Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series R shares are payable semi-annually at a fixed annual dividend rate of 6.00% through July 2023, and then become payable at a dividend rate of three-month LIBOR plus 3.30%.

The Series O Non-Cumulative Preferred Stock was issued in August 2012. Series P Non-Cumulative Preferred Stock was issued in February 2013; Series Q Fixed-to-Floating Non-Cumulative Preferred Stock was issued in April 2013; and Series R Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series R was issued in July 2013.

On September 1, 2013, the Firm redeemed all of the outstanding shares of its 8.625% Non-Cumulative Preferred Stock, Series J at their stated redemption value.

#### Redemption rights

Each series of the Firm's preferred stock may be redeemed on any dividend payment date on or after the earliest redemption date for that series. The Series O, Series P, Series Q and Series R preferred stock may also be redeemed following a capital treatment event, as described in the terms of that series. Any redemption of the Firm's preferred stock is subject to non-objection from the Federal Reserve.

#### Subsequent events

##### Issuance of preferred stock

On January 22, 2014, January 30, 2014, and February 6, 2014, the Firm issued \$2.0 billion, \$850 million, and \$75 million, respectively, of noncumulative preferred stock.

## Notes to consolidated financial statements

## Note 23 – Common stock

At December 31, 2013 and 2012, JPMorgan Chase was authorized to issue 9.0 billion shares of common stock with a par value of \$1 per share.

Common shares issued (newly issued or distributed from treasury) by JPMorgan Chase during the years ended December 31, 2013, 2012 and 2011 were as follows.

Year ended December 31, (in millions)	2013	2012	2011
Total issued – balance at January 1 and December 31	4,104.9	4,104.9	4,104.9
Treasury – balance at January 1	(300.9	)(332.2	)(194.6
Purchase of treasury stock	(96.1	)(33.5	)(226.9
Share repurchases related to employee stock-based awards <sup>(a)</sup>	—	(0.2	)(0.1
Issued from treasury:			
Employee benefits and compensation plans	47.1	63.7	88.3
Employee stock purchase plans	1.1	1.3	1.1
Total issued from treasury	48.3	65.0	89.4
Total treasury – balance at December 31	(348.8	)(300.9	)(332.2
Outstanding	3,756.1	3,804.0	3,772.7

(a) Participants in the Firm's stock-based incentive plans may have shares withheld to cover income taxes.

At December 31, 2013, 2012, and 2011, respectively, the Firm had 59.8 million, 59.8 million and 78.2 million warrants outstanding to purchase shares of common stock. The warrants were originally issued pursuant to the U.S. Treasury Capital Purchase Program in 2008, and are currently traded on the New York Stock Exchange. The warrants are exercisable, in whole or in part, at any time and from time to time until October 28, 2018, at an exercise price of \$42.42 per share. The number of shares issuable upon the exercise of each warrant and the warrant exercise price is subject to adjustment upon the occurrence of certain events, including in the case of: stock splits, subdivisions, reclassifications or combinations of common stock; cash dividends or distributions to all holders of the Firm's common stock of assets, rights or warrants (and with respect to cash dividends, only to the extent regular quarterly cash dividends exceed \$0.38 per share (as adjusted for any stock split, reverse stock split, reclassification or similar transaction)); pro rata repurchases of common stock (as defined in the warrants) pursuant to an offer available to substantially all holders of common stock; and certain business combinations (as defined in the warrants) requiring the approval of the Firm's stockholders or a reclassification of the Firm's common stock.

On March 13, 2012, the Board of Directors authorized a \$15.0 billion common equity (i.e., common stock and warrants) repurchase program. The amount of equity that may be repurchased is also subject to the amount that is set forth in the Firm's annual capital plan that is submitted to the Federal Reserve as part of the CCAR process. The following table shows the Firm's repurchases of common equity for the years ended December 31, 2013, 2012 and 2011, on a trade-date basis. As of December 31, 2013,

\$8.6 billion of authorized repurchase capacity remained under the program.

Year ended December 31, (in millions)	2013	2012	2011
Total number of shares of common stock repurchased	96	31	229
Aggregate purchase price of common stock repurchases	\$4,789	\$1,329	\$8,827
Total number of warrants repurchased	—	18	10
Aggregate purchase price of warrant repurchases	\$—	\$238	\$122

The Firm may, from time to time, enter into written trading plans under Rule 10b5-1 of the Securities Exchange Act of 1934 to facilitate repurchases in accordance with the common equity repurchase program. A Rule 10b5-1 repurchase plan allows the Firm to repurchase its equity during periods when it would not otherwise be repurchasing common equity — for example, during internal trading “black-out periods.” All purchases under a Rule 10b5-1 plan must be made according to a predefined plan established when the Firm is not aware of material nonpublic information. For

additional information regarding repurchases of the Firm's equity securities, see Part II, Item 5: Market for registrant's common equity, related stockholder matters and issuer purchases of equity securities, on pages 20–21 of JPMorgan Chase's 2013 Form 10-K.

On March 18, 2011, the Board of Directors raised the Firm's quarterly common stock dividend from \$0.05 to \$0.25 per share, effective with the dividend paid on April 30, 2011, to shareholders of record on April 6, 2011. On March 13, 2012, the Board of Directors increased the Firm's quarterly common stock dividend from \$0.25 to \$0.30 per share, effective with the dividend paid on April 30, 2012, to shareholders of record on April 5, 2012. On May 21, 2013, the Board of Directors increased the Firm's quarterly common stock dividend from \$0.30 per share to \$0.38 per share, effective with the dividend paid on July 31, 2013, to shareholders of record on July 5, 2013.

As of December 31, 2013, approximately 290 million unissued shares of common stock were reserved for issuance under various employee incentive, compensation, option and stock purchase plans, director compensation plans, and the warrants sold by the U.S. Treasury as discussed above.

## Note 24 – Earnings per share

Earnings per share (“EPS”) is calculated under the two-class method under which all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities based on their respective rights to receive dividends. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock; these unvested awards meet the definition of participating securities. Options issued under employee benefit plans that have an antidilutive effect are excluded from the computation of diluted EPS.

The following table presents the calculation of basic and diluted EPS for the years ended December 31, 2013, 2012 and 2011.

Year ended December 31, (in millions, except per share amounts)	2013	2012	2011
Basic earnings per share			
Net income	\$17,923	\$21,284	\$18,976
Less: Preferred stock dividends	805	653	629
Net income applicable to common equity	17,118	20,631	18,347
Less: Dividends and undistributed earnings allocated to participating securities	525	754	779
Net income applicable to common stockholders	\$16,593	\$19,877	\$17,568
Total weighted-average basic shares outstanding	3,782.4	3,809.4	3,900.4
Net income per share	\$4.39	\$5.22	\$4.50
Diluted earnings per share			
Net income applicable to common stockholders	\$16,593	\$19,877	\$17,568
Total weighted-average basic shares outstanding	3,782.4	3,809.4	3,900.4
Add: Employee stock options, SARs and warrants <sup>(a)</sup>	32.5	12.8	19.9
Total weighted-average diluted shares outstanding <sup>(b)</sup>	3,814.9	3,822.2	3,920.3
Net income per share	\$4.35	\$5.20	\$4.48

Excluded from the computation of diluted EPS (due to the antidilutive effect) were options issued under employee benefit plans and the warrants originally issued in 2008 under the U.S. Treasury’s Capital Purchase Program to (a) purchase shares of the Firm’s common stock. The aggregate number of shares issuable upon the exercise of such options and warrants was 6 million, 148 million and 133 million for the years ended December 31, 2013, 2012 and 2011, respectively.

(b) Participating securities were included in the calculation of diluted EPS using the two-class method, as this computation was more dilutive than the calculation using the treasury stock method.

Notes to consolidated financial statements

Note 25 – Accumulated other comprehensive income/(loss)

AOCI includes the after-tax change in unrealized gains and losses on AFS securities, foreign currency translation adjustments (including the impact of related derivatives), cash flow hedging activities, and net loss and prior service costs/(credit) related to the Firm's defined benefit pension and OPEB plans.

Year ended December 31, (in millions)	Unrealized gains/(losses) on AFS securities <sup>(a)</sup>	Translation adjustments, net of hedges	Cash flow hedges	Defined benefit pension and OPEB plans	Accumulated other comprehensive income/(loss)
Balance at December 31, 2010	\$2,498	\$253	\$206	\$(1,956 )	\$1,001
Net change	1,067 <sup>(b)</sup>	(279 )	(155 )	(690 )	(57 )
Balance at December 31, 2011	\$3,565 <sup>(c)</sup>	\$(26 )	\$51	\$(2,646 )	\$944
Net change	3,303 <sup>(d)</sup>	(69 )	69	(145 )	3,158
Balance at December 31, 2012	\$6,868 <sup>(c)</sup>	\$(95 )	\$120	\$(2,791 )	\$4,102
Net change	(4,070 ) <sup>(e)</sup>	(41 )	(259 )	1,467	(2,903 )
Balance at December 31, 2013	\$2,798 <sup>(c)</sup>	\$(136 )	\$(139 )	\$(1,324 )	\$1,199

(a) Represents the after-tax difference between the fair value and amortized cost of securities accounted for as AFS.

The net change for 2011 was due primarily to increased market value on U.S. government agency issued MBS and (b) obligations of U.S. states and municipalities, partially offset by the widening of spreads on non-U.S. corporate debt and the realization of gains due to portfolio repositioning.

Included after-tax unrealized losses not related to credit on debt securities for which credit losses have been (c) recognized in income of \$(56) million at December 31, 2011. There were no such losses at December 31, 2012 and 2013.

(d) The net change for 2012 was predominantly driven by increased market value on non-U.S. residential MBS, corporate debt securities and obligations of U.S. states and municipalities, partially offset by realized gains.

(e) The net change for 2013 was primarily related to the decline in fair value of U.S. government agency issued MBS and obligations of U.S. states and municipalities due to market changes, as well as net realized gains.

The following table presents the before- and after-tax changes in the components of other comprehensive income/(loss).

Year ended December 31, (in millions)	2013			2012			2011		
	Pretax	Tax effect	After-tax	Pretax	Tax effect	After-tax	Pretax	Tax effect	After-tax
Unrealized gains/(losses) on AFS securities:									
Net unrealized gains/(losses) arising during the period	\$(5,987)	\$2,323	\$(3,664)	\$7,521	\$(2,930)	\$4,591	\$3,361	\$(1,322)	\$2,039
Reclassification adjustment for realized (gains)/losses included in net income <sup>(a)</sup>	(667 )	261	(406 )	(2,110 )	822	(1,288 )	(1,593 )	621	(972 )
Net change	(6,654 )	2,584	(4,070 )	5,411	(2,108 )	3,303	1,768	(701 )	1,067
Translation adjustments:									
Translation <sup>(b)</sup>	(807 )	295	(512 )	(26 )	8	(18 )	(672 )	255	(417 )
Hedges <sup>(b)</sup>	773	(302 )	471	(82 )	31	(51 )	226	(88 )	138
Net change	(34 )	(7 )	(41 )	(108 )	39	(69 )	(446 )	167	(279 )
Cash flow hedges:									
Net unrealized gains/(losses) arising during the period	(525 )	206	(319 )	141	(55 )	86	50	(19 )	31
Reclassification adjustment for realized (gains)/losses included in net income <sup>(c)</sup>	101	(41 )	60	(28 )	11	(17 )	(301 )	115	(186 )

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Net change	(424 )	165	(259 )	113	(44 )	69	(251 )	96	(155 )
Defined benefit pension and OPEB plans:									
Prior service credits arising during the period	—	—	—	6	(2 )	4	—	—	—
Net gains/(losses) arising during the period	2,055	(750 )	1,305	(537 )	228	(309 )	(1,290 )	502	(788 )
Reclassification adjustments included in net income <sup>(d)</sup> :									—
Amortization of net loss	321	(124 )	197	324	(126 )	198	214	(83 )	131
Prior service costs/(credits)	(43 )	17	(26 )	(41 )	16	(25 )	(52 )	20	(32 )
Foreign exchange and other	(14 )	5	(9 )	(21 )	8	(13 )	(1 )	—	(1 )
Net change	2,319	(852 )	1,467	(269 )	124	(145 )	(1,129 )	439	(690 )
Total other comprehensive income/(loss)	\$(4,793)	\$1,890	\$(2,903)	\$5,147	\$(1,989)	\$3,158	\$(58 )	\$1	\$(57 )

(a) The pretax amount is reported in securities gains in the Consolidated Statements of Income.

Reclassifications of pretax realized gains/(losses) on translation adjustments and related hedges are reported in

(b) other income in the Consolidated Statements of Income. The amounts were not material for the year ended December 31, 2013.

(c) The pretax amount is reported in the same line as the hedged items, which are predominantly recorded in net interest income in the Consolidated Statements of Income.

(d) The pretax amount is reported in compensation expense in the Consolidated Statements of Income.

## Note 26 – Income taxes

JPMorgan Chase and its eligible subsidiaries file a consolidated U.S. federal income tax return. JPMorgan Chase uses the asset and liability method to provide income taxes on all transactions recorded in the Consolidated Financial Statements. This method requires that income taxes reflect the expected future tax consequences of temporary differences between the carrying amounts of assets or liabilities for book and tax purposes. Accordingly, a deferred tax asset or liability for each temporary difference is determined based on the tax rates that the Firm expects to be in effect when the underlying items of income and expense are realized. JPMorgan Chase's expense for income taxes includes the current and deferred portions of that expense. A valuation allowance is established to reduce deferred tax assets to the amount the Firm expects to realize.

Due to the inherent complexities arising from the nature of the Firm's businesses, and from conducting business and being taxed in a substantial number of jurisdictions, significant judgments and estimates are required to be made. Agreement of tax liabilities between JPMorgan Chase and the many tax jurisdictions in which the Firm files tax returns may not be finalized for several years. Thus, the Firm's final tax-related assets and liabilities may ultimately be different from those currently reported.

A reconciliation of the applicable statutory U.S. income tax rate to the effective tax rate for each of the years ended December 31, 2013, 2012 and 2011, is presented in the following table.

Effective tax rate						
Year ended December 31,	2013		2012		2011	
Statutory U.S. federal tax rate	35.0		% 35.0		% 35.0	%
Increase/(decrease) in tax rate resulting from:						
U.S. state and local income taxes, net of U.S. federal income tax benefit	2.2		1.6		1.6	
Tax-exempt income	(3.1	)	(2.9	)	(2.1	)
Non-U.S. subsidiary earnings <sup>(a)</sup>	(4.9	)	(2.4	)	(2.3	)
Business tax credits	(5.4	)	(4.2	)	(4.0	)
Nondeductible legal expense <sup>(b)</sup>	8.0		(0.2	)	0.9	
Other, net	(1.0	)	(0.5	)	—	
Effective tax rate	30.8		% 26.4		% 29.1	%

(a) Includes earnings deemed to be reinvested indefinitely in non-U.S. subsidiaries.

(b) The prior periods have been revised to conform with the current presentation.

The components of income tax expense/(benefit) included in the Consolidated Statements of Income were as follows for each of the years ended December 31, 2013, 2012, and 2011.

Income tax expense/(benefit)				
Year ended December 31, (in millions)	2013	2012	2011	
Current income tax expense/(benefit)				
U.S. federal	\$(1,316	) \$3,225	\$3,719	
Non-U.S.	1,308	1,782	1,183	
U.S. state and local	(4	) 1,496	1,178	
Total current income tax expense/(benefit)	(12	) 6,503	6,080	
Deferred income tax expense/(benefit)				
U.S. federal	7,080	2,238	2,109	
Non-U.S.	10	(327	) 102	
U.S. state and local	913	(781	) (518	)
Total deferred income tax expense/(benefit)	8,003	1,130	1,693	
Total income tax expense	\$7,991	\$7,633	\$7,773	

Total income tax expense was \$8.0 billion in 2013 with an effective tax rate of 30.8%. The relationship between current and deferred income tax expense is largely driven by the reversal of significant deferred tax assets as well as

prior year tax adjustments and audit resolutions. Total income tax expense includes \$531 million, \$200 million and \$76 million of tax benefits recorded in 2013, 2012, and 2011, respectively, as a result of tax audit resolutions. The preceding table does not reflect the tax effect of certain items that are recorded each period directly in stockholders' equity and certain tax benefits associated with the Firm's employee stock-based compensation plans. The tax effect of all items recorded directly to stockholders' equity resulted in an increase of \$2.1 billion in 2013, a decrease of \$1.9 billion in 2012, and an increase of \$927 million in 2011.

U.S. federal income taxes have not been provided on the undistributed earnings of certain non-U.S. subsidiaries, to the extent that such earnings have been reinvested abroad for an indefinite period of time. Based on JPMorgan Chase's ongoing review of the business requirements and capital needs of its non-U.S. subsidiaries, combined with the formation of specific strategies and steps taken to fulfill these requirements and needs, the Firm has determined that the undistributed earnings of certain of its subsidiaries would be indefinitely reinvested to fund current and future growth of the related businesses. As management does not intend to use the earnings of these subsidiaries as a source of funding for its U.S. operations, such earnings will not be distributed to the U.S. in the foreseeable future. For 2013, pretax earnings of approximately \$3.4 billion were generated and will be indefinitely reinvested in these subsidiaries. At December 31, 2013, the cumulative amount of undistributed pretax earnings in these subsidiaries approximated \$28.5 billion. If the Firm were to record a deferred tax liability associated with these

## Notes to consolidated financial statements

undistributed earnings, the amount would be approximately \$6.4 billion at December 31, 2013.

Tax expense applicable to securities gains and losses for the years 2013, 2012 and 2011 was \$261 million, \$822 million, and \$617 million, respectively.

Deferred income tax expense/(benefit) results from differences between assets and liabilities measured for financial reporting purposes versus income tax return purposes. Deferred tax assets are recognized if, in management's judgment, their realizability is determined to be more likely than not. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. The significant components of deferred tax assets and liabilities are reflected in the following table as of December 31, 2013 and 2012.

Deferred taxes		
December 31, (in millions)	2013	2012
Deferred tax assets		
Allowance for loan losses	\$6,593	\$8,712
Employee benefits	4,468	4,308
Accrued expenses and other	9,179	12,393
Non-U.S. operations	5,493	3,537
Tax attribute carryforwards	748	1,062
Gross deferred tax assets	26,481	30,012
Valuation allowance	(724	) (689
Deferred tax assets, net of valuation allowance	\$25,757	\$29,323
Deferred tax liabilities		
Depreciation and amortization	\$3,196	\$2,563
Mortgage servicing rights, net of hedges	5,882	5,336
Leasing transactions	2,352	2,242
Non-U.S. operations	4,705	3,582
Other, net	3,459	4,340
Gross deferred tax liabilities	19,594	18,063
Net deferred tax assets	\$6,163	\$11,260

JPMorgan Chase has recorded deferred tax assets of \$748 million at December 31, 2013, in connection with U.S. federal and state and local net operating loss carryforwards and foreign tax credit carryforwards. At December 31, 2013, the U.S. federal net operating loss carryforwards were approximately \$1.5 billion; the state and local net operating loss carryforward was approximately \$156 million; and the U.S. foreign tax credit carryforward was approximately \$203 million. If not utilized, the U.S. federal net operating loss carryforwards and the state and local net operating loss carryforward will expire between 2027 and 2030; and the U.S. foreign tax credit carryforward will expire in 2022.

The valuation allowance at December 31, 2013, was due to losses associated with non-U.S. subsidiaries.

At December 31, 2013, 2012 and 2011, JPMorgan Chase's unrecognized tax benefits, excluding related interest expense and penalties, were \$5.5 billion, \$7.2 billion and \$7.2 billion, respectively, of which \$3.7 billion, \$4.2 billion and \$4.0 billion, respectively, if recognized, would reduce the annual effective tax rate. Included in the amount of unrecognized tax benefits are certain items that would not affect the effective tax rate if they were recognized in the Consolidated Statements of Income. These unrecognized items include the tax effect of certain temporary differences, the portion of gross state and local unrecognized tax benefits that would be offset by the benefit from associated U.S. federal income tax deductions, and the portion of gross non-U.S. unrecognized tax benefits that would have offsets in other jurisdictions. JPMorgan Chase is presently under audit by a number of taxing authorities, most notably by the Internal Revenue Service, New York State and City, and the State of California as summarized in the Tax examination status table below. Based upon the status of all of the tax examinations currently in process, it is reasonably possible that over the next 12 months the resolution of some of these examinations could result in a significant reduction in the gross balance of unrecognized tax benefits; however, at this time, it is not possible to reasonably estimate the amount

of the reduction, if any.

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The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31, 2013, 2012 and 2011.

## Unrecognized tax benefits

Year ended December 31, (in millions)	2013	2012	2011
Balance at January 1,	\$7,158	\$7,189	\$7,767
Increases based on tax positions related to the current period	542	680	516
Decreases based on tax positions related to the current period	—	—	(110)
Increases based on tax positions related to prior periods	88	234	496
Decreases based on tax positions related to prior periods	(2,200)	(853)	(1,433)
Decreases related to settlements with taxing authorities	(53)	(50)	(16)
Decreases related to a lapse of applicable statute of limitations	—	(42)	(31)
Balance at December 31,	\$5,535	\$7,158	\$7,189

After-tax interest (benefit)/expense and penalties related to income tax liabilities recognized in income tax expense were \$(184) million, \$147 million and \$184 million in 2013, 2012 and 2011, respectively.

At December 31, 2013 and 2012, in addition to the liability for unrecognized tax benefits, the Firm had accrued \$1.2 billion and \$1.9 billion, respectively, for income tax-related interest and penalties.

JPMorgan Chase is continually under examination by the Internal Revenue Service, by taxing authorities throughout the world, and by many states throughout the U.S. The following table summarizes the status of significant income tax examinations of JPMorgan Chase and its consolidated subsidiaries as of December 31, 2013.

## Tax examination status

December 31, 2013	Periods under examination	Status
JPMorgan Chase – U.S.	2003 - 2005	Field examination completed, JPMorgan Chase intends to appeal
JPMorgan Chase – U.S.	2006 - 2010	Field examination
Bear Stearns – U.S.	2003 – 2005	Refund claims under review
Bear Stearns – U.S.	2006 – 2008	Field examination
JPMorgan Chase – United Kingdom	2006 – 2011	Field examination
JPMorgan Chase – New York State and City	2005 – 2007	Field examination
JPMorgan Chase – California	2006 – 2010	Field examination

The following table presents the U.S. and non-U.S. components of income before income tax expense for the years ended December 31, 2013, 2012 and 2011.

## Income before income tax expense - U.S. and non-U.S.

Year ended December 31, (in millions)	2013	2012	2011
U.S.	\$17,229	\$24,895	\$16,336
Non-U.S. <sup>(a)</sup>	8,685	4,022	10,413
Income before income tax expense	\$25,914	\$28,917	\$26,749

<sup>(a)</sup> For purposes of this table, non-U.S. income is defined as income generated from operations located outside the U.S.



## Notes to consolidated financial statements

## Note 27 – Restrictions on cash and intercompany funds transfers

The business of JPMorgan Chase Bank, National Association (“JPMorgan Chase Bank, N.A.”) is subject to examination and regulation by the OCC. The Bank is a member of the U.S. Federal Reserve System, and its deposits in the U.S. are insured by the FDIC.

