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, 2014. In making the assessment, management used the framework in "Internal Control - Integrated Framework (2013)" 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, 2014, JPMorgan Chase's internal control over financial reporting was effective based upon the COSO 2013 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, 2014.

The effectiveness of the Firm's internal control over financial reporting as of December 31, 2014, 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 24, 2015

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, 2014 and 2013 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2014 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, 2014 based on criteria established in *Internal Control - Integrated Framework (2013)* 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.

PricewaterhouseCoopers LLP

February 24, 2015

PricewaterhouseCoopers LLP • 300 Madison Avenue • New York, NY 10017

Consolidated statements of income

Year ended December 31, (in millions, except per share data)	2014	2013	2012
Revenue			
Investment banking fees	$ **6,542**	$ 6,354	$ 5,808
Principal transactions	**10,531**	10,141	5,536
Lending- and deposit-related fees	**5,801**	5,945	6,196
Asset management, administration and commissions	**15,931**	15,106	13,868
Securities gains[(a)]	**77**	667	2,110
Mortgage fees and related income	**3,563**	5,205	8,687
Card income	**6,020**	6,022	5,658
Other income	**2,106**	3,847	4,258
Noninterest revenue	**50,571**	53,287	52,121
Interest income	**51,531**	52,669	55,953
Interest expense	**7,897**	9,350	11,043
Net interest income	**43,634**	43,319	44,910
Total net revenue	**94,205**	96,606	97,031
Provision for credit losses	**3,139**	225	3,385
Noninterest expense			
Compensation expense	**30,160**	30,810	30,585
Occupancy expense	**3,909**	3,693	3,925
Technology, communications and equipment expense	**5,804**	5,425	5,224
Professional and outside services	**7,705**	7,641	7,429
Marketing	**2,550**	2,500	2,577
Other expense	**11,146**	**20,398**	**14,989**
Total noninterest expense	**61,274**	70,467	64,729
Income before income tax expense	**29,792**	25,914	28,917
Income tax expense	**8,030**	7,991	7,633
Net income	$ **21,762**	$ 17,923	$ 21,284
Net income applicable to common stockholders	$ **20,093**	$ 16,593	$ 19,877
Net income per common share data			
Basic earnings per share	$ **5.34**	$ 4.39	$ 5.22
Diluted earnings per share	**5.29**	4.35	5.20
Weighted-average basic shares	**3,763.5**	3,782.4	3,809.4
Weighted-average diluted shares	**3,797.5**	3,814.9	3,822.2
Cash dividends declared per common share	$ **1.58**	$ 1.44	$ 1.20

(a) The following other-than-temporary impairment losses are included in securities gains for the periods presented.

Year ended December 31, (in millions)	2014	2013	2012
Debt securities the Firm does not intend to sell that have credit losses			
Total other-than-temporary impairment losses	$ **(2)**	$ (1)	$ (113)
Losses recorded in/(reclassified from) accumulated other comprehensive income	**—**	—	85
Total credit losses recognized in income	**(2)**	(1)	(28)
Securities the Firm intends to sell	**(2)**	(20)	(15)
Total other-than-temporary impairment losses recognized in income	$ **(4)**	$ (21)	$ (43)

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of comprehensive income

Year ended December 31, (in millions)	2014	2013	2012
Net income	**$ 21,762**	$ 17,923	$ 21,284
Other comprehensive income/(loss), after–tax			
Unrealized gains/(losses) on investment securities	**1,975**	(4,070)	3,303
Translation adjustments, net of hedges	**(11)**	(41)	(69)
Cash flow hedges	**44**	(259)	69
Defined benefit pension and OPEB plans	**(1,018)**	1,467	(145)
Total other comprehensive income/(loss), after–tax	**990**	(2,903)	3,158
Comprehensive income	**$ 22,752**	$ 15,020	$ 24,442

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated balance sheets

December 31, (in millions, except share data)	2014	2013
Assets		
Cash and due from banks	$ **27,831**	$ 39,771
Deposits with banks	**484,477**	316,051
Federal funds sold and securities purchased under resale agreements (included **$28,585** and $25,135 at fair value)	**215,803**	248,116
Securities borrowed (included **$992** and $3,739 at fair value)	**110,435**	111,465
Trading assets (included assets pledged of **$125,034** and $116,499)	**398,988**	374,664
Securities (included **$298,752** and $329,977 at fair value and assets pledged of **$24,912** and $23,446)	**348,004**	354,003
Loans (included **$2,611** and $2,011 at fair value)	**757,336**	738,418
Allowance for loan losses	**(14,185)**	(16,264)
Loans, net of allowance for loan losses	**743,151**	722,154
Accrued interest and accounts receivable	**70,079**	65,160
Premises and equipment	**15,133**	14,891
Goodwill	**47,647**	48,081
Mortgage servicing rights	**7,436**	9,614
Other intangible assets	**1,192**	1,618
Other assets (included **$12,366** and $15,187 at fair value and assets pledged of **$1,396** and $2,066)	**102,950**	110,101
Total assets[(a)]	$ **2,573,126**	$ 2,415,689
Liabilities		
Deposits (included **$8,807** and $6,624 at fair value)	$ **1,363,427**	$ 1,287,765
Federal funds purchased and securities loaned or sold under repurchase agreements (included **$2,979** and $5,426 at fair value)	**192,101**	181,163
Commercial paper	**66,344**	57,848
Other borrowed funds (included **$14,739** and $13,306 at fair value)	**30,222**	27,994
Trading liabilities	**152,815**	137,744
Accounts payable and other liabilities (included **$36** and $25 at fair value)	**206,954**	194,491
Beneficial interests issued by consolidated variable interest entities (included **$2,162** and $1,996 at fair value)	**52,362**	49,617
Long-term debt (included **$30,226** and $28,878 at fair value)	**276,836**	267,889
Total liabilities[(a)]	**2,341,061**	2,204,511
Commitments and contingencies (see Notes 29, 30 and 31)		
Stockholders' equity		
Preferred stock ($1 par value; authorized 200,000,000 shares: issued **2,006,250** and 1,115,750 shares)	**20,063**	11,158
Common stock ($1 par value; authorized 9,000,000,000 shares; issued **4,104,933,895** shares)	**4,105**	4,105
Additional paid-in capital	**93,270**	93,828
Retained earnings	**130,315**	115,756
Accumulated other comprehensive income	**2,189**	1,199
Shares held in RSU trust, at cost (**472,953** and 476,642 shares)	**(21)**	(21)
Treasury stock, at cost (**390,144,630** and 348,825,583 shares)	**(17,856)**	(14,847)
Total stockholders' equity	**232,065**	211,178
Total liabilities and stockholders' equity	$ **2,573,126**	$ 2,415,689

(a) The following table presents information on assets and liabilities related to VIEs that are consolidated by the Firm at December 31, 2014 and 2013. 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)	2014	2013
Assets		
Trading assets	$ **9,090**	$ 6,366
Loans	**68,880**	70,072
All other assets	**1,815**	2,168
Total assets	$ **79,785**	$ 78,606
Liabilities		
Beneficial interests issued by consolidated variable interest entities	$ **52,362**	$ 49,617
All other liabilities	**949**	1,061
Total liabilities	$ **53,311**	$ 50,678

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, 2014 and 2013, the Firm provided limited program-wide credit enhancement of $2.0 billion and $2.6 billion, respectively, related to its Firm-administered multi-seller conduits, which are eliminated in consolidation. For further discussion, see Note 16.

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)	2014	2013	2012
Preferred stock			
Balance at January 1	**$ 11,158**	$ 9,058	$ 7,800
Issuance of preferred stock	**8,905**	3,900	1,258
Redemption of preferred stock	**–**	(1,800)	–
Balance at December 31	**20,063**	11,158	9,058
Common stock			
Balance at January 1 and December 31	**4,105**	4,105	4,105
Additional paid-in capital			
Balance at January 1	**93,828**	94,604	95,602
Shares issued and commitments to issue common stock for employee stock-based compensation awards, and related tax effects	**(508)**	(752)	(736)
Other	**(50)**	(24)	(262)
Balance at December 31	**93,270**	93,828	94,604
Retained earnings			
Balance at January 1	**115,756**	104,223	88,315
Net income	**21,762**	17,923	21,284
Dividends declared:			
Preferred stock	**(1,125)**	(805)	(647)
Common stock (**$1.58**, $1.44 and $1.20 per share for 2014, 2013 and 2012, respectively)	**(6,078)**	(5,585)	(4,729)
Balance at December 31	**130,315**	115,756	104,223
Accumulated other comprehensive income/(loss)			
Balance at January 1	**1,199**	4,102	944
Other comprehensive income/(loss)	**990**	(2,903)	3,158
Balance at December 31	**2,189**	1,199	4,102
Shares held in RSU Trust, at cost			
Balance at January 1	**(21)**	(21)	(38)
Reissuance from RSU Trust	**–**	–	17
Balance at December 31	**(21)**	(21)	(21)
Treasury stock, at cost			
Balance at January 1	**(14,847)**	(12,002)	(13,155)
Purchase of treasury stock	**(4,760)**	(4,789)	(1,415)
Reissuance from treasury stock	**1,751**	1,944	2,574
Share repurchases related to employee stock-based compensation awards	**–**	–	(6)
Balance at December 31	**(17,856)**	(14,847)	(12,002)
Total stockholders' equity	**$ 232,065**	$ 211,178	$ 204,069

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated statements of cash flows

Year ended December 31, (in millions)	2014	2013	2012
Operating activities			
Net income	**$ 21,762**	$ 17,923	$ 21,284
Adjustments to reconcile net income to net cash provided by/(used in) operating activities:			
Provision for credit losses	**3,139**	225	3,385
Depreciation and amortization	**4,759**	5,306	5,147
Deferred tax expense	**4,210**	8,003	1,130
Investment securities gains	**(77)**	(667)	(2,110)
Stock-based compensation	**2,190**	2,219	2,545
Originations and purchases of loans held-for-sale	**(67,525)**	(75,928)	(34,026)
Proceeds from sales, securitizations and paydowns of loans held-for-sale	**71,407**	73,566	33,202
Net change in:			
Trading assets	**(24,814)**	89,110	(5,379)
Securities borrowed	**1,020**	7,562	23,455
Accrued interest and accounts receivable	**(3,637)**	(2,340)	1,732
Other assets	**(9,166)**	526	(4,683)
Trading liabilities	**26,818**	(9,772)	(3,921)
Accounts payable and other liabilities	**6,065**	(5,743)	(13,069)
Other operating adjustments	**442**	(2,037)	(3,613)
Net cash provided by operating activities	**36,593**	107,953	25,079
Investing activities			
Net change in:			
Deposits with banks	**(168,426)**	(194,363)	(36,595)
Federal funds sold and securities purchased under resale agreements	**30,848**	47,726	(60,821)
Held-to-maturity securities:			
Proceeds from paydowns and maturities	**4,169**	189	4
Purchases	**(10,345)**	(24,214)	–
Available-for-sale securities:			
Proceeds from paydowns and maturities	**90,664**	89,631	112,633
Proceeds from sales	**38,411**	73,312	81,957
Purchases	**(121,504)**	(130,266)	(189,630)
Proceeds from sales and securitizations of loans held-for-investment	**20,115**	12,033	6,430
Other changes in loans, net	**(51,749)**	(23,721)	(30,491)
Net cash received from/(used in) business acquisitions or dispositions	**843**	(149)	88
All other investing activities, net	**1,338**	(679)	(3,400)
Net cash used in investing activities	**(165,636)**	(150,501)	(119,825)
Financing activities			
Net change in:			
Deposits	**89,346**	81,476	67,250
Federal funds purchased and securities loaned or sold under repurchase agreements	**10,905**	(58,867)	26,546
Commercial paper and other borrowed funds	**9,242**	2,784	9,315
Beneficial interests issued by consolidated variable interest entities	**(834)**	(10,433)	345
Proceeds from long-term borrowings	**78,515**	83,546	86,271
Payments of long-term borrowings	**(65,275)**	(60,497)	(96,473)
Excess tax benefits related to stock-based compensation	**407**	137	255
Proceeds from issuance of preferred stock	**8,847**	3,873	1,234
Redemption of preferred stock	**—**	(1,800)	–
Treasury stock and warrants repurchased	**(4,760)**	(4,789)	(1,653)
Dividends paid	**(6,990)**	(6,056)	(5,194)
All other financing activities, net	**(1,175)**	(1,050)	(189)
Net cash provided by financing activities	**118,228**	28,324	87,707
Effect of exchange rate changes on cash and due from banks	**(1,125)**	272	1,160
Net decrease in cash and due from banks	**(11,940)**	(13,952)	(5,879)
Cash and due from banks at the beginning of the period	**39,771**	53,723	59,602
Cash and due from banks at the end of the period	**$ 27,831**	$ 39,771	$ 53,723
Cash interest paid	**$ 8,194**	$ 9,573	$ 11,161
Cash income taxes paid, net	**1,392**	3,502	2,050