The Federal Reserve requires depository institutions to maintain cash reserves with a Federal Reserve Bank. The average amount of reserve balances deposited by the Firm’s bank subsidiaries with various Federal Reserve Banks was approximately \$5.3 billion and \$5.6 billion in 2013 and 2012, respectively.

Restrictions imposed by U.S. federal law prohibit JPMorgan Chase and certain of its affiliates from borrowing from banking subsidiaries unless the loans are secured in specified amounts. Such secured loans to the Firm or to other affiliates are generally limited to 10% of the banking subsidiary’s total capital, as determined by the risk-based capital guidelines; the aggregate amount of all such loans is limited to 20% of the banking subsidiary’s total capital.

The principal sources of JPMorgan Chase’s income (on a parent company-only basis) are dividends and interest from JPMorgan Chase Bank, N.A., and the other banking and nonbanking subsidiaries of JPMorgan Chase. In addition to dividend restrictions set forth in statutes and regulations, the Federal Reserve, the OCC and the FDIC have authority under the Financial Institutions Supervisory Act to prohibit or to limit the payment of dividends by the banking organizations they supervise, including JPMorgan Chase and its subsidiaries that are banks or bank holding companies, if, in the banking regulator’s opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization.

At January 1, 2014, JPMorgan Chase’s banking subsidiaries could pay, in the aggregate, \$29.8 billion in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators. The capacity to pay dividends in 2014 will be supplemented by the banking subsidiaries’ earnings during the year.

In compliance with rules and regulations established by U.S. and non-U.S. regulators, as of December 31, 2013 and 2012, cash in the amount of \$17.2 billion and \$25.1 billion, respectively, and securities with a fair value of \$1.5 billion and \$0.7 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers. In addition, as of December 31, 2013 and 2012, the Firm had other restricted cash of \$3.9 billion and \$3.4 billion, respectively, primarily representing cash reserves held at non-U.S. central banks and held for other general purposes.

## Note 28 – Regulatory capital

The Federal Reserve establishes capital requirements, including well-capitalized standards, for the consolidated financial holding company. The OCC establishes similar capital requirements and standards for the Firm’s national banks, including JPMorgan Chase Bank, N.A., and Chase Bank USA, N.A.

There are two categories of risk-based capital: Tier 1 capital and Tier 2 capital. Tier 1 capital consists of common stockholders’ equity, perpetual preferred stock, noncontrolling interests in subsidiaries and trust preferred securities, less goodwill and certain other adjustments. Tier 2 capital consists of preferred stock not qualifying as Tier 1 capital, subordinated long-term debt and other instruments qualifying as Tier 2 capital, and the aggregate allowance for credit losses up to a certain percentage of risk-weighted assets. Total capital is Tier 1 capital plus Tier 2 capital. Under the risk-based capital guidelines of the Federal Reserve, JPMorgan Chase is required to maintain minimum ratios of Tier 1 and Total capital to risk-weighted assets, as well as minimum leverage ratios (which are defined as Tier 1 capital divided by adjusted quarterly average assets). Failure to meet these minimum requirements could cause the Federal Reserve to take action. Banking subsidiaries also are subject to these capital requirements by their respective primary regulators. As of December 31, 2013 and 2012, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.



The following table presents the regulatory capital, assets and risk-based capital ratios for JPMorgan Chase and its significant banking subsidiaries at December 31, 2013 and 2012. These amounts are determined in accordance with regulations issued by the Federal Reserve and/or OCC. The table reflects the Firm's and JPMorgan Chase Bank, N.A.'s implementation of rules that provide for additional capital requirements for trading positions and securitizations ("Basel 2.5"). Basel 2.5 rules became effective for the Firm and JPMorgan Chase Bank, N.A. on January 1, 2013. The implementation of these rules in the first quarter of 2013 resulted in an increase of approximately \$150 billion and \$140 billion, respectively, in the Firm's and JPMorgan Chase Bank, N.A.'s risk-weighted assets compared with the Basel I rules at March 31, 2013. The implementation of these rules also resulted in decreases of the Firm's Tier 1 capital and Total capital ratios of 140 basis points and 160 basis points, respectively, at March 31, 2013, and decreases of JPMorgan Chase Bank, N.A.'s Tier 1 capital and Total capital ratios of 130 basis points and 150 basis points, respectively, at March 31, 2013. Implementation of Basel 2.5 in the first quarter of 2013 did not impact Chase Bank USA, N.A.'s RWA or Tier 1 capital and Total capital ratios.

December 31, (in millions, except ratios)	JPMorgan Chase & Co. <sup>(d)</sup>		JPMorgan Chase Bank, N.A. <sup>(d)</sup>		Chase Bank USA, N.A. <sup>(d)</sup>		Well-capitalized ratios <sup>(e)</sup>	Minimum capital ratios <sup>(e)</sup>
	2013	2012	2013	2012	2013	2012		
<b>Regulatory capital</b>								
Tier 1 <sup>(a)</sup>	\$ 165,663	\$ 160,002	\$ 139,727	\$ 111,827	\$ 12,956	\$ 9,648		
Total	199,286	194,036	165,496	146,870	16,389	13,131		
<b>Assets</b>								
Risk-weighted <sup>(b)</sup>	\$ 1,387,863	\$ 1,270,378	\$ 1,171,574	\$ 1,094,155	\$ 100,990	\$ 103,593		
Adjusted average <sup>(c)</sup>	2,343,713	2,243,242	1,900,770	1,815,816	109,731	103,688		
<b>Capital ratios</b>								
Tier 1 <sup>(a)</sup>	11.9	% 12.6	% 11.9	% 10.2	% 12.8	% 9.3	% 6.0	% 4.0%
Total	14.4	15.3	14.1	13.4	16.2	12.7	10.0	8.0
Tier 1 leverage	7.1	7.1	7.4	6.2	11.8	9.3	5.0	<sup>(f)</sup> 3.0 <sup>(g)</sup>

At December 31, 2013, for JPMorgan Chase and JPMorgan Chase Bank, N.A., trust preferred securities were \$5.3 billion and \$600 million, respectively. If these securities were excluded from the calculation at December 31, 2013, Tier 1 capital would be \$160.4 billion and \$139.1 billion, respectively, and the Tier 1 capital ratio would be 11.6% and 11.9%, respectively. At December 31, 2013, Chase Bank USA, N.A. had no trust preferred securities.

Included off-balance sheet risk-weighted assets at December 31, 2013, of \$315.9 billion, \$304.0 billion and \$14 million, and at December 31, 2012, of \$304.5 billion, \$297.1 billion and \$16 million, for JPMorgan Chase, JPMorgan Chase Bank, N.A. and Chase Bank USA, N.A., respectively.

Adjusted average assets, for purposes of calculating the leverage ratio, included total quarterly average assets adjusted for unrealized gains/(losses) on securities, less deductions for disallowed goodwill and other intangible assets, investments in certain subsidiaries, and the total adjusted carrying value of nonfinancial equity investments that are subject to deductions from Tier 1 capital.

Asset and capital amounts for JPMorgan Chase's banking subsidiaries reflect intercompany transactions; whereas the respective amounts for JPMorgan Chase reflect the elimination of intercompany transactions.

As defined by the regulations issued by the Federal Reserve, OCC and FDIC.

Represents requirements for banking subsidiaries pursuant to regulations issued under the FDIC Improvement Act.

There is no Tier 1 leverage component in the definition of a well-capitalized bank holding company.

The minimum Tier 1 leverage ratio for bank holding companies and banks is 3% or 4%, depending on factors specified in regulations issued by the Federal Reserve and OCC.

Rating agencies allow measures of capital to be adjusted upward for deferred tax liabilities, which have resulted from both nontaxable business combinations and from tax-deductible goodwill. The Firm had deferred tax liabilities resulting from nontaxable business combinations totaling \$192 million and \$291 million at December 31, 2013 and 2012, respectively; and deferred tax liabilities resulting from tax-deductible goodwill of \$2.8 billion and \$2.5 billion at December 31, 2013 and 2012, respectively.

## Notes to consolidated financial statements

A reconciliation of the Firm's Total stockholders' equity to Tier 1 capital and Total qualifying capital is presented in the table below.

December 31, (in millions)	2013	2012
Tier 1 capital		
Total stockholders' equity	\$211,178	\$204,069
Effect of certain items in AOCI excluded from Tier 1 capital	(1,337	) (4,198
Qualifying hybrid securities and noncontrolling interests <sup>(a)</sup>	5,618	10,608
Less: Goodwill <sup>(b)</sup>	45,320	45,663
Other intangible assets <sup>(b)</sup>	2,012	2,311
Fair value DVA on structured notes and derivative liabilities related to the Firm's credit quality	1,300	1,577
Investments in certain subsidiaries and other	1,164	926
Total Tier 1 capital	165,663	160,002
Tier 2 capital		
Long-term debt and other instruments qualifying as Tier 2	16,695	18,061
Qualifying allowance for credit losses	16,969	15,995
Other	(41	) (22
Total Tier 2 capital	33,623	34,034
Total qualifying capital	\$199,286	\$194,036

(a) Primarily includes trust preferred securities of certain business trusts.

(b) Goodwill and other intangible assets are net of any associated deferred tax liabilities.

#### Note 29 – Off-balance sheet lending-related financial instruments, guarantees, and other commitments

JPMorgan Chase provides lending-related financial instruments (e.g., commitments and guarantees) to meet the financing needs of its customers. The contractual amount of these financial instruments represents the maximum possible credit risk to the Firm should the counterparty draw upon the commitment or the Firm be required to fulfill its obligation under the guarantee, and should the counterparty subsequently fail to perform according to the terms of the contract. Most of these commitments and guarantees expire without being drawn or a default occurring. As a result, the total contractual amount of these instruments is not, in the Firm's view, representative of its actual future credit exposure or funding requirements.

To provide for probable credit losses inherent in consumer (excluding credit card) and wholesale lending commitments, an allowance for credit losses on lending-related commitments is maintained. See Note 15 on pages 284–287 of this Annual Report for further discussion regarding the allowance for credit losses on lending-related commitments. The following table summarizes the contractual amounts and carrying values of off-balance sheet lending-related financial instruments, guarantees and other commitments at December 31, 2013 and 2012. The amounts in the table below for credit card and home equity lending-related commitments represent the total available credit for these products. The Firm has not experienced, and does not anticipate, that all available lines of credit for these products will be utilized at the same time. The Firm can reduce or cancel credit card lines of credit by providing the borrower notice or, in some cases, without notice as permitted by law. The Firm may reduce or close home equity lines of credit when there are significant decreases in the value of the underlying property, or when there has been a demonstrable decline in the creditworthiness of the borrower. Also, the Firm typically closes credit card lines when the borrower is 60 days or more past due.

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Off-balance sheet lending-related financial instruments, guarantees and other commitments

	Contractual amount				Total	2012	Carrying value <sup>(g)</sup>	
	2013	Expires	Expires	Expires			2013	2012
By remaining maturity at December 31, (in millions)	Expires in 1 year or less	Expires 1 year through 3 years	Expires after 3 years through 5 years	Expires after 5 years	Total	Total		
<b>Lending-related</b>								
<b>Consumer, excluding credit card:</b>								
Home equity – senior lien	\$2,471	\$4,411	\$4,202	\$2,074	\$13,158	\$15,180	\$—	\$—
Home equity – junior lien	3,918	6,908	4,865	2,146	17,837	21,796	—	—
Prime mortgage	4,817	—	—	—	4,817	4,107	—	—
Subprime mortgage	—	—	—	—	—	—	—	—
Auto	7,992	191	115	11	8,309	7,185	1	1
Business banking	10,282	548	101	320	11,251	11,092	7	6
Student and other	108	111	4	462	685	796	—	—
Total consumer, excluding credit card	29,588	12,169	9,287	5,013	56,057	60,156	8	7
Credit card	529,383	—	—	—	529,383	533,018	—	—
Total consumer	558,971	12,169	9,287	5,013	585,440	593,174	8	7
<b>Wholesale:</b>								
Other unfunded commitments to extend credit <sup>(a)(b)</sup>	61,459	79,519	97,139	8,378	246,495	243,225	432	377
Standby letters of credit and other financial guarantees <sup>(a)(b)(c)</sup>	25,223	32,331	32,773	2,396	92,723	100,929	943	647
Unused advised lines of credit	88,443	12,411	423	717	101,994	85,087	—	—
Other letters of credit <sup>(a)</sup>	4,176	722	107	15	5,020	5,573	2	2
Total wholesale	179,301	124,983	130,442	11,506	446,232	434,814	1,377	1,026
Total lending-related	\$738,272	\$137,152	\$139,729	\$16,519	\$1,031,672	\$1,027,988	\$1,385	\$1,033
<b>Other guarantees and commitments</b>								
<b>Securities lending</b>								
indemnification agreements and guarantees <sup>(d)</sup>	\$169,709	\$—	\$—	\$—	\$169,709	\$166,493	NA	NA
Derivatives qualifying as guarantees	1,922	765	16,061	37,526	56,274	61,738	\$72	\$42
Unsettled reverse repurchase and securities borrowing agreements <sup>(e)</sup>	38,211	—	—	—	38,211	34,871	—	—
<b>Loan sale and securitization-related indemnifications:</b>								
Mortgage repurchase liability	NA	NA	NA	NA	NA	NA	681	2,811
Loans sold with recourse	NA	NA	NA	NA	7,692	9,305	131	141
Other guarantees and commitments <sup>(f)</sup>	654	256	1,484	4,392	6,786	6,780	(99)	(75)

(a)

At December 31, 2013 and 2012, reflects the contractual amount net of risk participations totaling \$476 million and \$473 million, respectively, for other unfunded commitments to extend credit; \$14.8 billion and \$16.6 billion, respectively, for standby letters of credit and other financial guarantees; and \$622 million and \$690 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.

- (b) At December 31, 2013 and 2012, included credit enhancements and bond and commercial paper liquidity commitments to U.S. states and municipalities, hospitals and other non-profit entities of \$18.9 billion and \$21.3 billion, respectively, within other unfunded commitments to extend credit; and \$17.2 billion and \$23.2 billion, respectively, within standby letters of credit and other financial guarantees. These commitments also include liquidity facilities to nonconsolidated municipal bond VIEs; for further information, see Note 16 on pages 288–299 of this Annual Report.
- (c) At December 31, 2013 and 2012, included unissued standby letters of credit commitments of \$42.8 billion and \$44.4 billion, respectively.
- (d) At December 31, 2013 and 2012, collateral held by the Firm in support of securities lending indemnification agreements was \$176.4 billion and \$165.1 billion, respectively. Securities lending collateral comprises primarily cash and securities issued by governments that are members of the Organisation for Economic Co-operation and Development (“OECD”) and U.S. government agencies.
- (e) At December 31, 2013 and 2012, the amount of commitments related to forward-starting reverse repurchase agreements and securities borrowing agreements were \$9.9 billion and \$13.2 billion, respectively. Commitments related to unsettled reverse repurchase agreements and securities borrowing agreements with regular-way settlement periods were \$28.3 billion and \$21.7 billion, at December 31, 2013 and 2012, respectively.
- (f) At December 31, 2013 and 2012, included unfunded commitments of \$215 million and \$370 million, respectively, to third-party private equity funds; and \$1.9 billion and \$1.5 billion, respectively, to other equity investments. These commitments included \$184 million and \$333 million, respectively, related to investments that are generally fair valued at net asset value as discussed in Note 3 on pages 195–215 of this Annual Report. In addition, at both December 31, 2013 and 2012, included letters of credit hedged by derivative transactions and managed on a market risk basis of \$4.5 billion.
- (g) For lending-related products, the carrying value represents the allowance for lending-related commitments and the guarantee liability; for derivative-related products, the carrying value represents the fair value.

## Notes to consolidated financial statements

## Other unfunded commitments to extend credit

Other unfunded commitments to extend credit generally comprise commitments for working capital and general corporate purposes, extensions of credit to support commercial paper facilities and bond financings in the event that those obligations cannot be remarketed to new investors as well as committed liquidity facilities to clearing organizations.

Also included in other unfunded commitments to extend credit are commitments to noninvestment-grade counterparties in connection with leveraged and acquisition finance activities, which were \$18.3 billion at December 31, 2013. In the fourth quarter of 2013, the Firm implemented prospectively interagency guidance that revised the Firm's definition of leveraged lending to include all Commercial and Industrial borrowers, whether or not they are affiliated with financial sponsors, which meet certain leverage criteria and use of proceeds purpose tests related to a buyout, acquisition or capital distribution. Prior to this change, the Firm defined leveraged lending as primarily being affiliated with a financial sponsor-related company and used internal risk grades to identify the leveraged lending portfolio. For further information, see Note 3 and Note 4 on pages 195–215 and 215–218 respectively, of this Annual Report.

In addition, the Firm acts as a clearing and custody bank in the U.S. tri-party repurchase transaction market. In its role as clearing and custody bank, the Firm is exposed to intra-day credit risk of the cash borrowers, usually broker-dealers; however, this exposure is secured by collateral and typically extinguished through the settlement process by the end of the day. Tri-party repurchase daily balances averaged \$307 billion and \$370 billion for the years ended December 31, 2013 and 2012, respectively.

## Guarantees

U.S. GAAP requires that a guarantor recognize, at the inception of a guarantee, a liability in an amount equal to the fair value of the obligation undertaken in issuing the guarantee. U.S. GAAP defines a guarantee as a contract that contingently requires the guarantor to pay a guaranteed party based upon: (a) changes in an underlying asset, liability or equity security of the guaranteed party; or (b) a third party's failure to perform under a specified agreement. The Firm considers the following off-balance sheet lending-related arrangements to be guarantees under U.S. GAAP: standby letters of credit and financial guarantees, securities lending indemnifications, certain

indemnification agreements included within third-party contractual arrangements and certain derivative contracts. As required by U.S. GAAP, the Firm initially records guarantees at the inception date fair value of the obligation assumed (e.g., the amount of consideration received or the net present value of the premium receivable). For certain types of guarantees, the Firm records this fair value amount in other liabilities with an offsetting entry recorded in cash (for premiums received), or other assets (for premiums receivable). Any premium receivable recorded in other assets is reduced as cash is received under the contract, and the fair value of the liability recorded at inception is amortized into income as lending and deposit-related fees over the life of the guarantee contract. For indemnifications provided in sales agreements, a portion of the sale proceeds is allocated to the guarantee, which adjusts the gain or loss that would otherwise result from the transaction. For these indemnifications, the initial liability is amortized to income as the Firm's risk is reduced (i.e., over time or when the indemnification expires). Any contingent liability that exists as a result of issuing the guarantee or indemnification is recognized when it becomes probable and reasonably estimable. The contingent portion of the liability is not recognized if the estimated amount is less than the carrying amount of the liability recognized at inception (adjusted for any amortization). The recorded amounts of the liabilities related to guarantees and indemnifications at December 31, 2013 and 2012, excluding the allowance for credit losses on lending-related commitments, are discussed below.

## Standby letters of credit and other financial guarantees

Standby letters of credit ("SBLC") and other financial guarantees are conditional lending commitments issued by the Firm to guarantee the performance of a customer to a third party under certain arrangements, such as commercial paper facilities, bond financings, acquisition financings, trade and similar transactions. The carrying values of standby and other letters of credit were \$945 million and \$649 million at December 31, 2013 and 2012, respectively, which were classified in accounts payable and other liabilities on the Consolidated Balance Sheets; these carrying values included \$265 million and \$284 million, respectively, for the allowance for lending-related commitments, and \$680

million and \$365 million, respectively, for the guarantee liability and corresponding asset.

The following table summarizes the types of facilities under which standby letters of credit and other letters of credit arrangements are outstanding by the ratings profiles of the Firm's customers, as of December 31, 2013 and 2012. Standby letters of credit, other financial guarantees and other letters of credit

December 31, (in millions)	2013		2012	
	Standby letters of credit and other financial guarantees	Other letters of credit	Standby letters of credit and other financial guarantees	Other letters of credit
Investment-grade <sup>(a)</sup>	\$69,109	\$3,939	\$77,081	\$3,998
Noninvestment-grade <sup>(a)</sup>	23,614	1,081	23,848	1,575
Total contractual amount	\$92,723	\$5,020	\$100,929	\$5,573
Allowance for lending-related commitments	\$263	\$2	\$282	\$2
Commitments with collateral	40,410	1,473	42,654	1,145

(a) The ratings scale is based on the Firm's internal ratings which generally correspond to ratings as defined by S&P and Moody's.

#### Advised lines of credit

An advised line of credit is a revolving credit line which specifies the maximum amount the Firm may make available to an obligor, on a nonbinding basis. The borrower receives written or oral advice of this facility. The Firm may cancel this facility at any time by providing the borrower notice or, in some cases, without notice as permitted by law.

#### Securities lending indemnifications

Through the Firm's securities lending program, customers' securities, via custodial and non-custodial arrangements, may be lent to third parties. As part of this program, the Firm provides an indemnification in the lending agreements which protects the lender against the failure of the borrower to return the lent securities. To minimize its liability under these indemnification agreements, the Firm obtains cash or other highly liquid collateral with a market value exceeding 100% of the value of the securities on loan from the borrower. Collateral is marked to market daily to help assure that collateralization is adequate. Additional collateral is called from the borrower if a shortfall exists, or collateral may be released to the borrower in the event of overcollateralization. If a borrower defaults, the Firm would use the collateral held to purchase replacement securities in the market or to credit the lending customer with the cash equivalent thereof.

#### Derivatives qualifying as guarantees

In addition to the contracts described above, the Firm transacts certain derivative contracts that have the characteristics of a guarantee under U.S. GAAP. These contracts include written put options that require the Firm to purchase assets upon exercise by the option holder at a specified price by a specified date in the future. The Firm may enter into written put option contracts in order to meet client needs, or for other trading purposes. The terms of written put options are typically five years or less. Derivative guarantees also include contracts such as stable value derivatives that require the Firm to make a payment of the difference between the market value and the book value of a counterparty's reference portfolio of assets in the event that market value is less than book value and certain other conditions have been met. Stable value derivatives, commonly referred to as "stable value wraps", are

transacted in order to allow investors to realize investment returns with less volatility than an unprotected portfolio and are typically longer-term or may have no stated maturity, but allow the Firm to terminate the contract under certain conditions.

Derivative guarantees are recorded on the Consolidated Balance Sheets at fair value in trading assets and trading liabilities. The total notional value of the derivatives that the Firm deems to be guarantees was \$56.3 billion and \$61.7 billion at December 31, 2013 and 2012, respectively. The notional amount generally represents the Firm's maximum exposure to derivatives qualifying as guarantees. However, exposure to certain stable value contracts is contractually limited to a substantially lower percentage of the notional amount; the notional amount on these stable value contracts was \$27.0 billion and \$26.5 billion at December 31, 2013 and 2012, respectively, and the maximum exposure to loss was \$2.8 billion at both December 31, 2013 and 2012. The fair values of the contracts reflect the probability of whether the Firm will be required to perform under the contract. The fair value related to derivatives that the Firm

deems to be guarantees were derivative payables of \$109 million and \$122 million and derivative receivables of \$37 million and \$80 million at December 31, 2013 and 2012, respectively. The Firm reduces exposures to these contracts by entering into offsetting transactions, or by entering into contracts that hedge the market risk related to the derivative guarantees.

In addition to derivative contracts that meet the characteristics of a guarantee, the Firm is both a purchaser and seller of credit protection in the credit derivatives market. For a further discussion of credit derivatives, see Note 6 on pages 220–233 of this Annual Report.

Unsettled reverse repurchase and securities borrowing agreements

In the normal course of business, the Firm enters into reverse repurchase agreements and securities borrowing agreements that settle at a future date. At settlement, these commitments require that the Firm advance cash to and accept securities from the counterparty. These agreements generally do not meet the definition of a derivative, and

## Notes to consolidated financial statements

therefore, are not recorded on the Consolidated Balance Sheets until settlement date. At December 31, 2013 and 2012, the amount of commitments related to forward starting reverse repurchase agreements and securities borrowing agreements were \$9.9 billion and \$13.2 billion, respectively. Commitments related to unsettled reverse repurchase agreements and securities borrowing agreements with regular way settlement periods were \$28.3 billion and \$21.7 billion at December 31, 2013 and 2012, respectively.

## Loan sales- and securitization-related indemnifications

## Mortgage repurchase liability

In connection with the Firm's mortgage loan sale and securitization activities with the GSEs and other mortgage loan sale and private-label securitization transactions, as described in Note 16 on pages 288–299 of this Annual Report, the Firm has made representations and warranties that the loans sold meet certain requirements. The Firm has been, and may be, required to repurchase loans and/or indemnify the GSEs (e.g., with “make-whole” payments to reimburse the GSEs for their realized losses on liquidated loans) and other investors for losses due to material breaches of these representations and warranties. To the extent that repurchase demands that are received relate to loans that the Firm purchased from third parties that remain viable, the Firm typically will have the right to seek a recovery of related repurchase losses from the third party. Generally, the maximum amount of future payments the Firm would be required to make for breaches of these representations and warranties would be equal to the unpaid principal balance of such loans that are deemed to have defects that were sold to purchasers (including securitization-related SPEs) plus, in certain circumstances, accrued interest on such loans and certain expense.

On October 25, 2013, the Firm announced that it had reached a \$1.1 billion agreement with the FHFA to resolve, other than certain limited types of exposures, outstanding and future mortgage repurchase demands associated with loans sold to the GSEs from 2000 to 2008 (“FHFA Settlement Agreement”). The majority of the mortgage repurchase demands that the Firm had received from the GSEs related to loans originated from 2005 to 2008.

The Firm has recognized a mortgage repurchase liability of \$681 million and \$2.8 billion as of December 31, 2013 and 2012, respectively. The amount of the mortgage repurchase liability at December 31, 2013, relates to repurchase losses associated with loans sold in connection with loan sale and securitization transactions with the GSEs that are not covered by the FHFA Settlement Agreement (e.g., post-2008 loan sale and securitization transactions, mortgage insurance rescissions and certain mortgage insurance settlement-related exposures, as well as certain other specific exclusions).

The following table summarizes the change in the mortgage repurchase liability for each of the periods presented.

## Summary of changes in mortgage repurchase liability

Year ended December 31, (in millions)	2013	2012	2011
Repurchase liability at beginning of period	\$2,811	\$3,557	\$3,285
Net realized losses <sup>(a)(b)</sup>	(1,561)	) (1,158	) (1,263
Reclassification to litigation reserve <sup>(c)</sup>	(179)	) —	—
Provision for repurchase losses <sup>(d)</sup>	(390)	) 412	1,535
Repurchase liability at end of period	\$681	\$2,811	\$3,557

Presented net of third-party recoveries and include principal losses and accrued interest on repurchased loans, (a) “make-whole” settlements, settlements with claimants, and certain related expense. Make-whole settlements were \$414 million, \$524 million and \$640 million, for the years ended December 31, 2013, 2012 and 2011, respectively. (b) The 2013 amount includes \$1.1 billion, for the FHFA Settlement Agreement.

Prior to December 31, 2013, in the absence of a repurchase demand by a party to the relevant contracts, the Firm's decision to repurchase loans from private-label securitization trusts when it determined it had an obligation to do so was recognized in the mortgage repurchase liability. Pursuant to the terms of the RMBS Trust Settlement, all (c) repurchase obligations relating to the subject private-label securitization trusts, whether resulting from a repurchase demand or otherwise, are now recognized in the Firm's litigation reserves for this settlement. The RMBS Trust Settlement is fully accrued as of December 31, 2013.

(d) Included a provision related to new loan sales of \$20 million, \$112 million and \$52 million, for the years ended December 31, 2013, 2012 and 2011, respectively.

#### Private label securitizations

The liability related to repurchase demands associated with private label securitizations is separately evaluated by the Firm in establishing its litigation reserves.

On November 15, 2013, the Firm announced that it had reached a \$4.5 billion agreement with 21 major institutional investors to make a binding offer to the trustees of 330 residential mortgage-backed securities trust issued by J.P.Morgan, Chase, and Bear Stearns (“RMBS Trust Settlement”) to resolve all representation and warranty claims, as well as all servicing claims, on all trust issued by J.P.Morgan, Chase, and Bear Stearns between 2005 and 2008. The RMBS Trust Settlement may be subject to court approval.

In addition, from 2005 to 2008, Washington Mutual made certain loan level representations and warranties in connection with approximately \$165 billion of residential mortgage loans that were originally sold or deposited into private-label securitizations by Washington Mutual. Of the \$165 billion, approximately \$75 billion has been repaid. In addition, approximately \$47 billion of the principal amount of such loans has liquidated with an average loss severity of 59%. Accordingly, the remaining outstanding principal balance of these loans as of December 31, 2013, was approximately \$43 billion, of which \$10 billion was 60 days or more past due. The Firm believes that any repurchase

obligations related to these loans remain with the FDIC receivership.

For additional information regarding litigation, see Note 31 on pages 326–332 of this Annual Report.

#### Loans sold with recourse

The Firm provides servicing for mortgages and certain commercial lending products on both a recourse and nonrecourse basis. In nonrecourse servicing, the principal credit risk to the Firm is the cost of temporary servicing advances of funds (i.e., normal servicing advances). In recourse servicing, the servicer agrees to share credit risk with the owner of the mortgage loans, such as Fannie Mae or Freddie Mac or a private investor, insurer or guarantor. Losses on recourse servicing predominantly occur when foreclosure sales proceeds of the property underlying a defaulted loan are less than the sum of the outstanding principal balance, plus accrued interest on the loan and the cost of holding and disposing of the underlying property. The Firm's securitizations are predominantly nonrecourse, thereby effectively transferring the risk of future credit losses to the purchaser of the mortgage-backed securities issued by the trust. At December 31, 2013 and 2012, the unpaid principal balance of loans sold with recourse totaled \$7.7 billion and \$9.3 billion, respectively. The carrying value of the related liability that the Firm has recorded, which is representative of the Firm's view of the likelihood it will have to perform under its recourse obligations, was \$131 million and \$141 million at December 31, 2013 and 2012, respectively.

#### Other off-balance sheet arrangements

##### Indemnification agreements – general

In connection with issuing securities to investors, the Firm may enter into contractual arrangements with third parties that require the Firm to make a payment to them in the event of a change in tax law or an adverse interpretation of tax law. In certain cases, the contract also may include a termination clause, which would allow the Firm to settle the contract at its fair value in lieu of making a payment under the indemnification clause. The Firm may also enter into indemnification clauses in connection with the licensing of software to clients ("software licensees") or when it sells a business or assets to a third party ("third-party purchasers"), pursuant to which it indemnifies software licensees for claims of liability or damages that may occur subsequent to the licensing of the software, or third-party purchasers for losses they may incur due to actions taken by the Firm prior to the sale of the business or assets. It is difficult to estimate the Firm's maximum exposure under these indemnification arrangements, since this would require an assessment of future changes in tax law and future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

#### Credit card charge-backs

Chase Paymentech Solutions, Card's merchant services business and a subsidiary of JPMorgan Chase Bank, N.A., is a global leader in payment processing and merchant acquiring.

Under the rules of Visa USA, Inc., and MasterCard International, JPMorgan Chase Bank, N.A., is primarily liable for the amount of each processed credit card sales transaction that is the subject of a dispute between a cardmember and a merchant. If a dispute is resolved in the cardmember's favor, Chase Paymentech will (through the cardmember's issuing bank) credit or refund the amount to the cardmember and will charge back the transaction to the merchant. If Chase Paymentech is unable to collect the amount from the merchant, Chase Paymentech will bear the loss for the amount credited or refunded to the cardmember. Chase Paymentech mitigates this risk by withholding future settlements, retaining cash reserve accounts or by obtaining other security. However, in the unlikely event that: (1) a merchant ceases operations and is unable to deliver products, services or a refund; (2) Chase Paymentech does not have sufficient collateral from the merchant to provide customer refunds; and (3) Chase Paymentech does not have sufficient financial resources to provide customer refunds, JPMorgan Chase Bank, N.A., would recognize the loss. Chase Paymentech incurred aggregate losses of \$14 million, \$16 million, and \$13 million on \$750.1 billion, \$655.2 billion, and \$553.7 billion of aggregate volume processed for the years ended December 31, 2013, 2012 and 2011, respectively. Incurred losses from merchant charge-backs are charged to Other expense, with the offset recorded in a valuation allowance against Accrued interest and accounts receivable on the Consolidated Balance Sheets. The carrying value of the valuation allowance was \$5 million and \$6 million at December 31, 2013 and 2012, respectively, which the Firm believes, based on historical experience and the collateral held by Chase Paymentech of \$208 million and \$203 million at December 31, 2013 and 2012, respectively, is representative of the payment or performance risk

to the Firm related to charge-backs.

**Clearing Services - Client Credit Risk**

The Firm provides clearing services for clients entering into securities purchases and sales and derivative transactions, with central counterparties (“CCPs”), including exchange traded derivatives (“ETDs”) such as futures and options, as well as cleared over-the-counter (“OTC-cleared”) derivative contracts. As a clearing member, the Firm stands behind the performance of its clients, collects cash and securities collateral (margin) as well as any settlement amounts due from or to clients, and remits them to the relevant CCP or client in whole or part. There are two types of margin. Variation margin is posted on a daily basis based on the value of clients’ derivative contracts. Initial margin is posted at inception of a derivative contract, generally on the basis of the potential changes in the variation margin requirement for the contract.

## Notes to consolidated financial statements

As clearing member, the Firm is exposed to the risk of non-performance by its clients, but is not liable to clients for the performance of the CCPs. Where possible, the Firm seeks to mitigate its risk to the client through the collection of appropriate amounts of margin at inception and throughout the life of the transactions and can also cease provision of clearing services if clients do not adhere to their obligations under the clearing agreement. In the event of non-performance by a client, the Firm would close out the client's positions and access available margin. The CCP would utilize any margin it holds to make itself whole, with any remaining shortfalls required to be paid by the Firm as clearing member.

The Firm reflects its exposure to non-performance risk of the client through the recognition of margin payables or receivables to clients and CCPs, but does not reflect the clients underlying securities or derivative contracts in its Consolidated Financial Statements.

It is difficult to estimate the Firm's maximum possible exposure through its role as clearing member, as this would require an assessment of transactions that clients may execute in the future. However, based upon historical experience, and the credit risk mitigants available to the Firm, management believes it is unlikely that the Firm will have to make any material payments under these arrangements and the risk of loss is expected to be remote.

For information on the derivatives that the Firm executes for its own account and records in its Consolidated Financial Statements, see Note 6 on pages 220–233 of this Annual Report.

#### Exchange & Clearing House Memberships

Through the provision of clearing services, the Firm is a member of several securities and derivative exchanges and clearinghouses, both in the U.S. and other countries. Membership in some of these organizations requires the Firm to pay a pro rata share of the losses incurred by the organization as a result of the default of another member. Such obligations vary with different organizations. These obligations may be limited to members who dealt with the defaulting member or to the amount (or a multiple of the amount) of the Firm's contribution to the guarantee fund. Alternatively, these obligations may be a full pro-rata share of the residual losses after applying the guarantee fund. It is difficult to estimate the Firm's maximum possible exposure under these membership agreements, since this would require an assessment of future claims that may be made against the Firm that have not yet occurred. However, based on historical experience, management expects the risk of loss to be remote.

#### Guarantees of subsidiaries

In the normal course of business, JPMorgan Chase & Co. ("Parent Company") may provide counterparties with guarantees of certain of the trading and other obligations of its subsidiaries on a contract-by-contract basis, as negotiated with the Firm's counterparties. The obligations of the subsidiaries are included on the Firm's Consolidated Balance Sheets, or are reflected as off-balance sheet commitments; therefore, the Parent Company has not recognized a separate liability for these guarantees. The Firm believes that the occurrence of any event that would trigger payments by the Parent Company under these guarantees is remote.

The Parent Company has guaranteed certain debt of its subsidiaries, including both long-term debt and structured notes sold as part of the Firm's market-making activities. These guarantees are not included in the table on page 319 of this Note. For additional information, see Note 21 on pages 306–308 of this Annual Report.

## Note 30 – Commitments, pledged assets and collateral

## Lease commitments

At December 31, 2013, JPMorgan Chase and its subsidiaries were obligated under a number of noncancelable operating leases for premises and equipment used primarily for banking purposes, and for energy-related tolling service agreements. Certain leases contain renewal options or escalation clauses providing for increased rental payments based on maintenance, utility and tax increases, or they require the Firm to perform restoration work on leased premises. No lease agreement imposes restrictions on the Firm's ability to pay dividends, engage in debt or equity financing transactions or enter into further lease agreements.

The following table presents required future minimum rental payments under operating leases with noncancelable lease terms that expire after December 31, 2013.

Year ended December 31, (in millions)

2014		\$1,936	
2015		1,845	
2016		1,687	
2017		1,529	
2018		1,267	
After 2018		6,002	
Total minimum payments required <sup>(a)</sup>		14,266	
Less: Sublease rentals under noncancelable subleases		(2,595	)
Net minimum payment required		\$11,671	

<sup>(a)</sup> Lease restoration obligations are accrued in accordance with U.S. GAAP, and are not reported as a required minimum lease payment.

Total rental expense was as follows.

Year ended December 31, (in millions)	2013	2012	2011
Gross rental expense	\$2,187	\$2,212	\$2,228
Sublease rental income	(341	) (288	) (403
Net rental expense	\$1,846	\$1,924	\$1,825

## Pledged assets

At December 31, 2013, assets were pledged to maintain potential borrowing capacity with central banks and for other purposes, including to secure borrowings and public deposits, and to collateralize repurchase and other securities financing agreements. Certain of these pledged assets may be sold or repledged by the secured parties and are identified as financial instruments owned (pledged to various parties) on the Consolidated Balance Sheets. At December 31, 2013 and 2012, the Firm had pledged assets of \$251.3 billion and \$236.4 billion, respectively, at Federal Reserve Banks and FHLBs. In addition, as of December 31, 2013 and 2012, the Firm had pledged \$60.6 billion and \$74.5 billion, respectively, of financial instruments it owns that may not be sold or repledged by the secured parties. The prior period amount (and the corresponding pledged assets parenthetical disclosure for securities on the Consolidated Balance Sheets) have been revised to conform with the current period presentation. Total assets pledged do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. See Note 16 on pages 288–299 of this Annual Report for additional information on assets and liabilities of consolidated VIEs. For additional information on the Firm's securities financing activities and long-term debt, see Note 13 on pages 255–257, and Note 21 on pages 306–308, respectively, of this Annual report. The significant components of the Firm's pledged assets were as follows.

December 31, (in billions)	2013	2012
Securities	\$68.1	\$110.1
Loans	230.3	207.2
Trading assets and other	145.2	155.5
Total assets pledged	\$443.7	\$472.8

Collateral

At December 31, 2013 and 2012, the Firm had accepted assets as collateral that it could sell or repledge, deliver or otherwise use with a fair value of approximately \$726.7 billion and \$757.1 billion, respectively. This collateral was generally obtained under resale agreements, securities borrowing agreements, customer margin loans and derivative agreements. Of the collateral received, approximately \$543.5 billion and \$545.0 billion, respectively, were sold or repledged, generally as collateral under repurchase agreements, securities lending agreements or to cover short sales and to collateralize deposits and derivative agreements.

## Notes to consolidated financial statements

## Note 31 – Litigation

## Contingencies

As of December 31, 2013, the Firm and its subsidiaries are defendants or putative defendants in numerous legal proceedings, including private, civil litigations and regulatory/government investigations. The litigations range from individual actions involving a single plaintiff to class action lawsuits with potentially millions of class members. Investigations involve both formal and informal proceedings, by both governmental agencies and self-regulatory organizations. These legal proceedings are at varying stages of adjudication, arbitration or investigation, and involve each of the Firm's lines of business and geographies and a wide variety of claims (including common law tort and contract claims and statutory antitrust, securities and consumer protection claims), some of which present novel legal theories.

The Firm believes the estimate of the aggregate range of reasonably possible losses, in excess of reserves established, for its legal proceedings is from \$0 to approximately \$5.0 billion at December 31, 2013. This estimated aggregate range of reasonably possible losses is based upon currently available information for those proceedings in which the Firm is involved, taking into account the Firm's best estimate of such losses for those cases for which such estimate can be made. For certain cases, the Firm does not believe that an estimate can currently be made. The Firm's estimate involves significant judgment, given the varying stages of the proceedings (including the fact that many are currently in preliminary stages), the existence in many such proceedings of multiple defendants (including the Firm) whose share of liability has yet to be determined, the numerous yet-unresolved issues in many of the proceedings (including issues regarding class certification and the scope of many of the claims) and the attendant uncertainty of the various potential outcomes of such proceedings. Accordingly, the Firm's estimate will change from time to time, and actual losses may vary.

Set forth below are descriptions of the Firm's material legal proceedings.

**Bear Stearns Hedge Fund Matter.** In September 2013, an action brought by Bank of America and Banc of America Securities LLC (together "BofA") in the United States District Court for the Southern District of New York against Bear Stearns Asset Management, Inc. ("BSAM") relating to alleged losses resulting from the failure of the Bear Stearns High Grade Structured Credit Strategies Master Fund, Ltd. and the Bear Stearns High Grade Structured Credit Strategies Enhanced Leverage Master Fund, Ltd. was dismissed after the court granted BSAM's motion for summary judgment. BofA has determined not to appeal the dismissal.

**CIO Investigations and Litigation.** The Firm is responding to a consolidated shareholder purported class action, a consolidated purported class action brought under the Employee Retirement Income Security Act and shareholder derivative actions that have been filed in New York state court and the United States District Court for the Southern

District of New York, as well as shareholder demands and government investigations, relating to losses in the synthetic credit portfolio managed by the Firm's Chief Investment Office ("CIO"). The Firm continues to cooperate with ongoing government investigations, including by the United States Attorney's Office for the Southern District of New York and the State of Massachusetts. The purported class actions and shareholder derivative actions are in early stages with defendants' motions to dismiss pending.

**Credit Default Swaps Investigations and Litigation.** In July 2013, the European Commission (the "EC") filed a Statement of Objections against the Firm (including various subsidiaries) and other industry members in connection with its ongoing investigation into the credit default swaps ("CDS") marketplace. The EC asserts that between 2006 and 2009, a number of investment banks acted collectively through the International Swaps and Derivatives Association ("ISDA") and Markit Group Limited ("Markit") to foreclose exchanges from the potential market for exchange-traded credit derivatives by instructing Markit and ISDA to license their respective data and index benchmarks only for over-the-counter ("OTC") trading and not for exchange trading, allegedly to protect the investment banks' revenues from the OTC market. The Firm submitted a response to the Statement of Objections in January 2014. The U.S. Department of Justice (the "DOJ") also has an ongoing investigation into the CDS marketplace, which was initiated in July 2009. Separately, the Firm is a defendant in nine purported class actions (all consolidated in the United States District Court for the Southern District of New York) filed on behalf of purchasers and sellers of CDS and asserting federal antitrust law claims. Each of the complaints refers to the ongoing investigations by the EC and DOJ into the CDS market, and

alleges that the defendant investment banks and dealers, including the Firm, as well as Markit and/or ISDA, collectively prevented new entrants into the CDS market, in order to artificially inflate the defendants' OTC revenues. Foreign Exchange Investigations and Litigation. The Firm has received information requests, document production notices and related inquiries from various U.S. and non-U.S. government authorities regarding the Firm's foreign exchange trading business. These investigations are in the early stages and the Firm is cooperating with the relevant authorities.

Since November 2013, a number of class actions have been filed in the United States District Court for the Southern District of New York against a number of foreign exchange dealers, including the Firm, for alleged violations of federal and state antitrust laws and unjust enrichment based on an alleged conspiracy to manipulate foreign exchange rates reported on the WM/Reuters service.

**Interchange Litigation.** A group of merchants and retail associations filed a series of class action complaints relating to interchange in several federal courts. The complaints alleged that Visa and MasterCard, as well as certain banks, conspired to set the price of credit and debit card interchange fees, enacted respective rules in violation of antitrust laws, and engaged in tying/bundling and exclusive dealing. All cases were consolidated in the United States District Court for the Eastern District of New York for pretrial proceedings.

The parties have entered into an agreement to settle those cases, for a cash payment of \$6.05 billion to the class plaintiffs (of which the Firm's share is approximately 20%) and an amount equal to ten basis points of credit card interchange for a period of eight months to be measured from a date within 60 days of the end of the opt-out period. The agreement also provides for modifications to each credit card network's rules, including those that prohibit surcharging credit card transactions. The rule modifications became effective in January 2013. In December 2013, the Court issued a decision granting final approval of the settlement. A number of merchants have filed notices of appeal. Certain merchants that opted out of the class settlement have filed actions against Visa and MasterCard, as well as against the Firm and other banks.

**Investment Management Litigation.** The Firm is defending two pending cases that allege that investment portfolios managed by J.P. Morgan Investment Management ("JPMIM") were inappropriately invested in securities backed by residential real estate collateral. Plaintiffs Assured Guaranty (U.K.) and Ambac Assurance UK Limited claim that JPMIM is liable for losses of more than \$1 billion in market value of these securities. Discovery is proceeding.

**Italian Proceedings.**

**City of Milan.** In January 2009, the City of Milan, Italy (the "City") issued civil proceedings against (among others) JPMorgan Chase Bank, N.A. and J.P. Morgan Securities plc in the District Court of Milan alleging a breach of advisory obligations in connection with a bond issue by the City in June 2005 and an associated swap transaction. The Firm has entered into a settlement agreement with the City to resolve the City's civil proceedings.