The Notes to Consolidated Financial Statements are an integral part of these 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 and asset management. For a discussion of the Firm's business segments, see Note 33.

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.

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.

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 have 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 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 February 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.

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. For further discussion of the Firm's repurchase and reverse repurchase agreements, and securities borrowing and lending agreements, see Note 13.

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.

Fair value measurement	Note 3	Page 180
Fair value option	Note 4	Page 199
Derivative instruments	Note 6	Page 203
Noninterest revenue	Note 7	Page 216
Interest income and interest expense	Note 8	Page 218
Pension and other postretirement employee benefit plans	Note 9	Page 218
Employee stock-based incentives	Note 10	Page 228
Securities	Note 12	Page 230
Securities financing activities	Note 13	Page 235
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Note 2 – Business changes and developments

Subsequent events

As part of the Firm's business simplification agenda, the sale of a portion of the Private Equity Business ("Private Equity sale") was completed on January 9, 2015. Concurrent with the sale, a new independent management company was formed by the former One Equity Partners ("OEP") investment professionals. The new management company will provide investment management services to the acquirer of the investments sold in the Private Equity sale and for the portion of private equity investments retained by the Firm. Upon closing, this transaction did not have a material impact on the Firm's Consolidated balance sheets or its results of operations.

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.

The level of precision 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") comprised of 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 Firmwide 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 provided by the risk-taking functions by 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 the estimates, 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.

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 where an observable external price or valuation parameter exists but is of lower reliability, potentially due to lower market activity. Liquidity valuation adjustments are applied and determined based on current market conditions. Factors that may be considered in determining the liquidity adjustment include analysis of: (1) the estimated bid-offer spread for the instrument being traded; (2) alternative pricing points for similar instruments in active markets; and (3) the range of reasonable values that the price or parameter could take.
- The Firm manages certain portfolios of financial instruments on the basis of net open risk exposure and, as permitted by U.S. 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 prices or input parameters to valuation models that are unobservable due to a lack of market activity or because they cannot be implied from observable market data. Such prices or parameters must be estimated and are, therefore, subject to management judgment. Unobservable parameter valuation adjustments are applied to reflect the uncertainty inherent in the resulting valuation estimate.

Where appropriate, the Firm also applies adjustments to its estimates of fair value in order to appropriately reflect counterparty credit quality, the Firm's own creditworthiness and the impact of funding, applying a consistent framework across the Firm. For more information on such adjustments see Credit and funding adjustments on pages 196–197 of this Note.

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 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. The Model Risk function is part of the Firm's Model Risk and Development unit, and the Firmwide Model Risk and Development Executive reports to the Firm's CRO. 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 valuation 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.

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	Valuations are based on discounted cash flows, which consider: • Derivative features. For further information refer to the discussion of derivatives below. • Market rates for the respective maturity • Collateral	Level 2
Loans and lending-related commitments - wholesale		
Trading portfolio	Where observable market data is available, valuations are based on: • Observed market prices (circumstances are infrequent) • Relevant broker quotes • Observed market prices for similar instruments Where observable market data is unavailable or limited, valuations are based on discounted cash flows, which consider the following: • Yield • Lifetime credit losses • Loss severity • Prepayment speed • Servicing costs	Level 2 or 3
Loans held for investment and associated lending-related commitments	Valuations are based on discounted cash flows, which consider: • Credit spreads, derived from the cost of credit default swaps ("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 • Prepayment speed 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 For information regarding the valuation of loans measured at collateral value, see Note 14.	Predominantly level 3
Loans - consumer		
Held for investment consumer loans, excluding credit card	Valuations are based on discounted cash flows, which consider: • Discount rates (derived from primary origination rates and market activity) • Expected lifetime credit losses (considering expected and current default rates for existing portfolios, collateral prices, and economic environment expectations (e.g., unemployment rates)) • Estimated prepayments • Servicing costs • Market liquidity For information regarding the valuation of loans measured at collateral value, see Note 14.	Predominantly level 3
Held for investment credit card receivables	Valuations are based on discounted cash flows, which consider: • Projected interest income and late fee revenue, servicing and credit costs, and loan repayment rates • Estimated life of receivables (based on projected loan payment rates) • Discount rate - based on cost of funding and 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	Quoted market prices are used where available.	Level 1
	In the absence of quoted market prices, securities are valued based on: • Observable market prices for similar securities • Relevant broker quotes • Discounted cash flows In addition, the following inputs to discounted cash flows are used for the following products: *Mortgage- and asset-backed securities specific inputs:* • Collateral characteristics • Deal-specific payment and loss allocations • Current market assumptions related to yield, prepayment speed, conditional default rates and loss severity *Collateralized loan obligations ("CLOs"), specific inputs:* • Collateral characteristics • Deal-specific payment and loss allocations • Expected prepayment speed, conditional default rates, loss severity • Credit spreads • Credit rating data	Level 2 or 3
Physical commodities	Valued using observable market prices or data	Predominantly Level 1 and 2
Derivatives	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.	Level 1
	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: • Contractual terms including the period to maturity • Readily observable parameters including interest rates and volatility • Credit quality of the counterparty and of the Firm • Market funding levels • Correlation levels In addition, the following specific inputs are used for the following derivatives that are valued based on models with significant unobservable inputs: *Structured credit derivatives specific inputs include:* • CDS spreads and recovery rates • Credit correlation between the underlying debt instruments (levels are modeled on a transaction basis and calibrated to liquid benchmark tranche indices) • Actual transactions, where available, are used to regularly recalibrate unobservable parameters *Certain long-dated equity option specific inputs include:* • Long-dated equity volatilities *Certain interest rate and foreign exchange ("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 Additionally, adjustments are made to reflect counterparty credit quality (credit valuation adjustments or "CVA"), the Firm's own creditworthiness (debit valuation adjustments or "DVA"), and funding valuation adjustment ("FVA") to incorporate the impact of funding. See pages 196–197 of this Note.	Level 2 or 3