Four current and former JPMorgan Chase employees and JPMorgan Chase Bank, N.A. (as well as other individuals and three other banks) were directed by a criminal judge to participate in a trial that started in May 2010. As it relates to JPMorgan Chase individuals, two were acquitted and two were found guilty of aggravated fraud with sanctions of prison sentences, fines and a ban from dealing with Italian public bodies for one year. JPMorgan Chase (along with other banks involved) was found liable for breaches of Italian administrative law, fined €1 million and ordered to forfeit the profit from the transaction (for JPMorgan Chase, totaling €24.7 million). JPMorgan Chase and the individuals are appealing the verdict, and none of the sanctions will take effect until all appeal avenues have been exhausted. The first appeal hearing took place in January 2014.

**Parmalat.** In 2003, following the bankruptcy of the Parmalat group of companies ("Parmalat"), criminal prosecutors in Italy investigated the activities of Parmalat, its directors and the financial institutions that had dealings with them following the collapse of the company. In March 2012, the criminal prosecutor served a notice indicating an intention to pursue criminal proceedings against four former employees of the Firm (but not against the Firm) on charges of conspiracy to cause Parmalat's insolvency by underwriting bonds and continuing derivatives trading when Parmalat's balance sheet was false. A preliminary hearing is scheduled for February 2014, at which the judge will determine whether to recommend that the matter go to a full trial.

In addition, the administrator of Parmalat commenced five civil actions against JPMorgan Chase entities including: two claw-back actions; a claim relating to bonds issued by Parmalat in which it is alleged that JPMorgan Chase kept Parmalat "artificially" afloat and delayed the declaration of insolvency; and similar allegations in two claims relating to derivatives transactions.

**Lehman Brothers Bankruptcy Proceedings.** In May 2010, Lehman Brothers Holdings Inc. ("LBHI") and its Official Committee of Unsecured Creditors (the "Committee") filed a complaint (and later an amended complaint) against JPMorgan Chase Bank, N.A. in the United States Bankruptcy Court for the Southern District of New York that asserts both federal bankruptcy law and state common law claims, and seeks, among other relief, to recover \$8.6 billion in collateral that was transferred to JPMorgan Chase Bank, N.A. in the weeks preceding LBHI's bankruptcy. The amended complaint also seeks unspecified damages on the grounds that JPMorgan Chase Bank, N.A.'s collateral requests hastened LBHI's bankruptcy. The Court dismissed the counts of the amended complaint that sought to void

the allegedly constructively fraudulent and preferential transfers made to the Firm during the months of August and September 2008.

The Firm has also filed counterclaims against LBHI alleging that LBHI fraudulently induced the Firm to make large clearing advances to Lehman against inappropriate collateral, which left the Firm with more than \$25 billion in claims (the "Clearing Claims") against the estate of Lehman Brothers Inc. ("LBI"), LBHI's broker-dealer subsidiary. LBHI and the Committee have filed an objection to the claims asserted by JPMorgan Chase Bank, N.A. against LBHI with respect to the Clearing Claims, principally on the grounds that the Firm had not conducted the sale of the securities collateral held for such claims in a commercially reasonable manner. The Clearing Claims, together with approximately \$3 billion of other claims of the Firm against Lehman entities, have been paid in full, subject to the outcome of the objections filed by LBHI and the Committee. Discovery is ongoing.

LBHI and several of its subsidiaries that had been Chapter 11 debtors have filed a separate complaint and objection to derivatives claims asserted by the Firm alleging that the amount of the derivatives claims had been overstated and

## Notes to consolidated financial statements

challenging certain set-offs taken by JPMorgan Chase entities to recover on the claims. The Firm responded to this separate complaint and objection in February 2013. Discovery is ongoing.

LIBOR and Other Benchmark Rate Investigations and Litigation. JPMorgan Chase has received subpoenas and requests for documents and, in some cases, interviews, from federal and state agencies and entities, including the DOJ, the Commodity Futures Trading Commission (the “CFTC”), the Securities and Exchange Commission (the “SEC”) and various state attorneys general, as well as the European Commission, the U.K. Financial Conduct Authority (the “FCA”), Canadian Competition Bureau, Swiss Competition Commission and other regulatory authorities and banking associations around the world relating primarily to the process by which interest rates were submitted to the British Bankers Association (“BBA”) in connection with the setting of the BBA’s London Interbank Offered Rate (“LIBOR”) for various currencies, principally in 2007 and 2008. Some of the inquiries also relate to similar processes by which information on rates is submitted to the European Banking Federation (“EBF”) in connection with the setting of the EBF’s Euro Interbank Offered Rates (“EURIBOR”) and to the Japanese Bankers’ Association for the setting of Tokyo Interbank Offered Rates (“TIBOR”) as well as to other processes for the setting of other reference rates in various parts of the world during similar time periods. The Firm is cooperating with these inquiries. In December 2013, JPMorgan Chase reached a settlement with the European Commission regarding its Japanese Yen LIBOR investigation and agreed to pay a fine of €79.9 million. Investigations by the European Commission with regard to other reference rates remain open. In January 2014, the Canadian Competition Bureau announced that it has discontinued its investigation related to Yen LIBOR.

In addition, the Firm has been named as a defendant along with other banks in a series of individual and class actions filed in various United States District Courts in which plaintiffs make varying allegations that in various periods, starting in 2000 or later, defendants either individually or collectively manipulated the U.S. dollar LIBOR, Yen LIBOR and/or Euroyen TIBOR rates by submitting rates that were artificially low or high. Plaintiffs allege that they transacted in loans, derivatives or other financial instruments whose values are impacted by changes in U.S. dollar LIBOR, Yen LIBOR, or Euroyen TIBOR and assert a variety of claims including antitrust claims seeking treble damages.

The U.S. dollar LIBOR-related purported class actions have been consolidated for pre-trial purposes in the United States District Court for the Southern District of New York. In March 2013, the Court granted in part and denied in part the defendants’ motions to dismiss the claims, including dismissal with prejudice of the antitrust claims, and the United States Court of Appeals for the Second Circuit dismissed the appeals for lack of jurisdiction. In September 2013, certain plaintiffs filed amended complaints and others sought leave to amend their complaints to add additional allegations. Defendants have moved to dismiss

the amended complaints and have opposed the requests to amend. Those motions remain pending.

The Firm has also been named as a defendant in a purported class action filed in the United States District Court for the Southern District of New York on behalf of plaintiffs who purchased or sold exchange-traded Euroyen futures and options contracts. The action alleges manipulation of Yen LIBOR. Defendants have filed a motion to dismiss.

The Firm has also been named as a nominal defendant in a derivative action in the Supreme Court of New York in the County of New York against certain current and former members of the Firm’s board of directors for alleged breach of fiduciary duty in connection with the Firm’s purported role in manipulating LIBOR. The defendants have filed a motion to dismiss.

Madoff Litigation and Investigations. In January 2014, certain of the Firm’s bank subsidiaries entered into settlements with various governmental agencies in resolution of investigations relating to Bernard L. Madoff Investment Securities LLC (“BLMIS”). The Firm and certain of its subsidiaries also entered into settlements with several private parties in resolution of civil litigation relating to BLMIS.

JPMorgan Chase Bank, N.A. entered into a Deferred Prosecution Agreement (the “DPA”) with the United States Attorney’s Office for the Southern District of New York (the “U.S. Attorney”) in which it agreed to forfeit \$1.7 billion to the United States as a non-tax-deductible payment. JPMorgan Chase Bank, N.A. also consented, subject to the terms and conditions of the DPA, to the filing by the U.S. Attorney of an Information charging the bank with failure to maintain an adequate anti-money laundering program, and a failure to file a suspicious activity report in the United

States in October 2008 with respect to BLMIS, in violation of the Bank Secrecy Act. Pursuant to the DPA, the U.S. Attorney will defer any prosecution of JPMorgan Chase Bank, N.A. for a two-year period and will dismiss the Information with prejudice at the end of that time if the bank is in compliance with its obligations under the DPA. The DPA has been approved by the court.

JPMorgan Chase Bank, N.A., JPMorgan Bank and Trust Company, N.A. and Chase Bank USA, N.A., have also consented to the assessment of a \$350 million Civil Money Penalty by the Office of the Comptroller of the Currency (“OCC”) in connection with various Bank Secrecy Act/Anti-Money Laundering deficiencies, including in relation to the BLMIS fraud. In addition, JPMorgan Chase Bank, N.A. has agreed to the assessment of a \$461 million Civil Money Penalty by the Financial Crimes Enforcement Network (“FinCEN”) for failure to detect and adequately report suspicious transactions relating to BLMIS. The FinCEN penalty, but not the OCC penalty, has been deemed satisfied by the forfeiture payment to the U.S. Attorney.

Additionally, the Firm and certain subsidiaries, including JPMorgan Chase Bank, N.A., have agreed to enter into settlements with the court-appointed trustee for BLMIS (the “Trustee”) and with plaintiffs representing a class of former

BLMIS customers who lost all or a portion of their principal investments with BLMIS. As part of these settlements, the Firm and the bank have agreed to pay the Trustee a total of \$325 million. Separately, the Firm and the bank have agreed to pay the class action plaintiffs \$218 million, as well as attorneys' fees, in exchange for a release of all damages claims relating to BLMIS. The settlements with the Trustee and the class action plaintiffs are subject to court approval. BLMIS customers who did not suffer losses on their principal investments are not eligible to participate in the class action settlement, and certain customers in that category have stated that they intend to pursue claims against the Firm.

Also, various subsidiaries of the Firm, including J.P. Morgan Securities plc, have been named as defendants in lawsuits filed in Bankruptcy Court in New York arising out of the liquidation proceedings of Fairfield Sentry Limited and Fairfield Sigma Limited (together, "Fairfield"), so-called Madoff feeder funds. These actions seek to recover payments made by the funds to defendants totaling approximately \$155 million. Pursuant to an agreement with the Trustee, the liquidators of Fairfield have voluntarily dismissed their action against J.P. Morgan Securities plc without prejudice to re-filing. The other actions remain outstanding.

In addition, a purported class action was brought by investors in certain feeder funds against JPMorgan Chase in the United States District Court for the Southern District of New York, as was a motion by separate potential class plaintiffs to add claims against the Firm and certain subsidiaries to an already pending purported class action in the same court. The allegations in these complaints largely track those raised by the Trustee. The Court dismissed these complaints and plaintiffs have appealed. In September 2013, the United States Court of Appeals for the Second Circuit affirmed the District Court's decision. The plaintiffs have petitioned the entire Court for a rehearing of the appeal and the Court has deferred decision pending a ruling by the United States Supreme Court on a potentially related issue.

The Firm is a defendant in five other Madoff-related investor actions pending in New York state court. The allegations in all of these actions are essentially identical, and involve claims against the Firm for, among other things, aiding and abetting breach of fiduciary duty, conversion and unjust enrichment. The Firm has moved to dismiss these actions. Additionally, a shareholder derivative action has been filed in New York state court against the Firm, as nominal defendant, and certain of its current and former Board members, alleging breach of fiduciary duty for failure to maintain effective internal controls to detect fraudulent transactions.

MF Global. The Firm has responded to inquiries from the CFTC relating to the Firm's banking and other business relationships with MF Global, including as a depository for MF Global's customer segregated accounts.

J.P. Morgan Securities LLC has been named as one of several defendants in a number of purported class actions filed by purchasers of MF Global's publicly traded securities asserting violations of federal securities laws and alleging that the offering documents contained materially false and misleading statements and omissions regarding MF Global. The actions have been consolidated before the United States District Court for the Southern District of New York. Discovery is ongoing.

Mortgage-Backed Securities and Repurchase Litigation and Related Regulatory Investigations. JPMorgan Chase and affiliates (together, "JPMC"), Bear Stearns and affiliates (together, "Bear Stearns") and Washington Mutual affiliates (together, "Washington Mutual") have been named as defendants in a number of cases in their various roles in offerings of mortgage-backed securities ("MBS"). These cases include purported class action suits on behalf of MBS purchasers, actions by individual MBS purchasers and actions by monoline insurance companies that guaranteed payments of principal and interest for particular tranches of MBS offerings. Following the settlements referred to under "Repurchase Litigation" and "Government Enforcement Investigations and Litigation" below, there are currently pending and tolled investor and monoline insurer claims involving MBS with an original principal balance of approximately \$74 billion, of which \$67 billion involves JPMC, Bear Stearns or Washington Mutual as issuer and \$7 billion involves JPMC, Bear Stearns or Washington Mutual solely as underwriter. The Firm and certain of its current and former officers and Board members have also been sued in shareholder derivative actions relating to the Firm's MBS activities, and trustees have asserted or have threatened to assert claims that loans in securitization trusts should be repurchased.

Issuer Litigation – Class Actions. The Firm is a defendant in three purported class actions brought against JPMC and Bear Stearns as MBS issuers (and, in some cases, also as underwriters of their own MBS offerings) in the United States District Courts for the Eastern and Southern Districts of New York. The Firm has reached an agreement in principle to settle one of these purported class actions, pending in the United States District Court for the Eastern District of New York. Motions to dismiss have largely been denied in the remaining two cases pending in the United States District Court for the Southern District of New York, which are in various stages of litigation.

Issuer Litigation – Individual Purchaser Actions. In addition to class actions, the Firm is defending individual actions brought against JPMC, Bear Stearns and Washington Mutual as MBS issuers (and, in some cases, also as underwriters of their own MBS offerings). These actions are pending in federal and state courts across the United States and are in various stages of litigation.

Monoline Insurer Litigation. The Firm is defending five pending actions relating to monoline insurers' guarantees of principal and interest on certain classes of 14 different Bear Stearns MBS offerings. These actions are pending in

## Notes to consolidated financial statements

federal and state courts in New York and are in various stages of litigation.

**Underwriter Actions.** In actions against the Firm solely as an underwriter of other issuers' MBS offerings, the Firm has contractual rights to indemnification from the issuers. However, those indemnity rights may prove effectively unenforceable in various situations, such as where the issuers are now defunct. There are currently such actions pending against the Firm in federal and state courts in various stages of litigation.

**Repurchase Litigation.** The Firm is defending a number of actions brought by trustees or master servicers of various MBS trusts and others on behalf of purchasers of securities issued by those trusts. These cases generally allege breaches of various representations and warranties regarding securitized loans and seek repurchase of those loans or equivalent monetary relief, as well as indemnification of attorneys' fees and costs and other remedies. Deutsche Bank National Trust Company, acting as trustee for various MBS trusts, has filed such a suit against JPMC, Washington Mutual and the FDIC in connection with a significant number of MBS issued by Washington Mutual; that case is described in the Washington Mutual Litigations section below. Other repurchase actions, each specific to one or more MBS transactions issued by JPMC and/or Bear Stearns, are in various stages of litigation.

In addition, the Firm received demands by securitization trustees that threaten litigation, as well as demands by investors directing or threatening to direct trustees to investigate claims or bring litigation, based on purported obligations to repurchase loans out of securitization trusts and alleged servicing deficiencies. These include but are not limited to a demand from a law firm, as counsel to a group of 21 institutional MBS investors, to various trustees to investigate potential repurchase and servicing claims. These investors purported to have 25% or more of the voting rights in as many as 191 different trusts sponsored by the Firm or its affiliates with an original principal balance of more than \$174 billion (excluding 52 trusts sponsored by Washington Mutual, with an original principal balance of more than \$58 billion). Pursuant to a settlement agreement with the group of institutional investors, JPMC and the investor group have made a binding offer to the trustees of MBS issued by JPMC and Bear Stearns that provides for the payment of \$4.5 billion and the implementation of certain servicing changes to mortgage loans serviced by JPMC, to resolve all repurchase and servicing claims that have been asserted or could have been asserted with respect to the 330 MBS trusts. The offer, which is subject to acceptance by the trustees, and potentially a judicial approval process, does not resolve claims relating to WaMu MBS. JPMC and the trustees have agreed to toll and forbear from asserting repurchase and servicing claims with respect to most of the JPMC and Bear Stearns trusts subject to the settlement during the pendency of the settlement approval process.

There are additional repurchase and servicing claims made against trustees not affiliated with the Firm, but involving trusts that the Firm sponsored, which have been tolled.

**Derivative Actions.** Seven shareholder derivative actions relating to the Firm's MBS activities have been filed to date against the Firm, as nominal defendant, and certain of its current and former officers and members of its Board of Directors, in New York state court and California federal court. In one of the actions, the Firm's motion to dismiss was granted and the dismissal was affirmed on appeal. Defendants have filed, or intend to file, motions to dismiss the remaining actions.

**Government Enforcement Investigations and Litigation.** The Firm resolved actual and potential civil claims by the DOJ and several State Attorneys General relating to residential mortgage-backed securities activities by JPMC, Bear Stearns and Washington Mutual, in addition to resolving litigation by the Federal Housing Finance Agency, the Federal Deposit Insurance Corporation and the National Credit Union Administration. The Firm paid a total of \$9.0 billion, which is comprised of a \$2.0 billion civil monetary penalty and \$7.0 billion in compensatory payments (including \$4.0 billion to resolve the Federal Housing Finance Agency litigation) and made a commitment to provide \$4.0 billion in borrower relief before the end of 2017. In connection with this settlement, including the resolution of litigation by the Federal Housing Finance Agency, the Federal Deposit Insurance Corporation and the National Credit Union Administration, the Firm agreed to waive its right to seek indemnification from the Federal Deposit Insurance Corporation, in its capacity as receiver for Washington Mutual Bank and in its corporate capacity, with respect to any portion of this settlement relating to residential mortgage-backed securities activities of Washington Mutual Bank. The Firm retained its rights to seek indemnification from the Federal Deposit Insurance Corporation for all other liabilities relating to the residential mortgage-backed securities activities of Washington Mutual Bank.

Simultaneously with the resolution of litigation by the Federal Housing Finance Agency, the Firm also agreed to resolve Fannie Mae's and Freddie Mac's repurchase claims associated with whole loan purchases from 2000 to 2008, for \$1.1 billion.

The Firm is responding to an ongoing investigation being conducted by the Criminal Division of the United States Attorney's Office for the Eastern District of California relating to MBS offerings securitized and sold by the Firm and its subsidiaries. The Firm has also received other subpoenas and informal requests for information from federal and state authorities concerning the issuance and underwriting of MBS-related matters. The Firm continues to respond to these MBS-related regulatory inquiries.

In addition, the Firm is responding to and cooperating with requests for information from the U.S. Attorney's Office for the District of Connecticut, subpoenas and requests from the SEC Division of Enforcement, and a request from the Office of the Special Inspector General for the Troubled Asset Relief Program to conduct a review of certain activities, all of which relate to, among other matters, communications with counterparties in connection with certain secondary market trading in MBS.

The Firm has entered into agreements with a number of entities that purchased MBS that toll applicable limitations periods with respect to their claims, and has settled, and in the future may settle, tolled claims. There is no assurance that the Firm will not be named as a defendant in additional MBS-related litigation.

**Mortgage-Related Investigations and Litigation.** The Attorney General of Massachusetts filed an action against the Firm, other servicers and a mortgage recording company, asserting claims for various alleged wrongdoings relating to mortgage assignments and use of the industry's electronic mortgage registry. The court granted in part and denied in part the defendants' motion to dismiss the action, which remains pending.

The Firm is named as a defendant in a purported class action lawsuit relating to its mortgage foreclosure procedures. The plaintiffs have moved for class certification.

Two shareholder derivative actions have been filed in New York Supreme Court against the Firm's Board of Directors alleging that the Board failed to exercise adequate oversight as to wrongful conduct by the Firm regarding mortgage servicing. These actions seek declaratory relief and damages. In October 2012, the Court consolidated the actions and stayed all proceedings pending the plaintiffs' decision whether to file a consolidated complaint after the Firm completes its response to a demand submitted by one of the plaintiffs under Section 220 of the Delaware General Corporation Law.

In February 2014, the Firm entered into a settlement with the United States Attorney's Office for the Southern District of New York, the Federal Housing Administration ("FHA"), the United States Department of Housing and Urban Development ("HUD") and the United States Department of Veterans Affairs ("VA") resolving claims relating to the Firm's participation in federal mortgage insurance programs overseen by FHA, HUD and VA. Under the settlement, JPMorgan Chase will pay \$614 million and agree to enhance its quality control program for loans that are submitted in the future to FHA's Direct Endorsement Lender program. This settlement releases the Firm from False Claims Act, FIRREA and other civil and administrative liability for FHA and VA insurance claims that have been paid to JPMorgan Chase since 2002 through the date of the settlement.

The Civil Division of the United States Attorney's Office for the Southern District of New York is conducting an investigation concerning the Firm's compliance with the Fair Housing Act ("FHA") and Equal Credit Opportunity Act ("ECOA") in connection with its mortgage lending practices. In addition, two municipalities are pursuing investigations into the impact, if any, of alleged violations of the FHA and ECOA on their respective communities. The Firm is cooperating in these investigations.

**Municipal Derivatives Litigation.** Several civil actions were commenced in New York and Alabama courts against the Firm relating to certain Jefferson County, Alabama (the "County") warrant underwritings and swap transactions.

The claims in the civil actions generally alleged that the Firm made payments to certain third parties in exchange for being chosen to underwrite more than \$3 billion in warrants issued by the County and to act as the counterparty for certain swaps executed by the County. The County filed for bankruptcy in November 2011. In June 2013, the County filed a Chapter 9 Plan of Adjustment, as amended (the "Plan of Adjustment"), which provided that all the above-described actions against the Firm would be released and dismissed with prejudice. In November 2013, the Bankruptcy Court confirmed the Plan of Adjustment, and in December 2013, certain sewer rate payers filed an appeal challenging the confirmation of the Plan of Adjustment. All conditions to the Plan of Adjustment's effectiveness, including the dismissal of the actions against the Firm, were satisfied or waived and the transactions contemplated by the Plan of Adjustment occurred in December 2013. Accordingly, all the above-described actions against the Firm have been dismissed pursuant to the terms of the Plan of Adjustment. The appeal of the Bankruptcy Court's order confirming the Plan of Adjustment remains pending.

**Petters Bankruptcy and Related Matters.** JPMorgan Chase and certain of its affiliates, including One Equity Partners ("OEP"), have been named as defendants in several actions filed in connection with the receivership and bankruptcy proceedings pertaining to Thomas J. Petters and certain affiliated entities (collectively, "Petters") and the Polaroid Corporation. The principal actions against JPMorgan Chase and its affiliates have been brought by a court-appointed receiver for Petters and the trustees in bankruptcy proceedings for three Petters entities. These actions generally seek to avoid certain purported transfers in connection with (i) the 2005 acquisition by Petters of Polaroid, which at the time was majority-owned by OEP; (ii) two credit facilities that JPMorgan Chase and other financial institutions

entered into with Polaroid; and (iii) a credit line and investment accounts held by Petters. The actions collectively seek recovery of approximately \$450 million. Defendants have moved to dismiss the complaints in the actions filed by the Petters bankruptcy trustees.

**Power Matters.** The United States Attorney's Office for the Southern District of New York is investigating matters relating to the bidding activities that were the subject of the July 2013 settlement between J.P. Morgan Ventures Energy Corp. and the Federal Energy Regulatory Commission. The Firm is cooperating with the investigation.

**Referral Hiring Practices Investigations.** The SEC and DOJ are investigating, among other things, the Firm's compliance with the Foreign Corrupt Practices Act and other laws with respect to the Firm's hiring practices related to candidates referred by clients, potential clients and government officials, and its engagement of consultants in the Asia Pacific region. The Firm is cooperating with these investigations. Separate inquiries on these or similar topics have been made by other authorities, including authorities in other jurisdictions, and the Firm is responding to those inquiries.

## Notes to consolidated financial statements

Sworn Documents, Debt Sales and Collection Litigation Practices. The Firm has been responding to formal and informal inquiries from various state and federal regulators regarding practices involving credit card collections litigation (including with respect to sworn documents), the sale of consumer credit card debt and securities backed by credit card receivables. In September 2013, JPMorgan Chase Bank, N.A., Chase Bank USA, N.A. and JPMorgan Bank and Trust Company, N.A. (collectively, the “Banks”) entered into a consent order with the OCC regarding collections litigation processes pursuant to which the Banks agreed to take certain corrective actions in connection with certain of JPMorgan Chase’s credit card, student loan, auto loan, business banking and commercial banking customers who defaulted on their loan or contract.

Separately, the Consumer Financial Protection Bureau and multiple state Attorneys General are conducting investigations into the Firm’s collection and sale of consumer credit card debt. The California and Mississippi Attorneys General have filed separate civil actions against JPMorgan Chase & Co., Chase Bank USA, N.A. and Chase BankCard Services, Inc. alleging violations of law relating to debt collection practices.

Washington Mutual Litigations. Proceedings related to Washington Mutual’s failure are pending before the United States District Court for the District of Columbia and include a lawsuit brought by Deutsche Bank National Trust Company, initially against the FDIC, asserting an estimated \$6 billion to \$10 billion in damages based upon alleged breach of various mortgage securitization agreements and alleged violation of certain representations and warranties given by certain Washington Mutual, Inc. (“WMI”) subsidiaries in connection with those securitization agreements. The case includes assertions that JPMorgan Chase may have assumed liabilities for the alleged breaches of representations and warranties in the mortgage securitization agreements. The District Court denied as premature motions by the Firm and the FDIC that sought a ruling on whether the FDIC retained liability for Deutsche Bank’s claims. Discovery is underway.

An action filed by certain holders of Washington Mutual Bank debt against JPMorgan Chase, which alleged that JPMorgan Chase acquired substantially all of the assets of Washington Mutual Bank from the FDIC at a price that was allegedly too low, remains pending. JPMorgan Chase and the FDIC moved to dismiss this action and the District Court dismissed the case except as to the plaintiffs’ claim that the Firm tortiously interfered with the plaintiffs’ bond contracts with Washington Mutual Bank prior to its closure. Discovery is ongoing.

JPMorgan Chase has also filed a complaint in the United States District Court for the District of Columbia against the FDIC in its capacity as receiver for Washington Mutual Bank and in its corporate capacity asserting multiple claims for indemnification under the terms of the Purchase & Assumption Agreement between JPMorgan Chase and the FDIC relating to JPMorgan Chase’s purchase of most of the assets and certain liabilities of Washington Mutual Bank.

\* \* \*

In addition to the various legal proceedings discussed above, JPMorgan Chase and its subsidiaries are named as defendants or are otherwise involved in a substantial number of other legal proceedings. The Firm believes it has meritorious defenses to the claims asserted against it in its currently outstanding legal proceedings and it intends to defend itself vigorously in all such matters. Additional legal proceedings may be initiated from time to time in the future.

The Firm has established reserves for several hundred of its currently outstanding legal proceedings. The Firm accrues for potential liability arising from such proceedings when it is probable that such liability has been incurred and the amount of the loss can be reasonably estimated. The Firm evaluates its outstanding legal proceedings each quarter to assess its litigation reserves, and makes adjustments in such reserves, upwards or downwards, as appropriate, based on management’s best judgment after consultation with counsel. During the years ended December 31, 2013, 2012 and 2011, the Firm incurred \$11.1 billion, \$5.0 billion and \$4.9 billion, respectively, of legal expense. There is no assurance that the Firm’s litigation reserves will not need to be adjusted in the future.

In view of the inherent difficulty of predicting the outcome of legal proceedings, particularly where the claimants seek very large or indeterminate damages, or where the matters present novel legal theories, involve a large number of parties or are in early stages of discovery, the Firm cannot state with confidence what will be the eventual outcomes of the currently pending matters, the timing of their ultimate resolution or the eventual losses, fines, penalties or impact related to those matters. JPMorgan Chase believes, based upon its current knowledge, after consultation with counsel

and after taking into account its current litigation reserves, that the legal proceedings currently pending against it should not have a material adverse effect on the Firm's consolidated financial condition. The Firm notes, however, that in light of the uncertainties involved in such proceedings, there is no assurance the ultimate resolution of these matters will not significantly exceed the reserves it has currently accrued; as a result, the outcome of a particular matter may be material to JPMorgan Chase's operating results for a particular period, depending on, among other factors, the size of the loss or liability imposed and the level of JPMorgan Chase's income for that period.

## Note 32 – International operations

The following table presents income statement-related and balance sheet-related information for JPMorgan Chase by major international geographic area. The Firm defines international activities for purposes of this footnote presentation as business transactions that involve clients residing outside of the U.S., and the information presented below is based predominantly on the domicile of the client, the location from which the client relationship is managed, or the location of the trading desk. However, many of the Firm's U.S. operations serve international businesses.

As the Firm's operations are highly integrated, estimates and subjective assumptions have been made to apportion revenue and expense between U.S. and international operations. These estimates and assumptions are consistent with the allocations used for the Firm's segment reporting as set forth in Note 33 on pages 334–337 of this Annual Report. The Firm's long-lived assets for the periods presented are not considered by management to be significant in relation to total assets. The majority of the Firm's long-lived assets are located in the United States.

As of or for the year ended December 31, (in millions)	Revenue <sup>(b)</sup>	Expense <sup>(c)</sup>	Income before income tax expense	Net income	Total assets	
2013						
Europe/Middle East and Africa	\$15,585	\$9,069	\$6,516	\$4,842	\$514,747	(d)
Asia and Pacific	6,168	4,248	1,920	1,254	145,999	
Latin America and the Caribbean	2,251	1,626	625	381	41,473	
Total international	24,004	14,943	9,061	6,477	702,219	
North America <sup>(a)</sup>	72,602	55,749	16,853	11,446	1,713,470	
Total	\$96,606	\$70,692	\$25,914	\$17,923	\$2,415,689	
2012						
Europe/Middle East and Africa	\$10,522	\$9,326	\$1,196	\$1,508	\$553,147	(d)
Asia and Pacific	5,605	3,952	1,653	1,048	167,955	
Latin America and the Caribbean	2,328	1,580	748	454	53,984	
Total international	18,455	14,858	3,597	3,010	775,086	
North America <sup>(a)</sup>	78,576	53,256	25,320	18,274	1,584,055	
Total	\$97,031	\$68,114	\$28,917	\$21,284	\$2,359,141	
2011						
Europe/Middle East and Africa	\$16,212	\$9,157	\$7,055	\$4,844	\$566,866	(d)
Asia and Pacific	5,992	3,802	2,190	1,380	156,411	
Latin America and the Caribbean	2,273	1,711	562	340	51,481	
Total international	24,477	14,670	9,807	6,564	774,758	
North America <sup>(a)</sup>	72,757	55,815	16,942	12,412	1,491,034	
Total	\$97,234	\$70,485	\$26,749	\$18,976	\$2,265,792	

(a) Substantially reflects the U.S.

(b) Revenue is composed of net interest income and noninterest revenue.

(c) Expense is composed of noninterest expense and the provision for credit losses.

(d) Total assets for the U.K. were approximately \$451 billion, \$498 billion, and \$510 billion at December 31, 2013, 2012 and 2011, respectively.

## Notes to consolidated financial statements

## Note 33 – Business segments

The Firm is managed on a line of business basis. There are four major reportable business segments – Consumer & Community Banking, Corporate & Investment Bank, Commercial Banking and Asset Management. In addition, there is a Corporate/Private Equity segment. The business segments are determined based on the products and services provided, or the type of customer served, and they reflect the manner in which financial information is currently evaluated by management. Results of these lines of business are presented on a managed basis. For a definition of managed basis, see Explanation and Reconciliation of the Firm's use of non-GAAP financial measures, on pages 82–83 of this Annual Report. For a further discussion concerning JPMorgan Chase's business segments, see Business Segment Results on pages 84–85 of this Annual Report.

The following is a description of each of the Firm's business segments, and the products and services they provide to their respective client bases.

**Consumer & Community Banking**

CCB serves consumers and businesses through personal service at bank branches and through ATMs, online, mobile and telephone banking. CCB is organized into Consumer & Business Banking, Mortgage Banking (including Mortgage Production, Mortgage Servicing and Real Estate Portfolios) and Card. Consumer & Business Banking offers deposit and investment products and services to consumers, and lending, deposit, and cash management and payment solutions to small businesses. Mortgage Banking includes mortgage origination and servicing activities, as well as portfolios comprised of residential mortgages and home equity loans, including the PCI portfolio acquired in the Washington Mutual transaction. Card issues credit cards to consumers and small businesses, provides payment services to corporate and public sector clients through its commercial card products, offers payment processing services to merchants, and provides auto and student loan services.

**Corporate & Investment Bank**

CIB offers a broad suite of investment banking, market-making, prime brokerage, and treasury and securities products and services to a global client base of corporations, investors, financial institutions, government and municipal entities. Within Banking, the CIB offers a full range of investment banking products and services in all major capital markets, including advising on corporate strategy and structure, capital-raising in equity and debt markets, as well as loan origination and syndication. Also included in Banking is Treasury Services, which includes transaction services, comprised primarily of cash management and liquidity solutions, and trade finance products. The Markets & Investor Services segment of the CIB is a global market-maker in cash securities and derivative instruments, and also offers sophisticated risk management solutions, prime brokerage, and research. Markets & Investor Services also includes the Securities Services business, a leading global custodian which holds, values, clears and services securities, cash and alternative investments for investors and broker-dealers, and manages depositary receipt programs globally.

**Commercial Banking**

CB delivers extensive industry knowledge, local expertise and dedicated service to U.S. and U.S. multinational clients, including corporations, municipalities, financial institutions and non-profit entities with annual revenue generally ranging from \$20 million to \$2.0 billion. CB provides financing to real estate investors and owners. Partnering with the Firm's other businesses, CB provides comprehensive financial solutions, including lending, treasury services, investment banking and asset management to meet its clients' domestic and international financial needs.

#### Asset Management

AM, with client assets of \$2.3 trillion, is a global leader in investment and wealth management. AM clients include institutions, high-net-worth individuals and retail investors in every major market throughout the world. AM offers investment management across all major asset classes including equities, fixed income, alternatives and money market funds. AM also offers multi-asset investment management, providing solutions to a broad range of clients' investment needs. For individual investors, AM also provides retirement products and services, brokerage and banking services including trusts and estates, loans, mortgages and deposits. The majority of AM's client assets are in actively managed portfolios.

#### Corporate/Private Equity

The Corporate/Private Equity segment comprises Private Equity, Treasury and CIO, and Other Corporate, which includes corporate staff units and expense that is centrally managed. Treasury and CIO are predominantly responsible for measuring, monitoring, reporting and managing the Firm's liquidity, funding and structural interest rate and foreign exchange risks, as well as executing the Firm's capital plan. The major Other Corporate units include Real Estate, Central Technology, Legal, Compliance, Finance, Human Resources, Internal Audit, Risk Management, Oversight & Control, Corporate Responsibility and various Other Corporate groups. Other centrally managed expense includes the Firm's occupancy and pension-related expense that are subject to allocation to the businesses.

## Notes to consolidated financial statements

## Segment results

The following tables provide a summary of the Firm's segment results for 2013, 2012 and 2011 on a managed basis. Total net revenue (noninterest revenue and net interest income) for each of the segments is presented on a fully taxable-equivalent ("FTE") basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented on a basis comparable to taxable investments and securities; this non-GAAP financial measure allows management to assess the comparability of revenue arising from both taxable and tax-exempt sources. The corresponding income tax impact related to tax-exempt items is recorded within income tax expense/(benefit). The increase in equity levels for the lines of businesses since December 31, 2012, is largely driven by the evolving regulatory requirements and higher capital targets the firm has established under Basel III Advanced approach.

Segment results and reconciliation<sup>(a)</sup>

As of or the year ended	Consumer & Community Banking <sup>(b)</sup>			Corporate & Investment Bank			Commercial Banking		
	December 31, (in millions, except ratios)	2013	2012	2011	2013	2012	2011	2013	2012
Noninterest revenue	\$17,552	\$20,813	\$15,314	\$23,810	\$23,104	\$22,523	\$2,298	\$2,283	\$2,195
Net interest income	28,474	29,071	30,305	10,415	11,222	11,461	4,675	4,542	4,223
Total net revenue	46,026	49,884	45,619	34,225	34,326	33,984	6,973	6,825	6,418
Provision for credit losses	335	3,774	7,620	(232 )	(479 )	(285 )	85	41	208
Noninterest expense	27,842	28,827	27,637	21,744	21,850	21,979	2,610	2,389	2,278
Income/(loss) before income tax expense/(benefit)	17,849	17,283	10,362	12,713	12,955	12,290	4,278	4,395	3,932
Income tax expense/(benefit)	7,100	6,732	4,257	4,167	4,549	4,297	1,703	1,749	1,565
Net income/(loss)	\$10,749	\$10,551	\$6,105	\$8,546	\$8,406	\$7,993	\$2,575	\$2,646	\$2,367
Average common equity	\$46,000	\$43,000	\$41,000	\$56,500	\$47,500	\$47,000	\$13,500	\$9,500	\$8,000
Total assets	452,929	467,282	486,697	843,577	876,107	845,095	190,782	181,502	158,040
Return on average common equity	23	%25	%15	%15	%18	%17	%19	%28	%30
Overhead ratio	60	58	61	64	64	65	37	35	35

(a) Managed basis starts with the reported U.S. GAAP results and includes certain reclassifications as discussed below that do not have any impact on net income as reported by the lines of business or by the Firm as a whole.

The 2012 and 2011 data for certain income statement line items (predominantly net interest income, compensation and noncompensation expense) and balance sheet items were revised to reflect the transfer of certain technology and operations, as well as real estate-related functions and staff, from Corporate/Private Equity to CCB, effective January 1, 2013.

Segment managed results reflect revenue on a FTE basis with the corresponding income tax impact recorded within (c) income tax expense/(benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results.

(table continued from previous page)

Asset Management			Corporate/Private Equity <sup>(b)</sup>			Reconciling Items <sup>(c)</sup>			Total			
2013	2012	2011	2013	2012	2011	2013	2012	2011	2013	2012	2011	
\$9,029	\$7,847	\$7,895	\$3,093	\$190	\$3,621	\$(2,495)	\$(2,116)	\$(2,003)	\$53,287	\$52,121	\$49,545	
2,291	2,099	1,648	(1,839)	(1,281)	582	(697)	(743)	(530)	43,319	44,910	47,689	
11,320	9,946	9,543	1,254	(1,091)	4,203	(3,192)	(2,859)	(2,533)	96,606	97,031	97,234	
65	86	67	(28)	(37)	(36)	—	—	—	225	3,385	7,574	
8,016	7,104	7,002	10,255	4,559	4,015	—	—	—	70,467	64,729	62,911	
3,239	2,756	2,474	(8,973)	(5,613)	224	(3,192)	(2,859)	(2,533)	25,914	28,917	26,749	
1,208	1,053	882	(2,995)	(3,591)	(695)	(3,192)	(2,859)	(2,533)	7,991	7,633	7,773	
\$2,031	\$1,703	\$1,592	\$(5,978)	\$(2,022)	\$919	\$—	\$—	\$—	\$17,923	\$21,284	\$18,976	
\$9,000	\$7,000	\$6,500	\$71,409	\$77,352	\$70,766	\$—	\$—	\$—	\$196,409	\$184,352	\$173,266	
122,414	108,999	86,242	805,987	725,251	689,718	NA	NA	NA	2,415,689	2,359,141	2,265,792	
23	%24	%25	%	NM	NM	NM	NM	NM	9	%11	%11	%
71	71	73	NM	NM	NM	NM	NM	NM	73	67	65	

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## Notes to consolidated financial statements

## Note 34 – Parent company

## Parent company – Statements of income and comprehensive income

Year ended December 31, (in millions)	2013	2012	2011
Income			
Dividends from subsidiaries and affiliates:			
Bank and bank holding company	\$1,175	\$4,828	\$10,852
Nonbank <sup>(a)</sup>	876	1,972	2,651
Interest income from subsidiaries	757	1,041	1,099
Other interest income	303	293	384
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	318	939	809
Nonbank	2,065	1,207	92
Other income/(loss)	(1,380	) 579	(85
Total income	4,114	10,859	15,802
Expense			
Interest expense to subsidiaries and affiliates <sup>(a)</sup>	309	836	1,121
Other interest expense	4,031	4,679	4,447
Other noninterest expense	9,597	2,399	649
Total expense	13,937	7,914	6,217
Income (loss) before income tax benefit and undistributed net income of subsidiaries	(9,823	) 2,945	9,585
Income tax benefit	4,301	1,665	1,089
Equity in undistributed net income of subsidiaries	23,445	16,674	8,302
Net income	\$17,923	\$21,284	\$18,976
Other comprehensive income, net	(2,903	) 3,158	(57
Comprehensive income	\$15,020	\$24,442	\$18,919
Parent company – Balance sheets			
December 31, (in millions)		2013	2012
Assets			
Cash and due from banks		\$264	\$216
Deposits with banking subsidiaries		64,843	75,521
Trading assets		13,727	8,128
Available-for-sale securities		15,228	3,541
Loans		2,829	2,101
Advances to, and receivables from, subsidiaries:			
Bank and bank holding company		21,693	39,773
Nonbank		68,788	86,904
Investments (at equity) in subsidiaries and affiliates: <sup>(b)</sup>			
Bank and bank holding company		196,950	170,297
Nonbank <sup>(a)</sup>		50,996	46,302
Other assets		18,877	16,481
Total assets		\$454,195	\$449,264
Liabilities and stockholders' equity			
Borrowings from, and payables to, subsidiaries and affiliates <sup>(a)</sup>		\$14,328	\$16,744
Other borrowed funds, primarily commercial paper		55,454	62,010
Other liabilities		11,367	8,208
Long-term debt <sup>(c)(d)</sup>		161,868	158,233

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Total liabilities <sup>(d)</sup>	243,017	245,195
Total stockholders' equity	211,178	204,069
Total liabilities and stockholders' equity	\$454,195	\$449,264

Parent company – Statements of cash flows

Year ended December 31, (in millions)	2013	2012	2011
<b>Operating activities</b>			
Net income	\$17,923	\$21,284	\$18,976
Less: Net income of subsidiaries and affiliates <sup>(a)</sup>	25,496	23,474	21,805
Parent company net loss	(7,573)	(2,190)	(2,829)
Cash dividends from subsidiaries and affiliates <sup>(a)</sup>	1,917	6,798	13,414
Other operating adjustments <sup>(b)</sup>	3,180	2,376	860
Net cash (used in)/provided by operating activities <sup>(b)</sup>	(2,476)	6,984	11,445
<b>Investing activities</b>			
Net change in:			
Deposits with banking subsidiaries	10,679	16,100	20,866
Available-for-sale securities:			
Proceeds from paydowns and maturities	61	621	886
Purchases	(12,009)	(364)	(1,109)
Other changes in loans, net	(713)	(350)	153
Advances to subsidiaries, net	13,769	5,951	(28,105)
Investments (at equity) in subsidiaries and affiliates, net <sup>(a)</sup>	700	3,546	(1,530)
All other investing activities, net <sup>(b)</sup>	22	25	29
Net cash provided by/(used in) investing activities <sup>(b)</sup>	12,509	25,529	(8,810)
<b>Financing activities</b>			
Net change in:			
Borrowings from subsidiaries and affiliates <sup>(a)</sup>	(2,715)	(14,038)	2,827
Other borrowed funds	(7,297)	3,736	16,268
Proceeds from the issuance of long-term debt	31,303	28,172	33,566
Payments of long-term debt	(21,510)	(44,240)	(41,747)
Excess tax benefits related to stock-based compensation	137	255	867
Proceeds from issuance of preferred stock	3,873	1,234	—
Redemption of preferred stock	(1,800)	—	—
Treasury stock and warrants repurchased	(4,789)	(1,653)	(8,863)
Dividends paid	(6,056)	(5,194)	(3,895)
All other financing activities, net	(1,131)	(701)	(1,622)
Net cash used in financing activities	(9,985)	(32,429)	(2,599)
Net increase in cash and due from banks	48	84	36
Cash and due from banks at the beginning of the year, primarily with bank subsidiaries	216	132	96
Cash and due from banks at the end of the year, primarily with bank subsidiaries	\$264	\$216	\$132
Cash interest paid	\$4,409	\$5,690	\$5,800
Cash income taxes paid, net	2,390	3,080	5,885

(a) Affiliates include trusts that issued guaranteed capital debt securities (“issuer trusts”). The Parent received dividends of \$5 million, \$12 million and \$13 million from the issuer trusts in 2013, 2012 and 2011, respectively. For further

discussion on these issuer trusts, see Note 21 on pages 306–308 of this Annual Report.

(b) Prior periods were revised to conform with the current presentation.

(c) At December 31, 2013, long-term debt that contractually matures in 2014 through 2018 totaled \$26.4 billion, \$23.8 billion, \$22.5 billion, \$16.6 billion and \$18.7 billion, respectively.

(d) For information regarding the Firm's guarantees of its subsidiaries' obligations, see Note 21 and Note 29 on pages 306–308 and 318–324, respectively, of this Annual Report.