Product/instrument	Valuation methodology, inputs and assumptions	Classification in the valuation hierarchy
Mortgage servicing rights ("MSRs")	See Mortgage servicing rights in Note 17.	Level 3
Private equity direct investments	*Private equity direct investments* Fair value is estimated using all available information and considering the range of potential inputs, including: • Transaction prices • Trading multiples of comparable public companies • Operating performance of the underlying portfolio company • Additional available inputs relevant to the investment • Adjustments as required, since comparable public companies are not identical to the company being valued, and for company-specific issues and lack of liquidity	Level 2 or 3
	Public investments held in the Private Equity portfolio • Valued using observable market prices less adjustments for relevant restrictions, where applicable	Level 1 or 2
Fund investments (i.e., mutual/ collective investment funds, private equity funds, hedge funds, and real estate funds)	Net asset value ("NAV") • NAV is validated by sufficient level of observable activity (i.e., purchases and sales)	Level 1
	• Adjustments to the NAV as required, for restrictions on redemption (e.g., lock up periods or withdrawal limitations) or where observable activity is limited	Level 2 or 3
Beneficial interests issued by consolidated VIEs	Valued using observable market information, where available In the absence of observable market information, valuations are based on the fair value of the underlying assets held by the VIE	Level 2 or 3
Long-term debt, not carried at fair value	Valuations are based on discounted cash flows, which consider: • Market rates for respective maturity • The Firm's own creditworthiness (DVA). See pages 196-197 of this Note.	Predominantly level 2
Structured notes (included in deposits, other borrowed funds and long-term debt)	• Valuations are based on discounted cash flow analyses that consider the embedded derivative and the terms and payment structure of the note. • 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 creditworthiness (DVA) and to incorporate the impact of funding (FVA). See pages 196–197 of this Note.	Level 2 or 3

The following table presents the asset and liabilities reported at fair value as of December 31, 2014 and 2013, by major product category and fair value hierarchy.

Assets and liabilities measured at fair value on a recurring basis

	Fair value hierarchy				
December 31, 2014 (in millions)	Level 1	Level 2	Level 3	Derivative netting adjustments	Total fair value
Federal funds sold and securities purchased under resale agreements	$ —	$ 28,585	$ —	$ —	$ 28,585
Securities borrowed	—	992	—	—	992
Trading assets:					
Debt instruments:					
Mortgage-backed securities:					
U.S. government agencies[a]	14	31,904	922	—	32,840
Residential – nonagency	—	1,381	663	—	2,044
Commercial – nonagency	—	927	306	—	1,233
Total mortgage-backed securities	14	34,212	1,891	—	36,117
U.S. Treasury and government agencies[a]	17,816	8,460	—	—	26,276
Obligations of U.S. states and municipalities	—	9,298	1,273	—	10,571
Certificates of deposit, bankers' acceptances and commercial paper	—	1,429	—	—	1,429
Non-U.S. government debt securities	25,854	27,294	302	—	53,450
Corporate debt securities	—	28,099	2,989	—	31,088
Loans[b]	—	23,080	13,287	—	36,367
Asset-backed securities	—	3,088	1,264	—	4,352
Total debt instruments	43,684	134,960	21,006	—	199,650
Equity securities	104,890	748	431	—	106,069
Physical commodities[c]	2,739	1,741	2	—	4,482
Other	—	8,762	1,050	—	9,812
Total debt and equity instruments[d]	151,313	146,211	22,489	—	320,013
Derivative receivables:					
Interest rate	473	951,901	4,149	(922,798)	33,725
Credit	—	73,853	2,989	(75,004)	1,838
Foreign exchange	758	205,887	2,276	(187,668)	21,253
Equity	—	44,240	2,552	(38,615)	8,177
Commodity	247	42,807	599	(29,671)	13,982
Total derivative receivables[e]	1,478	1,318,688	12,565	(1,253,756)	78,975
Total trading assets	152,791	1,464,899	35,054	(1,253,756)	398,988
Available-for-sale securities:					
Mortgage-backed securities:					
U.S. government agencies[a]	—	65,319	—	—	65,319
Residential – nonagency	—	50,865	30	—	50,895
Commercial – nonagency	—	21,009	99	—	21,108
Total mortgage-backed securities	—	137,193	129	—	137,322
U.S. Treasury and government agencies[a]	13,591	54	—	—	13,645
Obligations of U.S. states and municipalities	—	30,068	—	—	30,068
Certificates of deposit	—	1,103	—	—	1,103
Non-U.S. government debt securities	24,074	28,669	—	—	52,743
Corporate debt securities	—	18,532	—	—	18,532
Asset-backed securities:					
Collateralized loan obligations	—	29,402	792	—	30,194
Other	—	12,499	116	—	12,615
Equity securities	2,530	—	—	—	2,530
Total available-for-sale securities	40,195	257,520	1,037	—	298,752
Loans	—	70	2,541	—	2,611
Mortgage servicing rights	—	—	7,436	—	7,436
Other assets:					
Private equity investments[f]	648	2,624	2,475	—	5,747
All other	4,018	230	2,371	—	6,619
Total other assets	4,666	2,854	4,846	—	12,366
Total assets measured at fair value on a recurring basis	$ 197,652	$ 1,754,920 [g]	$ 50,914 [g]	$ (1,253,756)	$ 749,730
Deposits	$ —	$ 5,948	$ 2,859	$ —	$ 8,807
Federal funds purchased and securities loaned or sold under repurchase agreements	—	2,979	—	—	2,979
Other borrowed funds	—	13,286	1,453	—	14,739
Trading liabilities:					
Debt and equity instruments[d]	62,914	18,713	72	—	81,699
Derivative payables:					
Interest rate	499	920,623	3,523	(906,900)	17,745
Credit	—	73,095	2,800	(74,302)	1,593
Foreign exchange	746	214,800	2,802	(195,378)	22,970
Equity	—	46,228	4,337	(38,825)	11,740
Commodity	141	44,318	1,164	(28,555)	17,068
Total derivative payables[e]	1,386	1,299,064	14,626	(1,243,960)	71,116
Total trading liabilities	64,300	1,317,777	14,698	(1,243,960)	152,815
Accounts payable and other liabilities	—	—	36	—	36
Beneficial interests issued by consolidated VIEs	—	1,016	1,146	—	2,162
Long-term debt	—	18,349	11,877	—	30,226
Total liabilities measured at fair value on a recurring basis	$ 64,300	$ 1,359,355	$ 32,069	$ (1,243,960)	$ 211,764

December 31, 2013 (in millions)	Fair value hierarchy Level 1	Level 2	Level 3	Derivative netting adjustments	Total fair value
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[a]	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[a]	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[h]	–	24,802	5,920	–	30,722
Loans[b]	–	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[c]	4,968	5,217	4	–	10,189
Other	–	5,659	2,000	–	7,659
Total debt and equity instruments[d]	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[e]	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[a]	–	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[a]	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:					
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[f]	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 [g]	$ 69,310 [g]	$ (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[d]	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[e]	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

(a) At December 31, 2014 and 2013, included total U.S. government-sponsored enterprise obligations of $84.1 billion and $91.5 billion, respectively, which were predominantly mortgage-related.

(b) At December 31, 2014 and 2013, included within trading loans were $17.0 billion and $14.8 billion, respectively, of residential first-lien mortgages, and $5.8 billion and $2.1 billion, respectively, of commercial first-lien mortgages. Residential mortgage loans include conforming mortgage loans originated with the intent to sell to U.S. government agencies of $7.7 billion and $6.0 billion, respectively, and reverse mortgages of $3.4 billion and $3.6 billion, respectively.

(c) 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 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. To provide consistent fair value disclosure information, all physical commodities inventories have been included in each period presented.
(d) Balances reflect the reduction of securities owned (long positions) by the amount of identical securities sold but not yet purchased (short positions).
(e) 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 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 $2.5 billion and $7.6 billion at December 31, 2014 and 2013, respectively; this is exclusive of the netting benefit associated with cash collateral, which would further reduce the level 3 balances.
(f) Private equity instruments represent investments within the Corporate line of business. The cost basis of the private equity investment portfolio totaled $6.0 billion and $8.0 billion at December 31, 2014 and 2013, respectively.
(g) 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 investments. At December 31, 2014 and 2013, the fair values of these investments were $1.8 billion and $3.2 billion, respectively, of which $337 million and $899 million, respectively were classified in level 2, and $1.4 billion and $2.3 billion, respectively, in level 3.

Transfers between levels for instruments carried at fair value on a recurring basis

For the year ended December 31, 2014 and 2013, there were no significant transfers between levels 1 and 2.

During the year ended December 31, 2014, transfers from level 3 to level 2 included the following:

- $4.3 billion and $4.4 billion of gross equity derivative receivables and payables, respectively, due to increased observability of certain equity option valuation inputs;
- $2.7 billion of trading loans, $2.6 billion of margin loans, $2.3 billion of private equity investments, $2.0 billion of corporate debt, and $1.3 billion of long-term debt, based on increased liquidity and price transparency.

Transfers from level 2 into level 3 included $1.1 billion of other borrowed funds, $1.1 billion of trading loans and $1.0 billion of long-term debt, based on a decrease in observability of valuation inputs and price transparency.

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 year ended December 31, 2012, 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.

All transfers are assumed to occur at the beginning of the quarterly reporting period in which they occur.

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 181–184 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.

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. 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. 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. 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 and the foreign exchange correlation inputs were concentrated at the lower end of the range presented. The equity volatility is concentrated in the lower half 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.

Level 3 inputs[(a)]

December 31, 2014 (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	$ 8,917	Discounted cash flows	Yield	1% - 25%	5%
			Prepayment speed	0% - 18%	6%
			Conditional default rate	0% - 100%	22%
			Loss severity	0% - 90%	27%
Commercial mortgage-backed securities and loans[(b)]	5,319	Discounted cash flows	Yield	2% - 32%	5%
			Conditional default rate	0% - 100%	8%
			Loss severity	0% - 50%	29%
Corporate debt securities, obligations of U.S. states and municipalities, and other[(c)]	6,387	Discounted cash flows	Credit spread	53 bps - 270 bps	140 bps
			Yield	1% - 22%	7%
	6,629	Market comparables	Price	$ — - $131	$90
Net interest rate derivatives	626	Option pricing	Interest rate correlation	(75)% - 95%	
			Interest rate spread volatility	0% - 60%	
Net credit derivatives[(b)(c)]	189	Discounted cash flows	Credit correlation	47% - 90%	
Net foreign exchange derivatives	(526)	Option pricing	Foreign exchange correlation	0% - 60%	
Net equity derivatives	(1,785)	Option pricing	Equity volatility	15% - 65%	
Net commodity derivatives	(565)	Discounted cash flows	Forward commodity price	$ 50 - $90 per barrel	
Collateralized loan obligations	792	Discounted cash flows	Credit spread	260 bps - 675 bps	279 bps
			Prepayment speed	20%	20%
			Conditional default rate	2%	2%
			Loss severity	40%	40%
	393	Market comparables	Price	$ — - $146	$79
Mortgage servicing rights	7,436	Discounted cash flows	Refer to Note 17		
Private equity direct investments	2,054	Market comparables	EBITDA multiple	6x - 12.4x	9.1x
			Liquidity adjustment	0% - 15%	7%
Private equity fund investments	421	Net asset value	Net asset value[(e)]		
Long-term debt, other borrowed funds, and deposits[(d)]	15,069	Option pricing	Interest rate correlation	(75)% - 95%	
			Interest rate spread volatility	0% - 60%	
			Foreign exchange correlation	0% - 60%	
			Equity correlation	(55)% - 85%	
	1,120	Discounted cash flows	Credit correlation	47% - 90%	

(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 $491 million of credit derivative receivables and $433 million of credit derivative payables with underlying commercial 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 $795 million of credit derivative receivables and $715 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) 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.