## Supplementary information

## Selected quarterly financial data (unaudited)

(Table continued  
on next page)

As of or for the period ended (in millions, except per share, ratio and headcount data)	2013				2012			
	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Selected income statement data								
Total net revenue	\$23,156	\$23,117	\$25,211	\$25,122	\$23,653	\$25,146	\$22,180	\$26,052
Total noninterest expense	15,552	23,626	15,866	15,423	16,047	15,371	14,966	18,345
Pre-provision profit/(loss)	7,604	(509 )	9,345	9,699	7,606	9,775	7,214	7,707
Provision for credit losses	104	(543 )	47	617	656	1,789	214	726
Income before income tax expense	7,500	34	9,298	9,082	6,950	7,986	7,000	6,981
Income tax expense	2,222	414	2,802	2,553	1,258	2,278	2,040	2,057
Net income/(loss)	\$5,278	\$(380 )	\$6,496	\$6,529	\$5,692	\$5,708	\$4,960	\$4,924
Per common share data								
Net income/(loss) per share: Basic	\$1.31	\$(0.17 )	\$1.61	\$1.61	\$1.40	\$1.41	\$1.22	\$1.20
Diluted	1.30	(0.17 )	1.60	1.59	1.39	1.40	1.21	1.19
Cash dividends declared per share	0.38	0.38	0.38	0.30	0.30	0.30	0.30	0.30
Book value per share	53.25	52.01	52.48	52.02	51.27	50.17	48.40	47.48
Tangible book value per share ("TBVS" <sup>a</sup> )	40.81	39.51	39.97	39.54	38.75	37.53	35.71	34.79
Common shares outstanding								
Average: Basic	3,762.1	3,767.0	3,782.4	3,818.2	3,806.7	3,803.3	3,808.9	3,818.8
Diluted	3,797.1	3,767.0	3,814.3	3,847.0	3,820.9	3,813.9	3,820.5	3,833.4
Common shares at period-end	3,756.1	3,759.2	3,769.0	3,789.8	3,804.0	3,799.6	3,796.8	3,822.0
Share price <sup>(b)</sup>								
High	\$58.55	\$56.93	\$55.90	\$51.00	\$44.54	\$42.09	\$46.35	\$46.49
Low	50.25	50.06	46.05	44.20	38.83	33.10	30.83	34.01
Close	58.48	51.69	52.79	47.46	43.97	40.48	35.73	45.98
Market capitalization	219,657	194,312	198,966	179,863	167,260	153,806	135,661	175,737
Selected ratios								
Return on common equity ("ROE")	10	%(1 )	%13	%13	%11	%12	%11	%11

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Return on tangible common equity (“ROTCE” <sup>(a)</sup> )	14	(2 )	17	17	15	16	15	15	
Return on assets (“ROA”)	0.87	(0.06 )	1.09	1.14	0.98	1.01	0.88	0.88	
Return on risk-weighted assets <sup>(c)(d)</sup>	1.52	(0.11 )	1.85	1.88	1.76	1.74	1.52	1.57	
Overhead ratio	67	102	63	61	68	61	67	70	
Loans-to-deposits ratio	57	57	60	61	61	63	65	64	
High Quality Liquid Assets (“HQLA”)(in billions) <sup>(e)</sup>	\$522	\$538	\$454	\$413	\$341	NA	NA	NA	
Tier 1 capital ratio <sup>(d)</sup>	11.9	% 11.7	% 11.6	% 11.6	% 12.6	% 11.9	% 11.3	% 11.9	%
Total capital ratio <sup>(d)</sup>	14.3	14.3	14.1	14.1	15.3	14.7	14.0	14.9	
Tier 1 leverage ratio	7.1	6.9	7.0	7.3	7.1	7.1	6.7	7.1	
Tier 1 common capital ratio <sup>(d)(f)</sup>	10.7	10.5	10.4	10.2	11.0	10.4	9.9	9.8	
Selected balance sheet data (period-end)									
Trading assets	\$374,664	\$383,348	\$401,470	\$430,991	\$450,028	\$447,053	\$417,324	\$455,633	
Securities <sup>(g)</sup>	354,003	356,556	354,725	365,744	371,152	365,901	354,595	381,742	
Loans	738,418	728,679	725,586	728,886	733,796	721,947	727,571	720,967	
Total assets	2,415,689	2,463,309	2,439,494	2,389,349	2,359,141	2,321,284	2,290,146	2,320,164	
Deposits	1,287,765	1,281,102	1,202,950	1,202,507	1,193,593	1,139,611	1,115,886	1,128,512	
Long-term debt <sup>(h)</sup>	267,889	263,372	266,212	268,361	249,024	241,140	239,539	255,831	
Common stockholders’ equity	200,020	195,512	197,781	197,128	195,011	190,635	183,772	181,469	
Total stockholders’ equity	211,178	206,670	209,239	207,086	204,069	199,639	191,572	189,269	
Headcount <sup>(i)</sup>	251,196	255,041	254,063	255,898	258,753	259,144	260,398	261,169	

## Supplementary information

(Table continued from previous page)

As of or for the period ended (in millions, except ratio data)	2013				2012				
	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter	
Credit quality metrics									
Allowance for credit losses	\$16,969	\$18,248	\$20,137	\$21,496	\$22,604	\$23,576	\$24,555	\$26,621	
Allowance for loan losses to total retained loans	2.25	%2.43	%2.69	%2.88	%3.02	%3.18	%3.29	%3.63	%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans <sup>(j)</sup>	1.80	1.89	2.06	2.27	2.43	2.61	2.74	3.11	
Nonperforming assets	\$9,706	\$10,380	\$11,041	\$11,739	\$11,906	\$12,481	\$11,397	\$11,953	
Net charge-offs	1,328	1,346	1,403	1,725	1,628	2,770	2,278	2,387	
Net charge-off rate	0.73	%0.74	%0.78	%0.97	%0.90	%1.53	%1.27	%1.35	%

(a) TBVS and ROTCE are non-GAAP financial measures. Tangible book value per share represents the Firm's tangible common equity divided by period-end common shares. ROTCE measures the Firm's annualized earnings as a percentage of tangible common equity. For further discussion of these measures, see Explanation and Reconciliation of the Firm's Use of Non-GAAP Financial Measures on pages 82–83 of this Annual Report.

(b) Share prices shown for JPMorgan Chase's common stock are from the New York Stock Exchange. JPMorgan Chase's common stock is also listed and traded on the London Stock Exchange and the Tokyo Stock Exchange.

(c) Return on Basel I risk-weighted assets is the annualized earnings of the Firm divided by its average RWA.

(d) Basel 2.5 rules became effective for the Firm on January 1, 2013. The implementation of these rules in the first quarter of 2013 resulted in an increase of approximately \$150 billion in RWA compared with the Basel I rules. The implementation of these rules also resulted in decreases of the Firm's Tier 1 capital, Total capital and Tier 1 common capital ratios by 140 basis points, 160 basis points and 120 basis points, respectively, at March 31, 2013.

For further discussion of Basel 2.5, see Regulatory capital on pages 161–165 of this Annual Report.

(e) The Firm began estimating its total HQLA as of December 31, 2012, based on its current understanding of the Basel III LCR rules. See HQLA on page 172 of this Annual Report.

(f) Basel I Tier 1 common capital ratio ("Tier 1 common ratio") is Tier 1 common capital ("Tier 1 common") divided by risk-weighted assets. The Firm uses Tier 1 common capital along with the other capital measures to assess and monitor its capital position. For further discussion of the Tier 1 common ratio, see Regulatory capital on pages 161–165 of this Annual Report.

(g) Included held-to-maturity securities of \$24.0 billion and \$4.5 billion at December 31, 2013 and September 30, 2013. Held-to-maturity balances for the other periods were not material.

(h) Included unsecured long-term debt of \$199.4 billion, \$199.2 billion, \$199.1 billion, \$206.1 billion, \$200.6 billion, \$207.3 billion and \$213.4 billion, and \$235.4 billion, respectively, for the periods presented.

(i) Effective January 1, 2013, interns are excluded from the firmwide and business segment headcount metrics. Prior periods were revised to conform with this presentation.

(j) Excludes the impact of residential real estate PCI loans. For further discussion, see Allowance for credit losses on pages 139–141 of this Annual Report.



## Glossary of Terms

**Active foreclosures:** Loans referred to foreclosure where formal foreclosure proceedings are ongoing. Includes both judicial and non-judicial states.

**Active online customers:** Users of all internet browsers and mobile platforms who have logged in within the past 90 days.

**Active mobile customers:** Users of all mobile platforms, which include: SMS, mobile smartphone and tablet, who have logged in within the past 90 days.

**Allowance for loan losses to total loans:** Represents period-end allowance for loan losses divided by retained loans.

**Assets under management:** Represent assets actively managed by AM on behalf of its Private Banking, Institutional and Retail clients. Includes “Committed capital not Called,” on which AM earns fees. Excludes assets managed by American Century Companies, Inc., in which the Firm sold its ownership interest on August 31, 2011.

**Beneficial interests issued by consolidated VIEs:** Represents the interest of third-party holders of debt, equity securities, or other obligations, issued by VIEs that JPMorgan Chase consolidates.

**Benefit obligation:** Refers to the projected benefit obligation for pension plans and the accumulated postretirement benefit obligation for OPEB plans.

**Chase Liquid<sup>SM</sup> cards** - Refers to a prepaid, reloadable card product.

**Client advisors:** Investment product specialists, including private client advisors, financial advisors, financial advisor associates, senior financial advisors, independent financial advisors and financial advisor associate trainees, who advise clients on investment options, including annuities, mutual funds, stock trading services, etc., sold by the Firm or by third-party vendors through retail branches, Chase Private Client locations and other channels.

**Client assets:** Represent assets under management as well as custody, brokerage, administration and deposit accounts.

**Client investment managed accounts:** Assets actively managed by Chase Wealth Management on behalf of clients.

The percentage of managed accounts is calculated by dividing managed account assets by total client investment assets.

**Credit cycle:** A period of time over which credit quality improves, deteriorates and then improves again (or vice versa). The duration of a credit cycle can vary from a couple of years to several years.

**CUSIP number:** A CUSIP (i.e., Committee on Uniform Securities Identification Procedures) number consists of nine characters (including letters and numbers) that uniquely identify a company or issuer and the type of security and is assigned by the American Bankers Association and operated by Standard & Poor’s. This system facilitates the clearing and settlement process of securities. A similar system is used to identify non-U.S. securities (CUSIP International Numbering System).

**Deposit margin/deposit spread:** Represents net interest income expressed as a percentage of average deposits.

**Exchange traded derivatives:** Derivative contracts that are executed on an exchange and settled via a central clearing house.

**FICO score:** A measure of consumer credit risk provided by credit bureaus, typically produced from statistical models by Fair Isaac Corporation utilizing data collected by the credit bureaus.

**Forward points:** Represents the interest rate differential between two currencies, which is either added to or subtracted from the current exchange rate (i.e., “spot rate”) to determine the forward exchange rate.

**Group of Seven (“G7”) nations:** Countries in the G7 are Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.

**G7 government bonds:** Bonds issued by the government of one of the G7 nations.

**Headcount-related expense:** Includes salary and benefits (excluding performance-based incentives), and other noncompensation costs related to employees.

**Home equity - senior lien:** Represents loans and commitments where JP Morgan Chase holds the first security interest on the property.

**Home equity - junior lien:** Represents loans and commitments where JP Morgan Chase holds a security interest that is subordinate in rank to other liens.

**Interchange income:** A fee paid to a credit card issuer in the clearing and settlement of a sales or cash advance transaction.

Investment-grade: An indication of credit quality based on JPMorgan Chase's internal risk assessment system. "Investment grade" generally represents a risk profile similar to a rating of a "BBB-"/"Baa3" or better, as defined by independent rating agencies.

## Glossary of Terms

LLC: Limited Liability Company.

Loan-to-value (“LTV”) ratio: For residential real estate loans, the relationship, expressed as a percentage, between the principal amount of a loan and the appraised value of the collateral (i.e., residential real estate) securing the loan.

Origination date LTV ratio

The LTV ratio at the origination date of the loan. Origination date LTV ratios are calculated based on the actual appraised values of collateral (i.e., loan-level data) at the origination date.

Current estimated LTV ratio

An estimate of the LTV as of a certain date. The current estimated LTV ratios are calculated using estimated collateral values derived from a nationally recognized home price index measured at the metropolitan statistical area (“MSA”) level. These MSA-level home price indices comprise actual data to the extent available and forecasted data where actual data is not available. As a result, the estimated collateral values used to calculate these ratios do not represent actual appraised loan-level collateral values; as such, the resulting LTV ratios are necessarily imprecise and should therefore be viewed as estimates.

Combined LTV ratio

The LTV ratio considering all lien positions related to the property. Combined LTV ratios are used for junior lien home equity products.

Managed basis: A non-GAAP presentation of financial results that includes reclassifications to present revenue on a fully taxable-equivalent basis. Management uses this non-GAAP financial measure at the segment level, because it believes this provides information to enable investors to understand the underlying operational performance and trends of the particular business segment and facilitates a comparison of the business segment with the performance of competitors.

Master netting agreement: An agreement between two counterparties who have multiple derivative contracts with each other that provides for the net settlement of all contracts, as well as cash collateral, through a single payment, in a single currency, in the event of default on or termination of any one contract.

Mortgage product types:

Alt-A

Alt-A loans are generally higher in credit quality than subprime loans but have characteristics that would disqualify the borrower from a traditional prime loan. Alt-A lending characteristics may include one or more of the following: (i) limited documentation; (ii) a high combined loan-to-value (“CLTV”) ratio; (iii) loans secured by non-owner occupied properties; or (iv) a debt-to-income ratio above normal limits. A substantial proportion of the Firm’s Alt-A loans are those where a borrower does not provide complete documentation of his or her assets or the amount or source of his or her income.

Option ARMs

The option ARM real estate loan product is an adjustable-rate mortgage loan that provides the borrower with the option each month to make a fully amortizing, interest-only or minimum payment. The minimum payment on an option ARM loan is based on the interest rate charged during the introductory period. This introductory rate is usually significantly below the fully indexed rate. The fully indexed rate is calculated using an index rate plus a margin. Once the introductory period ends, the contractual interest rate charged on the loan increases to the fully indexed rate and adjusts monthly to reflect movements in the index. The minimum payment is typically insufficient to cover interest accrued in the prior month, and any unpaid interest is deferred and added to the principal balance of the loan. Option ARM loans are subject to payment recast, which converts the loan to a variable-rate fully amortizing loan upon meeting specified loan balance and anniversary date triggers.

Prime

Prime mortgage loans are made to borrowers with good credit records and a monthly income at least three to four times greater than their monthly housing expense (mortgage payments plus taxes and other debt payments). These borrowers provide full documentation and generally have reliable payment histories.

Subprime

Subprime loans are loans to customers with one or more high risk characteristics, including but not limited to: (i) unreliable or poor payment histories; (ii) a high LTV ratio of greater than 80% (without borrower-paid mortgage insurance); (iii) a high debt-to-income ratio; (iv) an occupancy type for the loan is other than the borrower's primary residence; or (v) a history of delinquencies or late payments on the loan.

## Glossary of Terms

**Multi-asset:** Any fund or account that allocates assets under management to more than one asset class.

**NA:** Data is not applicable or available for the period presented.

**Net charge-off/(recovery) rate:** Represents net charge-offs/(recoveries) (annualized) divided by average retained loans for the reporting period.

**Net yield on interest-earning assets:** The average rate for interest-earning assets less the average rate paid for all sources of funds.

**NM:** Not meaningful.

**Over-the-counter derivatives (“OTC”):** Derivative contracts that are negotiated, executed and settled bilaterally between two derivative counterparties, where one or both counterparties is a derivatives dealer.

**Over-the-counter cleared derivatives (“OTC cleared”):** Derivative contracts that are negotiated and executed bilaterally, but subsequently settled via a central clearing house, such that each derivative counterparty is only exposed to the default of that clearing house.

**Overhead ratio:** Noninterest expense as a percentage of total net revenue.

**Participating securities:** Represents unvested stock-based compensation awards containing nonforfeitable rights to dividends or dividend equivalents (collectively, “dividends”), which are included in the earnings per share calculation using the two-class method. JPMorgan Chase grants restricted stock and RSUs to certain employees under its stock-based compensation programs, which entitle the recipients to receive nonforfeitable dividends during the vesting period on a basis equivalent to the dividends paid to holders of common stock. These unvested awards meet the definition of participating securities. Under the two-class method, all earnings (distributed and undistributed) are allocated to each class of common stock and participating securities, based on their respective rights to receive dividends.

**Personal bankers:** Retail branch office personnel who acquire, retain and expand new and existing customer relationships by assessing customer needs and recommending and selling appropriate banking products and services.

**Portfolio activity:** Describes changes to the risk profile of existing lending-related exposures and their impact on the allowance for credit losses from changes in customer profiles and inputs used to estimate the allowances.

**Pre-provision profit/(loss):** Represents total net revenue less noninterest expense. The Firm believes that this financial measure is useful in assessing the ability of a lending institution to generate income in excess of its provision for credit losses.

**Pretax margin:** Represents income before income tax expense divided by total net revenue, which is, in management’s view, a comprehensive measure of pretax performance derived by measuring earnings after all costs are taken into consideration. It is one basis upon which management evaluates the performance of AM against the performance of their respective competitors.

**Principal transactions revenue:** Principal transactions revenue includes realized and unrealized gains and losses recorded on derivatives, other financial instruments, private equity investments, and physical commodities used in market making and client-driven activities. In addition, Principal transactions revenue also includes certain realized and unrealized gains and losses related to hedge accounting and specified risk management activities including: (a) certain derivatives designated in qualifying hedge accounting relationships (primarily fair value hedges of commodity and foreign exchange risk), (b) certain derivatives used for specified risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives, including the synthetic credit portfolio.

**Purchased credit-impaired (“PCI”) loans:** Represents loans that were acquired in the Washington Mutual transaction and deemed to be credit-impaired on the acquisition date in accordance with the guidance of the Financial Accounting Standards Board (“FASB”). The guidance allows purchasers to aggregate credit-impaired loans acquired in the same fiscal quarter into one or more pools, provided that the loans have common risk characteristics (e.g., product type, LTV ratios, FICO scores, past due status, geographic location). A pool is then accounted for as a single asset with a single composite interest rate and an aggregate expectation of cash flows.

**Real assets:** Real assets include investments in productive assets such as agriculture, energy rights, mining and timber properties and exclude raw land to be developed for real estate purposes.



## Glossary of Terms

Real estate investment trust (“REIT”): A special purpose investment vehicle that provides investors with the ability to participate directly in the ownership or financing of real-estate related assets by pooling their capital to purchase and manage income property (i.e., equity REIT) and/or mortgage loans (i.e., mortgage REIT). REITs can be publicly-or privately-held and they also qualify for certain favorable tax considerations.

Receivables from customers: Primarily represents margin loans to prime and retail brokerage customers which are included in accrued interest and accounts receivable on the Consolidated Balance Sheets.

Reported basis: Financial statements prepared under U.S. GAAP, which excludes the impact of taxable-equivalent adjustments.

Retained loans: Loans that are held-for-investment (i.e. excludes loans held-for-sale and loans at fair value).

Risk-weighted assets (“RWA”): Risk-weighted assets consist of on- and off-balance sheet assets that are assigned to one of several broad risk categories and weighted by factors representing their risk and potential for default. On-balance sheet assets are risk-weighted based on the estimated credit risk associated with the obligor or counterparty, the nature of any collateral, and the guarantor, if any. Off-balance sheet assets such as lending-related commitments, guarantees, derivatives and other applicable off-balance sheet positions are risk-weighted by multiplying the contractual amount by the appropriate credit conversion factor to determine the on-balance sheet credit equivalent amount, which is then risk-weighted based on the same factors used for on-balance sheet assets. Risk-weighted assets also incorporate a measure for market risk related to applicable trading assets-debt and equity instruments, and foreign exchange and commodity derivatives. The resulting risk-weighted values for each of the risk categories are then aggregated to determine total risk-weighted assets.

Sales specialists: Retail branch office and field personnel, including relationship managers and loan officers, who specialize in marketing and sales of various business banking products (i.e., business loans, letters of credit, deposit accounts, Chase Paymentech, etc.) and mortgage products to existing and new clients.

Seed capital: Initial JPMorgan capital invested in products, such as mutual funds, with the intention of ensuring the fund is of sufficient size to represent a viable offering to clients, enabling pricing of its shares, and allowing the manager to develop a track record. After these goals are achieved, the intent is to remove the Firm’s capital from the investment.

Short sale: A short sale is a sale of real estate in which proceeds from selling the underlying property are less than the amount owed the Firm under the terms of the related mortgage and the related lien is released upon receipt of such proceeds.

Structural Interest Rate Risk: Represents interest rate risk of the non-trading assets and liabilities of the firm.

Suspended foreclosures: Loans referred to foreclosure where formal foreclosure proceedings have started but are currently on hold, which could be due to bankruptcy or loss mitigation. Includes both judicial and non-judicial states.

Taxable-equivalent basis: In presenting managed results, the total net revenue for each of the business segments and the Firm is presented on a tax-equivalent basis. Accordingly, revenue from investments that receive tax credits and tax-exempt securities is presented in the managed results on a basis comparable to taxable investments and securities; the corresponding income tax impact related to tax-exempt items is recorded within income tax expense.

Trade-date and settlement-date: For financial instruments, the trade-date is the date that an order to purchase, sell or otherwise acquire an instrument is executed in the market. The trade-date may differ from the settlement-date, which is the date on which the actual transfer of a financial instrument between two parties is executed. The amount of time that passes between the trade-date and the settlement-date differs depending on the financial instrument. For repurchases under the common equity repurchase program, except where the trade-date is specified, the amounts disclosed are presented on a settlement-date basis. In the Capital Management section on pages 160–167, of this Form 10-K, and where otherwise specified, repurchases under the common equity repurchase program are presented on a trade-date basis because the trade-date is used to calculate the Firm’s regulatory capital.

Troubled debt restructuring (“TDR”): A TDR is deemed to occur when the Firm modifies the original terms of a loan agreement by granting a concession to a borrower that is experiencing financial difficulty.

Unaudited: Financial statements and information that have not been subjected to auditing procedures sufficient to permit an independent certified public accountant to express an opinion.

U.S. GAAP: Accounting principles generally accepted in the United States of America.

## Glossary of Terms

U.S. government-sponsored enterprise obligations: Obligations of agencies originally established or chartered by the U.S. government to serve public purposes as specified by the U.S. Congress; these obligations are not explicitly guaranteed as to the timely payment of principal and interest by the full faith and credit of the U.S. government.

U.S. Treasury: U.S. Department of the Treasury.

Value-at-risk (“VaR”): A measure of the dollar amount of potential loss from adverse market moves in an ordinary market environment.

Wallet: Proportion of fee revenues based on estimates of investment banking fees generated across the industry (i.e. the revenue wallet) from investment banking transactions in M&A, equity and debt underwriting, and loan syndications. Source: Dealogic, a third party provider of investment banking competitive analysis and volume-based league tables for the above noted industry products.

Warehouse loans: Consist of prime mortgages originated with the intent to sell that are accounted for at fair value and classified as trading assets.

Washington Mutual transaction: On September 25, 2008, JPMorgan Chase acquired certain of the assets of the banking operations of Washington Mutual Bank (“Washington Mutual”) from the FDIC.

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Distribution of assets, liabilities and stockholders' equity; interest rates and interest differentials

Consolidated average balance sheet, interest and rates

Provided below is a summary of JPMorgan Chase & Co.'s ("JPMorgan Chase" or the "Firm") consolidated average balances, interest rates and interest differentials on a taxable-equivalent basis for the years 2011 through 2013.