(e) The range has not been disclosed due to the wide range of possible values given the diverse nature of the underlying investments.

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; 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 has 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 lien on 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. The range of 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 sheets 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, 2014, 2013 and 2012. 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 or losses in the following tables do not reflect the effect of the Firm's risk management activities related to such level 3 instruments.

	Fair value measurements using significant unobservable inputs							
Year ended December 31, 2014 (in millions)	Fair value at January 1, 2014	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2014	Change in unrealized gains/ (losses) related to financial instruments held at Dec. 31, 2014
Assets:								
Trading assets:								
Debt instruments:								
Mortgage-backed securities:								
U.S. government agencies	$ 1,005	$ (97)	$ 351	$ (186)	$ (121)	$ (30)	$ 922	$ (92)
Residential – nonagency	726	66	827	(761)	(41)	(154)	663	(15)
Commercial – nonagency	432	17	980	(914)	(60)	(149)	306	(12)
Total mortgage-backed securities	2,163	(14)	2,158	(1,861)	(222)	(333)	1,891	(119)
Obligations of U.S. states and municipalities	1,382	90	298	(358)	(139)	–	1,273	(27)
Non-U.S. government debt securities	143	24	719	(617)	(3)	36	302	10
Corporate debt securities	5,920	210	5,854	(3,372)	(4,531)	(1,092)	2,989	379
Loans	13,455	387	13,551	(7,917)	(4,623)	(1,566)	13,287	123
Asset-backed securities	1,272	19	2,240	(2,126)	(283)	142	1,264	(30)
Total debt instruments	24,335	716	24,820	(16,251)	(9,801)	(2,813)	21,006	336
Equity securities	885	112	248	(272)	(290)	(252)	431	46
Physical commodities	4	(1)	–	–	(1)	–	2	–
Other	2,000	239	1,426	(276)	(201)	(2,138)	1,050	329
Total trading assets – debt and equity instruments	27,224	1,066 [c]	26,494	(16,799)	(10,293)	(5,203)	22,489	711 [c]
Net derivative receivables:[a]								
Interest rate	2,379	184	198	(256)	(1,771)	(108)	626	(853)
Credit	95	(149)	272	(47)	92	(74)	189	(107)
Foreign exchange	(1,200)	(137)	139	(27)	668	31	(526)	(62)
Equity	(1,063)	154	2,044	(2,863)	10	(67)	(1,785)	583
Commodity	115	(465)	1	(113)	(109)	6	(565)	(186)
Total net derivative receivables	326	(413) [c]	2,654	(3,306)	(1,110)	(212)	(2,061)	(625) [c]
Available-for-sale securities:								
Asset-backed securities	1,088	(41)	275	(2)	(101)	(311)	908	(40)
Other	1,234	(19)	122	–	(223)	(985)	129	(2)
Total available-for-sale securities	2,322	(60) [d]	397	(2)	(324)	(1,296)	1,037	(42) [d]
Loans	1,931	(254) [c]	3,258	(845)	(1,549)	–	2,541	(234) [c]
Mortgage servicing rights	9,614	(1,826) [e]	768	(209)	(911)	–	7,436	(1,826) [e]
Other assets:								
Private equity investments	6,474	443 [c]	164	(1,967)	(360)	(2,279)	2,475	26 [c]
All other	3,176	33 [f]	190	(451)	(577)	–	2,371	11 [f]

	Fair value measurements using significant unobservable inputs								
Year ended December 31, 2014 (in millions)	Fair value at January 1, 2014	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2014	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2014
Liabilities:[b]									
Deposits	$ 2,255	$ 149 [c]	$ –	$ –	$ 1,578	$ (197)	$ (926)	$ 2,859	$ 130 [c]
Other borrowed funds	2,074	(596) [c]	–	–	5,377	(6,127)	725	1,453	(415) [c]
Trading liabilities – debt and equity instruments	113	(5) [c]	(305)	323	–	(5)	(49)	72	2 [c]
Accounts payable and other liabilities	25	27 [f]	–	–	–	(16)	–	36	– [f]
Beneficial interests issued by consolidated VIEs	1,240	(4) [c]	–	–	775	(763)	(102)	1,146	(22) [c]
Long-term debt	10,008	(40) [c]	–	–	7,421	(5,231)	(281)	11,877	(9) [c]

Year ended December 31, 2013 (in millions)	Fair value measurements using significant unobservable inputs							
	Fair value at January 1, 2013	Total realized/ unrealized gains/ (losses)	Purchases[g]	Sales	Settlements	Transfers into and/or out of level 3[h]	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 [c]	25,273	(20,815)	(3,867)	(1,243)	27,224	2,420 [c]
Net derivative receivables:[a]								
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)	2,528 [i]	1,305 [i]	(2,111) [i]	(1,353)	374	(1,063)	872
Commodity	254	816	105	(3)	(1,107)	50	115	410
Total net derivative receivables	1,893	2,904 [c]	1,872	(2,350)	(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]

Year ended December 31, 2013 (in millions)	Fair value measurements using significant unobservable inputs								
	Fair value at January 1, 2013	Total realized/ unrealized (gains)/ losses	Purchases[g]	Sales	Issuances	Settlements	Transfers into and/or out of level 3[h]	Fair value at Dec. 31, 2013	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2013
Liabilities:[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]

Year ended December 31, 2012 (in millions)	Fair value measurements using significant unobservable inputs: Fair value at January 1, 2012	Total realized/ unrealized gains/ (losses)	Purchases[(g)]	Sales	Settlements	Transfers into and/or out of level 3[(h)]	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:[(a)]								
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)	160 (i)	1,279 (i)	(2,174) (i)	899	1,135	(1,806)	580
Commodity	(687)	(673)	74	64	1,278	198	254	(160)
Total net derivative receivables	6,238	1,130 (c)	1,995	(2,572)	(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 (c)	1,536	(22)	(1,718)	144	2,282	12 (c)
Mortgage servicing rights	7,223	(635) (e)	2,833	(579)	(1,228)	–	7,614	(635) (e)
Other assets:								
Private equity investments	6,751	420 (c)	1,545	(512)	(977)	(46)	7,181	333 (c)
All other	4,374	(195) (f)	818	(238)	(501)	–	4,258	(200) (f)

Year ended December 31, 2012 (in millions)	Fair value measurements using significant unobservable inputs: Fair value at January 1, 2012	Total realized/ unrealized (gains)/ losses	Purchases[(g)]	Sales	Issuances	Settlements	Transfers into and/or out of level 3[(h)]	Fair value at Dec. 31, 2012	Change in unrealized (gains)/losses related to financial instruments held at Dec. 31, 2012
Liabilities:[(b)]									
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)

(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 15%, 18% and 18% at December 31, 2014, 2013 and 2012, respectively.
(c) Predominantly reported in principal transactions revenue, except for changes in fair value for 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.

(d) 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 Other Comprehensive Income ("OCI"). Realized gains/(losses) and foreign exchange remeasurement adjustments recorded in income on AFS securities were $(43) million, $17 million, and $145 million for the years ended December 31, 2014, 2013 and 2012, respectively. Unrealized gains/(losses) recorded on AFS securities in OCI were $(16) million, $13 million and $45 million for the years ended December 31, 2014, 2013 and 2012, respectively.
(e) Changes in fair value for CCB mortgage servicing rights are reported in mortgage fees and related income.
(f) Predominantly reported in other income.
(g) Loan originations are included in purchases.
(h) 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.
(i) The prior period amounts have been revised. The revision had no impact on the Firm's Consolidated balance sheets or its results of operations.

Level 3 analysis

Consolidated balance sheets changes

Level 3 assets (including assets measured at fair value on a nonrecurring basis) were 2.1% of total Firm assets at December 31, 2014. The following describes significant changes to level 3 assets since December 31, 2013, 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 197.

For the year ended December 31, 2014

Level 3 assets were $50.9 billion at December 31, 2014, reflecting a decrease of $18.4 billion from December 31, 2013, due to the following:

- $6.0 billion decrease in gross derivative receivables due to a $4.5 billion decrease in equity derivative receivables due to expirations and a transfer from level 3 into level 2 as a result of an increase in observability of certain equity option valuation inputs; and a $1.2 billion decrease in interest rate derivatives due to market movements;
- $4.7 billion decrease in trading assets - debt and equity instruments is largely due to a decrease of $2.9 billion in corporate debt securities. The decrease in corporate debt securities is driven by transfers from level 3 to level 2 as a result of an increase in observability of certain valuation inputs, as well as net sales and maturities;
- $4.0 billion decrease in private equity investments predominantly driven by $2.0 billion in sales and $2.3 billion of transfers into level 2 based on an increase in observability and price transparency;
- $2.2 billion decrease in MSRs. For further discussion of the change, refer to Note 17.

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 December 31, 2014, 2013 and 2012. For further information on these instruments, see Changes in level 3 recurring fair value measurements rollforward tables on pages 191–195.

2014

- $1.8 billion of losses on MSRs. For further discussion of the change, refer to Note 17;
- $1.1 billion of net gains on trading assets - debt and equity instruments, largely driven by market movements and client-driven financing transactions.

2013

- $2.9 billion of net gains on derivatives, largely driven by $2.5 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.

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.

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 counterparty credit quality, the Firm's own creditworthiness, and the impact of funding:

- Credit valuation adjustments ("CVA") are taken to reflect the credit quality of a counterparty in the valuation of derivatives. CVA 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 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. As such, the Firm estimates derivatives CVA relative to the relevant benchmark interest rate.

- DVA is 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.

- 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. Effective in 2013, the Firm implemented a FVA framework to incorporate the impact of funding into its valuation estimates for uncollateralized (including partially collateralized) over-the-counter ("OTC") derivatives and structured notes. The Firm's FVA framework leverages its existing CVA and DVA calculation methodologies, and considers the fact that the Firm's own credit risk is a significant component of funding costs. 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 a similar credit standing as the Firm.

Upon the implementation of the FVA framework in 2013, the Firm recorded a one time $1.5 billion loss in principal transactions revenue that was recorded in the CIB. While the FVA framework applies to both assets and liabilities, the loss on implementation largely related to uncollateralized derivative receivables given that the impact of the Firm's own credit risk, which is a significant component of funding costs, was already incorporated in the valuation of liabilities through the application of DVA.

The following table provides the credit and funding adjustments, excluding the effect of any associated hedging activities, reflected within the Consolidated balance sheets as of the dates indicated.

December 31, (in millions)	**2014**	2013
Derivative receivables balance[(a)]	**$ 78,975**	$ 65,759
Derivative payables balance[(a)]	**71,116**	57,314
Derivatives CVA[(b)]	**(2,674)**	(2,352)
Derivatives DVA and FVA[(b)(c)]	**(380)**	(322)
Structured notes balance [(a)(d)]	**53,772**	48,808
Structured notes DVA and FVA[(b)(e)]	**1,152**	952

(a) Balances are presented net of applicable CVA and DVA/FVA.
(b) Positive CVA and DVA/FVA represent amounts that increased receivable balances or decreased payable balances; negative CVA and DVA/FVA represent amounts that decreased receivable balances or increased payable balances.
(c) At December 31, 2014 and 2013, included derivatives DVA of $714 million and $715 million, respectively.
(d) Structured notes are predominantly financial instruments containing embedded derivatives that are measured at fair value based on the Firm's election under the fair value option. At December 31, 2014 and 2013, included $943 million and $1.1 billion, respectively, of financial instruments with no embedded derivative for which the fair value option has also been elected. For further information on these elections, see Note 4.
(e) At December 31, 2014 and 2013, included structured notes DVA of $1.4 billion and $1.4 billion, respectively.