Income computed on a taxable-equivalent basis is the income reported in the Consolidated Statements of Income, adjusted to make income and earnings yields on assets exempt from income taxes (primarily federal taxes) comparable with other taxable

(Table continued on next page) Year ended December 31, (Taxable-equivalent interest and rates; in millions, except rates)	2013 Average balance	Interest <sup>(e)</sup>	Average rate	
<b>Assets</b>				
Deposits with banks	\$268,968	\$918	0.34	%
Federal funds sold and securities purchased under resale agreements	231,567	1,940	0.84	
Securities borrowed	118,300	(127)	<sup>(a)</sup> (0.11)	)
Trading assets – debt instruments	227,769	8,518	3.74	
Securities	356,843	8,285	2.32	<sup>(g)</sup>
Loans	726,450	33,621	<sup>(f)</sup> 4.63	
Other assets <sup>(b)</sup>	40,334	538	1.33	
Total interest-earning assets	1,970,231	53,693	2.73	
Allowance for loan losses	(19,819)	)		
Cash and due from banks	35,919			
Trading assets – equity instruments	112,680			
Trading assets – derivative receivables	72,629			
Goodwill	48,102			
<b>Other intangible assets:</b>				
Mortgage servicing rights	8,840			
Purchased credit card relationships	214			
Other intangibles	1,736			
Other assets	149,572			
Total assets	\$2,380,104			
<b>Liabilities</b>				
Interest-bearing deposits	\$822,781	\$2,067	0.25	%
Federal funds purchased and securities loaned or sold under repurchase agreements	238,551	582	0.24	
Commercial paper	53,717	112	0.21	
Trading liabilities - debt, short-term and other liabilities <sup>(c)</sup>	202,894	1,431	0.70	
Beneficial interests issued by consolidated VIEs	54,832	478	0.87	
Long-term debt	264,083	5,007	1.90	
Total interest-bearing liabilities	1,636,858	9,677	0.59	
Noninterest-bearing deposits	366,361			
Trading liabilities – equity instruments	14,218			
Trading liabilities – derivative payables	64,553			
All other liabilities, including the allowance for lending-related commitments	90,745			
Total liabilities	2,172,735			
Stockholders' equity				
Preferred stock	10,960			

Common stockholders' equity	196,409		
Total stockholders' equity	207,369	(d)	
Total liabilities and stockholders' equity	\$2,380,104		
Interest rate spread			2.14 %
Net interest income and net yield on interest-earning assets	\$44,016		2.23

Negative interest income for the year ended December 31, 2013, and 2012 is a result of increased client-driven demand for certain securities combined with the impact of low interest rates; the offset of this matched book activity is reflected as lower net interest expense reported within trading liabilities - debt, short-term and other liabilities.

(a) Includes margin loans.

(b) Includes brokerage customer payables.

The ratio of average stockholders' equity to average assets was 8.7% for 2013, 8.5% for 2012, and 8.2% for 2011.

(d) The return on average stockholders' equity, based on net income, was 8.6% for 2013, 11.1% for 2012, and 10.5% for 2011.

(e) Interest includes the effect of related hedging derivatives. Taxable-equivalent amounts are used where applicable.

(f) Fees and commissions on loans included in loan interest amounted to \$1.3 billion in 2013, \$1.3 billion in 2012, and \$1.2 billion in 2011.

The annualized rate for securities based on amortized cost was 2.37% in 2013, 2.35% in 2012, and 2.84% in 2011,

(g) and does not give effect to changes in fair value that are reflected in accumulated other comprehensive income/(loss).

income. The incremental tax rate used for calculating the taxable-equivalent adjustment was approximately 38% in both 2013, 2012 and 2011. A substantial portion of JPMorgan Chase's securities are taxable.

Within the Consolidated average balance sheets, interest and rates summary, the principal amounts of nonaccrual loans have been included in the average loan balances used to determine the average interest rate earned on loans. For additional information on nonaccrual loans, including interest accrued, see Note 14 on pages 258–283.

(Table continued from previous

page)

2012			2011				
Average balance	Interest <sup>(e)</sup>	Average rate		Average balance	Interest <sup>(e)</sup>	Average rate	
\$118,463	\$555	0.47	%	\$79,783	\$599	0.75	%
239,703	2,442	1.02		211,800	2,523	1.19	
131,446	(3	)	—	128,777	110	0.09	
234,224	9,285	3.96		264,941	11,309	4.27	
363,230	8,322	2.29	<sup>(g)</sup>	337,894	9,462	2.80	<sup>(g)</sup>
722,384	35,946	4.98	<sup>(f)</sup>	693,523	37,214	5.37	<sup>(f)</sup>
32,967	259	0.79		44,637	606	1.36	
1,842,417	56,806	3.08		1,761,355	61,823	3.51	
(24,906	)			(29,483	)		
51,410				40,725			
115,113				128,949			
85,744				90,003			
48,176				48,632			
7,133				11,249			
470				744			
2,363				2,889			
144,061				143,135			
\$2,271,981				\$2,198,198			
\$751,098	\$2,655	0.35	%	\$733,683	\$3,855	0.53	%
248,561	535	0.22		256,283	534	0.21	
50,780	91	0.18		42,653	73	0.17	
193,459	1,162	0.60		206,531	2,266	1.10	
60,234	648	1.08		68,523	767	1.12	
245,662	6,062	2.47		272,985	6,109	2.24	
1,549,794	11,153	0.72		1,580,658	13,604	0.86	
354,785				278,307			
14,172				5,316			
76,162				71,539			
84,480				81,312			
2,079,393				2,017,132			
8,236				7,800			
184,352				173,266			
192,588	<sup>(d)</sup>			181,066	<sup>(d)</sup>		
\$2,271,981				\$2,198,198			

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	2.36	%		2.65	%
\$45,653	2.48		\$48,219	2.74	
			347		

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Interest rates and interest differential analysis of net interest income – U.S. and non-U.S.

Presented below is a summary of interest rates and interest differentials segregated between U.S. and non-U.S. operations for the years 2011 through 2013. The segregation of U.S. and non-U.S. components is based on

the location of the office recording the transaction. Intracompany funding generally comprises dollar-denominated deposits originated in various locations that are centrally managed by JPMorgan Chase's Treasury unit.

(Table continued on next page)

Year ended December 31, (Taxable-equivalent interest and rates; in millions, except rates)	2013		
	Average balance	Interest	Average rate
<b>Interest-earning assets</b>			
<b>Deposits with banks:</b>			
U.S.	\$233,850	\$572	0.24 %
Non-U.S.	35,118	346	0.99
<b>Federal funds sold and securities purchased under resale agreements:</b>			
U.S.	129,600	793	0.61
Non-U.S.	101,967	1,147	1.13
<b>Securities borrowed:</b>			
U.S.	69,377	(376)	) <sup>(c)</sup> (0.54 )
Non-U.S.	48,923	249	0.51
<b>Trading assets – debt instruments:</b>			
U.S.	120,985	4,348	3.59
Non-U.S.	106,784	4,170	3.91
<b>Securities:</b>			
U.S.	170,473	4,795	2.81
Non-U.S.	186,370	3,490	1.87
<b>Loans<sup>(a)</sup>:</b>			
U.S.	617,043	31,235	5.06
Non-U.S.	109,407	2,386	2.18
Other assets, predominantly U.S.	40,334	538	1.33
<b>Total interest-earning assets</b>	<b>1,970,231</b>	<b>53,693</b>	<b>2.73</b>
<b>Interest-bearing liabilities</b>			
<b>Interest-bearing deposits:</b>			
U.S.	582,282	1,067	0.18
Non-U.S.	240,499	1,000	0.42
<b>Federal funds purchased and securities loaned or sold under repurchase agreements:</b>			
U.S.	161,256	103	(d) 0.06 (d)
Non-U.S.	77,295	479	0.62
<b>Trading liabilities - debt, short-term and other liabilities<sup>(a)</sup>:</b>			
U.S.	176,870	98	(c) 0.06
Non-U.S.	79,741	1,445	1.81
<b>Beneficial interests issued by consolidated VIEs, predominantly U.S.</b>			
U.S.	54,832	478	0.87
<b>Long-term debt:</b>			
U.S.	250,957	4,949	1.97
Non-U.S.	13,126	58	0.45

Intracompany funding:					
U.S.	(181,109	)	(339	)	—
Non-U.S.	181,109		339		—
Total interest-bearing liabilities	1,636,858		9,677		0.59
Noninterest-bearing liabilities <sup>(b)</sup>	333,373				
Total investable funds	\$1,970,231		\$9,677		0.49 %
Net interest income and net yield:			\$44,016		2.23 %
U.S.			35,446		2.58
Non-U.S.			8,570		1.43
Percentage of total assets and liabilities attributable to non-U.S. operations:					
Assets					32.6
Liabilities					23.5

(a) 2011 has been reclassified to conform with the current presentation.

(b) Represents the amount of noninterest-bearing liabilities funding interest-earning assets.

Negative interest income is a result of increased client-driven demand for certain securities combined with the (c) impact of low interest rates; the offset of this matched book activity is reflected as lower net interest expense reported within trading liabilities - debt, short-term and other liabilities.

(d) Reflects a benefit from the favorable market environments for dollar-roll financings.

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U.S. net interest income was \$35.4 billion in 2013, a decrease of \$131 million from the prior year. Net interest income from non-U.S. operations was \$8.6 billion for 2013, a decrease of \$1.8 billion from \$10.3 billion in 2012. For

further information, see the “Net interest income” discussion in Consolidated Results of Operations on pages 71–74.

(Table continued from previous page)

2012			2011		
Average balance	Interest	Average rate	Average balance	Interest	Average rate
\$79,992	\$168	0.21 %	\$51,123	\$127	0.25 %
38,471	387	1.01	28,660	472	1.65
137,874	872	0.63	106,927	690	0.65
101,829	1,570	1.54	104,873	1,833	1.75
70,084	(407)	) <sup>(c)</sup> (0.58)	65,702	(358)	) <sup>(c)</sup> (0.54)
61,362	404	0.66	63,075	468	0.74
119,854	4,592	3.83	123,078	5,071	4.12
114,370	4,693	4.10	141,863	6,238	4.40
161,727	3,991	2.47	183,692	5,761	3.14
201,503	4,331	2.15	154,202	3,701	2.40
620,615	33,167	5.34	611,057	34,846	5.70
101,769	2,779	2.73	82,466	2,368	2.87
32,967	259	0.79	44,637	606	1.36
1,842,417	56,806	3.08	1,761,355	61,823	3.51
512,589	1,345	0.26	472,645	1,680	0.36
238,509	1,310	0.55	261,038	2,175	0.83
181,460	4	) <sup>(d)</sup> —	203,899	(92)	) <sup>(d)</sup> (0.05)
67,101	531	0.79	52,384	626	1.20
176,755	(82)	) (0.05)	171,731	573	0.34
67,484	1,335	1.98	77,453	1,766	2.27
60,234	648	1.08	68,523	767	1.12
230,101	5,998	2.61	252,506	6,041	2.39
15,561	64	0.41	20,479	68	0.33
(253,906)	)(551)	) —	(190,282)	)(600)	) —
253,906	551	—	190,282	600	—

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1,549,794	11,153	0.72		1,580,658	13,604	0.86	
292,623				180,697			
\$1,842,417	\$11,153	0.60	%	\$1,761,355	\$13,604	0.77	%
	\$45,653	2.48	%		\$48,219	2.74	%
	35,315	2.91			38,399	3.25	
	10,338	1.65			9,820	1.69	
		36.2				36.3	
		23.4				24.9	

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Changes in net interest income, volume and rate analysis

The table below presents an analysis of the effect on net interest income of volume and rate changes for the periods 2013 versus 2012 and 2012 versus 2011. In this analysis, when the change cannot be isolated to either volume or rate, it has been allocated to volume.

Year ended December 31, (On a taxable-equivalent basis: in millions)	2013 versus 2012 Increase/(decrease) due to change in:			2012 versus 2011 Increase/(decrease) due to change in:		
	Volume	Rate	Net change	Volume	Rate	Net change
<b>Interest-earning assets</b>						
<b>Deposits with banks:</b>						
U.S.	\$380	\$24	\$404	\$61	\$(20)	\$41
Non-U.S.	(33)	(8)	(41)	98	(183)	(85)
<b>Federal funds sold and securities purchased under resale agreements:</b>						
U.S.	(51)	(28)	(79)	203	(21)	182
Non-U.S.	(6)	(417)	(423)	(43)	(220)	(263)
<b>Securities borrowed:</b>						
U.S.	3	28	31	(23)	(26)	(49)
Non-U.S.	(63)	(92)	(155)	(14)	(50)	(64)
<b>Trading assets – debt instruments:</b>						
U.S.	44	(288)	(244)	(122)	(357)	(479)
Non-U.S.	(306)	(217)	(523)	(1,119)	(426)	(1,545)
<b>Securities:</b>						
U.S.	254	550	804	(539)	(1,231)	(1,770)
Non-U.S.	(277)	(564)	(841)	1,016	(386)	630
<b>Loans:</b>						
U.S.	(194)	(1,738)	(1,932)	521	(2,200)	(1,679)
Non-U.S.	167	(560)	(393)	526	(115)	411
Other assets, predominantly U.S.	101	178	279	(93)	(254)	(347)
Change in interest income	19	(3,132)	(3,113)	472	(5,489)	(5,017)
<b>Interest-bearing liabilities</b>						
<b>Interest-bearing deposits:</b>						
U.S.	132	(410)	(278)	138	(473)	(335)
Non-U.S.	—	(310)	(310)	(134)	(731)	(865)
<b>Federal funds purchased and securities loaned or sold under repurchase agreements:</b>						
U.S.	(10)	109	99	(6)	102	96
Non-U.S.	62	(114)	(52)	120	(215)	(95)
<b>Trading liabilities - debt, short-term and other liabilities</b>						
U.S.	(12)	192	180	15	(670)	(655)
Non-U.S.	225	(115)	110	(206)	(225)	(431)
Beneficial interests issued by consolidated VIEs, predominantly U.S.	(44)	(126)	(170)	(92)	(27)	(119)

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Long-term debt:							
U.S.	424	(1,473	) (1,049	) (599	) 556	(43	)
Non-U.S.	(12	) 6	(6	) (20	) 16	(4	)
Intracompany funding:							
U.S.	136	76	212	(141	) 190	49	
Non-U.S.	(136	) (76	) (212	) 141	(190	) (49	)
Change in interest expense	765	(2,241	) (1,476	) (784	) (1,667	) (2,451	)
Change in net interest income	\$(746	) \$(891	) \$(1,637	) \$1,256	\$ (3,822	) \$(2,566	)

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Securities portfolio

For information regarding the securities portfolio as of December 31, 2013 and 2012, and for the years ended December 31, 2013 and 2012, see Note 12 on pages 249–254. For the available–for–sale securities portfolio, at December 31, 2011, the fair value and amortized cost of U.S. Treasury and government agency obligations was \$115.5 billion and \$110.2 billion, respectively; the fair value and amortized cost of all other available–for–sale securities was \$249.3 billion and \$248.7 billion, respectively; and the total fair value and amortized cost of the total available–for–sale securities portfolio was \$364.8 billion and \$358.9 billion respectively.

At December 31, 2011, the fair value and amortized cost of U.S. Treasury and government agency obligations in held-to-maturity securities portfolio was \$13 million and \$12 million, respectively. There were no other held-to-maturity securities at December 31, 2011.

## Loan portfolio

The table below presents loans on the line-of-business basis that is presented in Credit Risk Management on pages 119, 130 and 120–129, and in Note 14 on pages 258–283, at the periods indicated.

December 31, (in millions)	2013	2012	2011	2010	2009
U.S. Consumer, excluding credit card loans					
Home equity	\$76,790	\$88,356	\$100,497	\$112,844	\$127,945
Mortgage	129,008	123,277	128,709	134,284	143,129
Auto	52,757	49,913	47,426	48,367	46,031
Other	30,508	31,074	31,795	32,123	33,392
Total U.S. Consumer, excluding credit card loans	289,063	292,620	308,427	327,618	350,497
Credit Card Loans					
U.S. Credit Card loans	125,308	125,277	129,587	134,781	76,490
Non-U.S. Credit Card loans	2,483	2,716	2,690	2,895	2,296
Total Credit Card loans	127,791	127,993	132,277	137,676	78,786
Total Consumer loans	416,854	420,613	440,704	465,294	429,283
U.S. wholesale loans					
Commercial and industrial	79,436	77,900	65,958	50,912	51,113
Real estate	67,815	59,369	53,230	51,734	54,970
Financial institutions	11,087	10,708	8,489	12,120	13,557
Government agencies	8,316	7,962	7,236	6,408	5,634
Other	48,158	50,948	52,126	38,298	23,811
Total U.S. wholesale loans	214,812	206,887	187,039	159,472	149,085
Non-U.S. wholesale loans					
Commercial and industrial	36,447	36,674	31,108	19,053	20,188
Real estate	1,621	1,757	1,748	1,973	2,270
Financial institutions	22,813	26,564	30,262	20,043	11,848
Government agencies	2,146	1,586	583	870	1,707
Other	43,725	39,715	32,276	26,222	19,077
Total non-U.S. wholesale loans	106,752	106,296	95,977	68,161	55,090
Total wholesale loans					
Commercial and industrial	115,883	114,574	97,066	69,965	71,301
Real estate	69,436	61,126	54,978	53,707	57,240
Financial institutions	33,900	37,272	38,751	32,163	25,405
Government agencies	10,462	9,548	7,819	7,278	7,341
Other	91,883	90,663	84,402	64,520	42,888
Total wholesale loans	321,564	313,183	283,016	227,633	204,175
Total loans <sup>(a)</sup>	\$738,418	\$733,796	\$723,720	\$692,927	\$633,458
Memo:					
Loans held-for-sale	\$12,230	\$4,406	\$2,626	\$5,453	\$4,876
Loans at fair value	2,011	2,555	2,097	1,976	1,364
Total loans held-for-sale and loans at fair value	\$14,241	\$6,961	\$4,723	\$7,429	\$6,240

Loans (other than purchased credit-impaired loans and those for which the fair value option have been elected) are presented net of unearned income, unamortized discounts and premiums, and net deferred loan costs of \$1.9 billion, \$2.5 billion, \$2.7 billion, \$1.9 billion and \$1.4 billion at December 31, 2013, 2012, 2011, 2010 and 2009, respectively.



## Maturities and sensitivity to changes in interest rates

The table below sets forth, at December 31, 2013, wholesale loan maturity and distribution between fixed and floating interest rates based on the stated terms of the loan agreements. The table below also reflects the line-of-business basis that is presented in Credit Risk Management on pages 119, 130 and 120–129, and in Note 14 on pages 258–283. The table does not include the impact of derivative instruments.

December 31, 2013 (in millions)	Within 1 year <sup>(a)</sup>	1-5 years	After 5 years	Total
U.S.				
Commercial and industrial	\$ 11,776	\$47,361	\$20,299	\$79,436
Real estate	4,282	16,538	46,995	67,815
Financial institutions	5,715	4,848	524	11,087
Government agencies	1,527	2,454	4,335	8,316
Other	19,243	25,087	3,828	48,158
Total U.S.	42,543	96,288	75,981	214,812
Non-U.S.				
Commercial and industrial	13,385	14,649	8,413	36,447
Real estate	563	952	106	1,621
Financial institutions	18,271	4,211	331	22,813
Government agencies	810	612	724	2,146
Other	32,782	9,814	1,129	43,725
Total non-U.S.	65,811	30,238	10,703	106,752
Total wholesale loans	\$ 108,354	\$ 126,526	\$86,684	\$321,564
Loans at fixed interest rates		\$12,144	\$54,612	
Loans at variable interest rates		114,382	32,072	
Total wholesale loans		\$ 126,526	\$86,684	

(a) Includes demand loans and overdrafts.

## Risk elements

The following tables set forth nonperforming assets, contractually past-due assets, and accruing restructured loans with the line-of-business basis that is presented in Credit Risk Management on pages 119, 121–122 and 130, at the periods indicated.

December 31, (in millions)	2013	2012	2011	2010	2009
Nonperforming assets					
U.S. nonaccrual loans:					
Consumer, excluding credit card loans	\$7,496	\$9,174	\$7,411	\$8,833	\$10,657
Credit Card loans	—	1	1	2	3
Total U.S. nonaccrual consumer loans	7,496	9,175	7,412	8,835	10,660
Wholesale:					
Commercial and industrial	317	702	936	1,745	2,182
Real estate	338	520	886	2,390	2,647
Financial institutions	19	60	76	111	663
Government agencies	1	—	—	—	4
Other	97	153	234	267	348
Total U.S. wholesale nonaccrual loans	772	1,435	2,132	4,513	5,844
Total U.S. nonaccrual loans	8,268	10,610	9,544	13,348	16,504
Non-U.S. nonaccrual loans:					
Consumer, excluding credit card loans	—	—	—	—	—
Credit Card loans	—	—	—	—	—
Total Non-U.S. nonaccrual consumer loans	—	—	—	—	—
Wholesale:					

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Commercial and industrial	116	131	79	234	281
Real estate	88	89	—	585	241
Financial institutions	8	—	—	30	118
Government agencies	—	5	16	22	—
Other	60	57	354	622	420
Total non-U.S. Wholesale nonaccrual loans	272	282	449	1,493	1,060
Total Non-U.S. nonaccrual loans	272	282	449	1,493	1,060
Total nonaccrual loans	8,540	10,892	9,993	14,841	17,564
Derivative receivables	415	239	297	159	736
Assets acquired in loan satisfactions	751	775	1,025	1,682	1,648
Nonperforming assets	\$9,706	\$11,906	\$11,315	\$16,682	\$19,948
Memo:					
Loans held-for-sale	\$26	\$18	\$110	\$341	\$234
Loans at fair value <sup>(a)</sup>	197	265	73	155	111
Total loans held-for-sale and loans at fair value	\$223	\$283	\$183	\$496	\$345

(a) In 2013 certain loans that resulted from restructurings that were previously classified as performing were reclassified as nonperforming loans. Prior periods were revised to conform with the current presentation.

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December 31, (in millions)	2013	2012	2011	2010	2009
Contractually past-due loans <sup>(a)</sup>					
U.S. loans:					
Consumer, excluding credit card loans	\$428	\$525	\$551	\$625	\$542
Credit Card loans	997	1,268	1,867	3,015	3,443
Total U.S. Consumer loans	1,425	1,793	2,418	3,640	3,985
Wholesale:					
Commercial and industrial	14	19	—	7	23
Real estate	14	69	84	109	114
Financial institutions	—	6	2	2	6
Government agencies	—	—	—	—	—
Other	16	30	6	171	75
Total U.S. Wholesale loans	44	124	92	289	218
Total U.S. loans	1,469	1,917	2,510	3,929	4,203
Non-U.S. loans:					
Consumer, excluding credit card loans	—	—	—	—	—
Credit Card loans	25	34	36	38	38
Total Non-U.S. Consumer loans	25	34	36	38	38
Wholesale:					
Commercial and industrial	—	—	—	—	5
Real estate	—	—	—	—	—
Financial institutions	6	—	—	—	—
Government agencies	—	—	—	—	—
Other	—	14	8	70	109
Total non-U.S. Wholesale loans	6	14	8	70	114
Total non-U.S. loans	31	48	44	108	152
Total contractually past due loans	\$1,500	\$1,965	\$2,554	\$4,037	\$4,355

(a) Represents accruing loans past-due 90 days or more as to principal and interest, which are not characterized as nonaccrual loans.

December 31, (in millions)	2013	2012	2011	2010	2009
Accruing restructured loans <sup>(a)</sup>					
U.S.:					
Consumer, excluding credit card loans	\$9,173	\$9,033	\$7,310	\$4,256	\$2,160
Credit Card loans <sup>(b)</sup>	3,115	4,762	7,214	10,005	6,245
Total U.S. Consumer loans	12,288	13,795	14,524	14,261	8,405
Wholesale:					
Commercial and industrial	—	29	68	—	—
Real estate	27	7	48	76	5
Financial institutions	—	—	2	—	—
Other	3	—	6	—	—
Total U.S. Wholesale loans	30	36	124	76	5
Total U.S.	12,318	13,831	14,648	14,337	8,410
Non-U.S.:					
Consumer, excluding credit card loans	—	—	—	—	—
Credit Card loans <sup>(b)</sup>	—	—	—	—	—
Total Non-U.S. Consumer loans	—	—	—	—	—
Wholesale:					

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Commercial and industrial	—	24	48	49	31
Real estate	—	—	—	—	582
Other	—	—	—	—	—
Total non-U.S. Wholesale loans	—	24	48	49	613
Total non-U.S.	—	24	48	49	613
Total accruing restructured notes	\$12,318	\$13,855	\$14,696	\$14,386	\$9,023

Represents performing loans modified in troubled debt restructurings in which an economic concession was granted by the Firm and the borrower has demonstrated its ability to repay the loans according to the terms of the restructuring. As defined in accounting principles generally accepted in the United States of America (“U.S. GAAP”), concessions include the reduction of interest rates or the deferral of interest or principal payments, resulting from deterioration in the borrowers’ financial condition. Excludes nonaccrual assets and contractually past-due assets, which are included in the sections above.

(a) Includes credit card loans that have been modified in a troubled debt restructuring.

For a discussion of nonaccrual loans, past-due loan accounting policies, and accruing restructured loans see Credit Risk Management on pages 117–141, and Note 14 on pages 258–283.

## Impact of nonaccrual loans and accruing restructured loans on interest income

The negative impact on interest income from nonaccrual loans represents the difference between the amount of interest income that would have been recorded on such nonaccrual loans according to their original contractual terms had they been performing and the amount of interest that actually was recognized on a cash basis. The negative impact on interest income from accruing restructured loans represents the difference between the amount of interest income that would have been recorded on such loans according to their original contractual terms and the amount of interest that actually was recognized under the modified terms. The following table sets forth this data for the years specified. The change in foregone interest income from 2011 through 2013 was primarily driven by the change in the levels of nonaccrual loans.

Year ended December 31, (in millions)	2013	2012	2011
Nonaccrual loans			
U.S.:			
Consumer, excluding credit card:			
Gross amount of interest that would have been recorded at the original terms	\$719	804	669
Interest that was recognized in income	(298	)(302	)(128
Total U.S. Consumer, excluding credit card	421	502	541
Credit Card:			
Gross amount of interest that would have been recorded at the original terms	—	—	—
Interest that was recognized in income	—	—	—
Total U.S. credit card	—	—	—
Total U.S. Consumer	421	502	541
Wholesale:			
Gross amount of interest that would have been recorded at the original terms	29	54	80
Interest that was recognized in income	(9	)(4	)(4
Total U.S. Wholesale	20	50	76
Negative impact - U.S.	441	552	617
Non-U.S.:			
Consumer, excluding credit card:			
Gross amount of interest that would have been recorded at the original terms	—	—	—
Interest that was recognized in income	—	—	—
Total Non-U.S. Consumer, excluding credit card	—	—	—
Credit Card:			
Gross amount of interest that would have been recorded at the original terms	—	—	—
Interest that was recognized in income	—	—	—
Total Non U.S. credit card	—	—	—
Total Non U.S. Consumer	—	—	—
Wholesale: <sup>(a)</sup>			
Gross amount of interest that would have been recorded at the original terms	36	14	10
Interest that was recognized in income	—	—	(2
Total non-U.S. wholesale	36	14	8
Negative impact — non-U.S.	36	14	8
Total negative impact on interest income	\$477	\$566	\$625

(a) During 2013, certain loans that resulted from restructurings that were previously classified as performing were reclassified as nonperforming loans. The gross amount of interest that would have been recorded at the original

terms has been adjusted accordingly. Prior periods were revised to conform with the current presentation.

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Year ended December 31, (in millions)	2013	2012	2011
Accruing restructured loans			
U.S.:			
Consumer, excluding credit card:			
Gross amount of interest that would have been recorded at the original terms	\$758	\$729	\$537
Interest that was recognized in income	(395)	(417)	(304)
Total U.S. Consumer, excluding credit card	363	312	233
Credit Card:			
Gross amount of interest that would have been recorded at the original terms	602	805	1,150
Interest that was recognized in income	(198)	(308)	(463)
Total U.S. Credit Card	404	497	687
Total U.S. Consumer	767	809	920
Wholesale: <sup>(a)</sup>			
Gross amount of interest that would have been recorded at the original terms	1	1	2
Interest that was recognized in income	(1)	(2)	(2)
Total U.S. wholesale	—	(1)	—
Negative impact — U.S.	767	808	920
Non-U.S.:			
Consumer, excluding credit card:			
Gross amount of interest that would have been recorded at the original terms	—	—	—
Interest that was recognized in income	—	—	—
Total Non-U.S. Consumer, excluding credit card	—	—	—
Credit Card:			
Gross amount of interest that would have been recorded at the original terms	—	—	—
Interest that was recognized in income	—	—	—
Total Non U.S. Credit Card	—	—	—
Total Non U.S. Consumer	—	—	—
Wholesale: <sup>(a)</sup>			
Gross amount of interest that would have been recorded at the original terms	—	1	4
Interest that was recognized in income	—	(1)	(3)
Total non-U.S. wholesale	—	—	1
Negative impact — non-U.S.	—	—	1
Total negative impact on interest income	\$767	\$808	\$921

(a) Predominantly real estate-related.

## Cross-border outstandings

Cross-border disclosure is based on the Federal Financial Institutions Examination Council's ("FFIEC") guidelines governing the determination of cross-border risk.

The reporting of country exposure under the FFIEC bank regulatory requirements provides information on the distribution, by country and sector, of claims on, and liabilities to, foreign residents held by U.S. banks and bank holding companies and is used by the regulatory agencies to determine the presence of credit and related risks,

including transfer and country risk. Country location under the FFIEC bank regulatory reporting is based on where the entity or counterparty is legal established.

JPMorgan Chase's total cross-border exposure tends to fluctuate greatly, and the amount of exposure at year-end tends to be a function of timing rather than representing a consistent trend. For a further discussion of JPMorgan Chase's country risk exposure, see Country Risk Management on pages 149–152.

The following table lists all countries in which JPMorgan Chase's cross-border outstandings exceed 0.75% of consolidated assets as of the dates specified.

Cross-border outstandings exceeding 0.75% of total assets<sup>(a)</sup>

(in millions)	December 31,	Government	Banks	Other <sup>(c)</sup>	Net local country assets	Total cross-border outstandings <sup>(d)</sup>	Commitments <sup>(e)</sup>	Total exposure
Cayman Islands	2013	\$9	\$232	\$70,005	\$—	\$ 70,246	\$ 21,851	\$92,097
	2012	234	35	68,588	—	68,857	2,645	71,502
	2011	266	64	55,856	—	56,186	6,869	63,055
France	2013	\$ 10,512	\$ 11,141	\$ 38,415	\$ 2,424	\$ 62,492	\$ 229,025	\$ 291,517
	2012	10,706	18,979	26,796	1,714	58,195	91,632	149,827
	2011	3,025	20,167	29,006	1,348	53,546	100,897	154,443
Japan	2013	\$956	\$20,892	\$12,973	\$25,262	\$ 60,083	\$ 52,040	\$112,123
	2012	2,016	30,616	7,708	23,680	64,020	57,023	121,043
	2011	3,135	32,334	3,904	35,938	75,311	57,858	133,169
Netherlands	2013	\$995	\$4,350	\$32,792	\$—	\$ 38,137	\$ 96,561	\$134,698
	2012	48	5,947	36,625	—	42,620	41,481	84,101
	2011	130	9,433	39,454	—	49,017	45,108	94,125
Germany	2013	\$ 19,242	\$ 8,781	\$ 8,281	\$—	\$ 36,304	\$ 210,001	\$ 246,305
	2012	11,376	21,944	11,674	321	45,315	92,597	137,912
	2011	9,337	21,565	7,328	—	38,230	104,115	142,345
Italy	2013	\$ 10,301	\$ 4,546	\$ 5,644	\$ 1,418	\$ 21,909	\$ 135,274	\$ 157,183
	2012	9,939	3,703	2,786	1,254	17,682	73,190	90,872
	2011	8,155	4,407	2,736	1,347	16,645	70,889	87,534
Spain	2013	\$ 2,547	\$ 9,330	\$ 9,546	\$ 217	\$ 21,640	\$ 79,517	\$ 101,157
	2012	1,204	8,458	6,643	129	16,434	46,299	62,733
	2011	597	10,047	3,509	830	14,983	42,483	57,466
Ireland	2013	\$99	\$4,175	\$13,878	\$—	\$ 18,152	\$ 11,556	\$29,708
	2012	97	2,818	12,598	—	15,513	8,912	24,425
	2011	87	2,530	11,109	—	13,726	9,855	23,581
Switzerland	2013	\$73	\$1,425	\$4,657	\$11,579	\$ 17,734	\$ 84,216	\$101,950
	2012	103	4,196	3,638	13,874	21,811	32,408	54,219
	2011	119	5,596	1,701	30,303	37,719	35,569	73,288
Brazil	2013	\$ 2,289	\$ 3,521	\$ 4,942	\$ 4,385	\$ 15,137	\$ 10,038	\$ 25,175
	2012	4,951	4,373	6,456	9,463	25,243	8,841	34,084

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	2011	2,928	3,746	5,564	11,683	23,921	10,026	33,947
United Kingdom <sup>(b)</sup>	2013	\$ 1,130	\$ 2,787	\$ 8,840	\$—	\$ 12,757	\$ 308,289	\$ 321,046
	2012	408	5,786	8,212	—	14,406	125,633	140,039
	2011	668	12,048	13,654	—	26,370	156,454	182,824

(a) Prior periods were revised to conform with the current presentation.

Excluded from the table are \$915.5 billion and \$665.3 billion, at December 31, 2012 and 2011, respectively, substantially all of which represent notional amounts related to credit protection sold on indices representing

(b) baskets of exposures from multiple European countries, which had previously been reported within the United Kingdom. Effective with the fourth quarter of 2013, these exposures are reported within individual countries as required by revised regulatory guidance.

(c) Consists primarily of commercial and industrial.

Outstandings includes loans and accrued interest receivable, interest-bearing deposits with banks, acceptances, resale agreements, other monetary assets, cross-border trading debt and equity instruments, fair value of foreign

(d) exchange and derivative contracts, and local country assets, net of local country liabilities. The amounts associated with foreign exchange and derivative contracts are presented after taking into account the impact of legally enforceable master netting agreements.

(e) Commitments include outstanding letters of credit, undrawn commitments to extend credit, and the gross notional value of credit derivatives where JPMorgan Chase is a protection seller.

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Summary of loan and lending-related commitments loss experience

The tables below summarize the changes in the allowance for loan losses and the allowance for lending-related commitments during the periods indicated. For a further discussion, see Allowance for credit losses on pages 139–141, and Note 15 on pages 284–287.

Allowance for loan losses

Year ended December 31, (in millions)	2013	2012	2011	2010	2009
Balance at beginning of year	\$21,936	\$27,609	\$32,266	\$31,602	\$23,164
U.S. charge-offs					
U.S. Consumer, excluding credit card:	2,754	4,805	5,419	8,383	10,421
U.S. Credit Card:	4,358	5,624	8,017	15,247	10,217
Total U.S. Consumer charge-offs	7,112	10,429	13,436	23,630	20,638
U.S. Wholesale:					
Commercial and industrial	150	131	197	467	1,233
Real estate	51	114	221	698	700
Financial institutions	1	8	102	146	671
Government agencies	1	—	—	3	—
Other	9	56	149	102	151
Total U.S. Wholesale charge-offs	212	309	669	1,416	2,755
Total U.S. charge-offs	7,324	10,738	14,105	25,046	23,393
Non-U.S. charge-offs					
Non-U.S. Consumer, excluding credit card:	—	—	—	—	—
Non-U.S. Credit Card:	114	131	151	163	154
Total Non-U.S. Consumer charge-offs	114	131	151	163	154
Non-U.S. Wholesale:					
Commercial and industrial	5	8	1	23	64
Real estate	11	6	142	239	—
Financial institutions	—	—	6	—	66
Government agencies	—	4	—	—	—
Other	13	19	98	311	341
Total Non-U.S. Wholesale charge-offs	29	37	247	573	471
Total Non-U.S. charge-offs	143	168	398	736	625
Total charge-offs	7,467	10,906	14,503	25,782	24,018
U.S. recoveries					
U.S. Consumer, excluding credit card:	(847	)(508	)(547	)(474	)(222
U.S. Credit Card loans:	(568	)(782	)(1,211	)(1,345	)(719
Total U.S. Consumer recoveries:	(1,415	)(1,290	)(1,758	)(1,819	)(941
U.S. Wholesale:					
Commercial and industrial	(27	)(335	)(60	)(86	)(53
Real estate	(56	)(64	)(93	)(75	)(12
Financial institutions	(90	)(37	)(207	)(74	)(3
Government agencies	—	(2	)—	(1	)—
Other	(6	)(21	)(36	)(25	)(25
Total U.S. Wholesale recoveries	(179	)(459	)(396	)(261	)(93
Total U.S. recoveries	(1,594	)(1,749	)(2,154	)(2,080	)(1,034
Non-U.S. recoveries					
Non-U.S. Consumer, excluding credit card:	—	—	—	—	—
Non-U.S. Credit Card:	(25	)(29	)(32	)(28	)(18
Total Non-U.S. Consumer recoveries	(25	)(29	)(32	)(28	)(18

Non-U.S. Wholesale:						
Commercial and industrial	(29	) (16	) (14	) (1	) (1	)
Real estate	—	(2	) (14	) —	—	
Financial institutions	(10	) (7	) (38	) —	—	
Government agencies	—	—	—	—	—	
Other	(7	) (40	) (14	) —	—	
Total Non-U.S. Wholesale recoveries	(46	) (65	) (80	) (1	) (1	)
Total non-U.S. recoveries	(71	) (94	) (112	) (29	) (19	)
Total recoveries	(1,665	) (1,843	) (2,266	) (2,109	) (1,053	)
Net charge-offs	5,802	9,063	12,237	23,673	22,965	
Write-offs of PCI loans <sup>(a)</sup>	53	—	—	—	—	
Provision for loan losses	188	3,387	7,612	16,822	31,735	
Change in accounting principles <sup>(b)</sup>	—	—	—	7,494	—	
Other	(5	) 3	(32	) 21	(332	) <sup>(c)</sup>
Balance at year-end	\$ 16,264	\$ 21,936	\$ 27,609	\$ 32,266	\$ 31,602	

Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed

(a) estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. Any write-offs of PCI loans are recognized when the underlying loan is removed from a pool (e.g., upon liquidation).

Effective January 1, 2010, the Firm adopted accounting guidance related to variable interest entities (“VIEs”). Upon adoption of the guidance, the Firm consolidated its Firm-sponsored credit card securitization trusts, its

(b) Firm-administered multi-seller conduits and certain other consumer loan securitization entities, primarily mortgage-related. As a result, \$7.4 billion, \$14 million and \$127 million, respectively, of allowance for loan losses were recorded on-balance sheet with the consolidation of these entities.

(c) Predominantly includes a reclassification in 2009 related to the issuance and retention of securities from the Chase Issuance Trust.

Allowance for lending-related commitments Year ended December 31, (in millions)	2013	2012	2011	2010	2009
Balance at beginning of year	\$668	\$673	\$717	\$939	\$659
Provision for lending-related commitments	37	(2)	(38)	(183)	(280)
Net charge-offs	—	—	—	—	—
Change in accounting principles <sup>(a)</sup>	—	—	—	(18)	—
Other	—	(3)	(6)	(21)	—
Balance at year-end	\$705	\$668	\$673	\$717	\$939

(a) Relates to the adoption of the new accounting guidance related to VIEs.

#### Loan loss analysis

As of or for the year ended December 31,

(in millions, except ratios)	2013	2012	2011	2010	2009
<b>Balances</b>					
Loans – average	\$726,450	\$722,384	\$693,523	\$703,540	\$682,885
Loans – year-end	738,418	733,796	723,720	692,927	633,458
Net charge-offs <sup>(a)</sup>	5,802	9,063	12,237	23,673	22,965
<b>Allowance for loan losses:</b>					
U.S.	\$15,382	\$20,946	\$26,621	\$31,111	\$29,802
Non-U.S.	882	990	988	1,155	1,800
Total allowance for loan losses	\$16,264	\$21,936	\$27,609	\$32,266	\$31,602
Nonaccrual loans	8,540	10,892	9,993	14,841	17,564
<b>Ratios</b>					
<b>Net charge-offs to:</b>					
Loans retained – average	0.81	% 1.26	% 1.78	% 3.39	% 3.42
Allowance for loan losses	35.67	41.32	44.32	73.37	72.67
<b>Allowance for loan losses to:</b>					
Loans retained – year-end <sup>(b)</sup>	2.25	3.02	3.84	4.71	5.04
Nonaccrual loans retained	196	207	281	225	184

(a) There were no net charge-offs/(recoveries) on lending-related commitments in 2013, 2012, 2011, 2010 or 2009.

The allowance for loan losses as a percentage of retained loans declined from 2009 to 2013, due to an improvement (b) in credit quality of the consumer and wholesale credit portfolios. For a more detailed discussion of the 2011 through 2013 provision for credit losses, see Provision for credit losses on page 141.

## Deposits

The following table provides a summary of the average balances and average interest rates of JPMorgan Chase's various deposits for the years indicated.

Year ended December 31, (in millions, except interest rates)	Average balances			Average interest rates						
	2013	2012	2011	2013	2012	2011				
U.S. offices										
Noninterest-bearing	\$ 346,765	\$ 338,652	\$ 265,522	—	%	—	%	—	%	
Interest-bearing										
Demand	63,045	43,124	39,177	0.09		0.08		0.08		
Savings	429,289	383,777	349,425	0.13		0.18		0.23		
Time	89,948	85,688	84,043	0.51		0.74		1.00		
Total interest-bearing deposits	582,282	512,589	472,645	0.18		0.26		0.36		
Total deposits in U.S. offices	929,047	851,241	738,167	0.11		0.16		0.23		
Non-U.S. offices										
Noninterest-bearing	19,596	16,133	12,785	—		—		—		
Interest-bearing										
Demand	196,300	184,366	190,092	0.22		0.35		0.66		
Savings	1,374	846	637	0.11		0.23		0.14		
Time	42,825	53,297	70,309	1.32		1.23		1.32		
Total interest-bearing deposits	240,499	238,509	261,038	0.42		0.55		0.83		
Total deposits in non-U.S. offices	260,095	254,642	273,823	0.38		0.51		0.79		
Total deposits	\$ 1,189,142	\$ 1,105,883	\$ 1,011,990	0.17	%	0.24	%	0.38	%	

At December 31, 2013, other U.S. time deposits in denominations of \$100,000 or more totaled \$50.6 billion, substantially all of which mature in three months or less. In addition, the table below presents the maturities for U.S. time certificates of deposit in denominations of \$100,000 or more.

By remaining maturity at December 31, 2013 (in millions)	Three months or less	Over three months but within six months	Over six months but within 12 months	Over 12 months	Total
U.S. time certificates of deposit (\$100,000 or more)	\$8,439	\$6,642	\$5,387	\$3,786	\$24,254

## Short-term and other borrowed funds

The following table provides a summary of JPMorgan Chase's short-term and other borrowed funds for the years indicated.

As of or for the year ended December 31, (in millions, except rates)	2013		2012		2011	
Federal funds purchased and securities loaned or sold under repurchase agreements:						
Balance at year-end	\$181,163		\$240,103		\$213,532	
Average daily balance during the year	238,551		248,561		256,283	
Maximum month-end balance	272,718		268,931		289,835	
Weighted-average rate at December 31	0.31	%	0.23	%	0.16	%
Weighted-average rate during the year	0.24		0.22		0.21	
Commercial paper:						
Balance at year-end	\$57,848		\$55,367		\$51,631	
Average daily balance during the year	53,717		50,780		42,653	
Maximum month-end balance	58,835		62,875		51,631	
Weighted-average rate at December 31	0.22	%	0.21	%	0.12	%
Weighted-average rate during the year	0.21		0.18		0.17	
Other borrowed funds: <sup>(a)</sup>						
Balance at year-end	\$92,774		\$79,258		\$75,181	
Average daily balance during the year	93,937		79,003		107,543	
Maximum month-end balance	103,526		87,815		124,138	
Weighted-average rate at December 31	2.49	%	1.83	%	1.60	%
Weighted-average rate during the year	2.27		2.49		2.50	
Short-term beneficial interests: <sup>(b)</sup>						
Commercial paper and other borrowed funds:						
Balance at year-end	\$17,786		\$28,219		\$26,243	
Average daily balance during the year	22,245		25,653		25,125	
Maximum month-end balance	28,559		30,043		26,780	
Weighted-average rate at December 31	0.29	%	0.18	%	0.18	%
Weighted-average rate during the year	0.26		0.16		0.23	

(a) Includes interest-bearing securities sold but not yet purchased.

(b) Included on the Consolidated Balance Sheets in beneficial interests issued by consolidated variable interest entities. Federal funds purchased represent overnight funds. Securities loaned or sold under repurchase agreements generally mature between one day and three months. Commercial paper generally is issued in amounts not less than \$100,000, and with maturities of 270 days or less. Other borrowed funds consist of demand notes, term federal funds purchased, and various other borrowings that generally have maturities of one year or less.

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on behalf of the undersigned, thereunto duly authorized.

JPMorgan Chase & Co.  
(Registrant)

By: /s/ JAMES DIMON

(James Dimon  
Chairman and Chief Executive Officer)  
February 19, 2014

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacity and on the date indicated. JPMorgan Chase & Co. does not exercise the power of attorney to sign on behalf of any Director.

	Capacity	Date
/s/ JAMES DIMON (James Dimon)	Director, Chairman and Chief Executive Officer (Principal Executive Officer)	
/s/ LINDA B. BAMMANN (Linda B. Bammann)	Director	
/s/ JAMES A. BELL (James A. Bell)	Director	
/s/ CRANDALL C. BOWLES (Crandall C. Bowles)	Director	
/s/ STEPHEN B. BURKE (Stephen B. Burke)	Director	
/s/ JAMES S. CROWN (James S. Crown)	Director	February 19, 2014
/s/ TIMOTHY P. FLYNN (Timothy P. Flynn)	Director	
/s/ LABAN P. JACKSON, JR. (Laban P. Jackson, Jr.)	Director	
/s/ MICHAEL A. NEAL (Michael A. Neal)	Director	
/s/ LEE R. RAYMOND (Lee R. Raymond)	Director	
/s/ WILLIAM C. WELDON (William C. Weldon)	Director	
/s/ MARIANNE LAKE (Marianne Lake)	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	

/s/ MARK W. O'DONOVAN  
(Mark W. O'Donovan)

Managing Director and Corporate Controller  
(Principal Accounting Officer)

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