The following table provides the impact of credit and funding adjustments on Principal transactions revenue in the respective periods, excluding the effect of any associated hedging activities.

Year ended December 31, (in millions)	2014	2013	2012
Credit adjustments:			
Derivatives CVA	**$ (322)**	$ 1,886	$ 2,698
Derivatives DVA and FVA[(a)]	**(58)**	(1,152)	(590)
Structured notes DVA and FVA[(b)]	**200**	(760)	(340)

(a) Included derivatives DVA of $(1) million, $(115) million and $(590) million for the years ended December 31, 2014, 2013 and 2012, respectively.
(b) Included structured notes DVA of $20 million, $(337) million and $(340) million for the years ended December 31, 2014, 2013 and 2012, respectively.

Assets and liabilities measured at fair value on a nonrecurring basis

At December 31, 2014 and 2013, assets measured at fair value on a nonrecurring basis were $4.5 billion and $6.2 billion, respectively, comprised predominantly of loans that had fair value adjustments for the year ended December 31, 2014. At December 31, 2014, $1.3 billion and $3.2 billion of these assets were classified in levels 2 and 3 of the fair value hierarchy, respectively. 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. Liabilities measured at fair value on a nonrecurring basis were not significant at December 31, 2014 and 2013. For the years ended December 31, 2014, 2013 and 2012, there were no significant transfers between levels 1, 2 and 3.

Of the $3.2 billion of the level 3 assets measured at fair value on a nonrecurring basis as of December 31, 2014:

- $1.6 billion related to consumer loans that were reclassified to held-for-sale during the fourth quarter of 2014 subject to a lower of cost or fair value adjustment. These loans were classified as level 3, as they are valued based on the Firm's internal valuation methodology;
- $809 million related to residential real estate loans carried 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 8% to 66%, with a weighted average of 26%.

The total change in the recorded 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, 2014, 2013 and 2012, related to financial instruments held at those dates were losses of $992 million, $789 million and $1.6 billion, respectively; these reductions were predominantly associated with loans.

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.

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.

The following table presents by fair value hierarchy classification the carrying values and estimated fair values at December 31, 2014 and 2013, of financial assets and liabilities, excluding financial instruments which are carried at fair value on a recurring basis. 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 181–184 of this Note.

	December 31, 2014					December 31, 2013				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value	Level 1	Level 2	Level 3	Total estimated fair value
Financial assets										
Cash and due from banks	**$ 27.8**	**$ 27.8**	**$ –**	**$ –**	**$ 27.8**	$ 39.8	$ 39.8	$ –	$ –	$ 39.8
Deposits with banks	**484.5**	**480.4**	**4.1**	**–**	**484.5**	316.1	309.7	6.4	–	316.1
Accrued interest and accounts receivable	**70.1**	**–**	**70.0**	**0.1**	**70.1**	65.2	–	64.9	0.3	65.2
Federal funds sold and securities purchased under resale agreements	**187.2**	**–**	**187.2**	**–**	**187.2**	223.0	–	223.0	–	223.0
Securities borrowed	**109.4**	**–**	**109.4**	**–**	**109.4**	107.7	–	107.7	–	107.7
Securities, held-to-maturity[(a)]	**49.3**	**–**	**51.2**	**–**	**51.2**	24.0	–	23.7	–	23.7
Loans, net of allowance for loan losses[(b)]	**740.5**	**–**	**21.8**	**723.1**	**744.9**	720.1	–	23.0	697.2	720.2
Other[(c)]	**58.1**	**–**	**55.7**	**7.1**	**62.8**	58.2	–	54.5	7.4	61.9
Financial liabilities										
Deposits	**$ 1,354.6**	**$ –**	**$ 1,353.6**	**$ 1.2**	**$ 1,354.8**	$ 1,281.1	$ –	$ 1,280.3	$ 1.2	$ 1,281.5
Federal funds purchased and securities loaned or sold under repurchase agreements	**189.1**	**–**	**189.1**	**–**	**189.1**	175.7	–	175.7	–	175.7
Commercial paper	**66.3**	**–**	**66.3**	**–**	**66.3**	57.8	–	57.8	–	57.8
Other borrowed funds	**15.5**		**15.5**	**–**	**15.5**	14.7	–	14.7	–	14.7
Accounts payable and other liabilities	**176.7**	**–**	**173.7**	**2.8**	**176.5**	160.2	–	158.2	1.8	160.0
Beneficial interests issued by consolidated VIEs	**50.2**	**–**	**48.2**	**2.0**	**50.2**	47.6	–	44.3	3.2	47.5
Long-term debt and junior subordinated deferrable interest debentures[(d)]	**246.6**	**–**	**251.6**	**3.8**	**255.4**	239.0	–	240.8	6.0	246.8

(a) Carrying value includes unamortized discount or premium.
(b) 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 181–184.
(c) Current period amounts have been updated to include certain nonmarketable equity securities. Prior period amounts have been revised to conform to the current presentation.
(d) 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.

	December 31, 2014					December 31, 2013				
		Estimated fair value hierarchy					Estimated fair value hierarchy			
(in billions)	Carrying value[(a)]	Level 1	Level 2	Level 3	Total estimated fair value	Carrying value[(a)]	Level 1	Level 2	Level 3	Total estimated fair value
Wholesale lending-related commitments	**$ 0.6**	**$ –**	**$ –**	**$ 1.6**	**$ 1.6**	$ 0.7	$ –	$ –	$ 1.0	$ 1.0

(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 as permitted by law, without notice. For a further discussion of the valuation of lending-related commitments, see page 182 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)	**2014**	2013	2012
Trading assets – debt and equity instruments	**$ 327,259**	$ 340,449	$ 349,337
Trading assets – derivative receivables	**67,123**	72,629	85,744
Trading liabilities – debt and equity instruments[(a)]	**84,707**	77,706	69,001
Trading liabilities – derivative payables	**54,758**	64,553	76,162

(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.

The Firm has elected to measure certain instruments at fair value in order 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.

The Firm has elected to measure the following instruments at fair value:

- 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.

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, 2014, 2013 and 2012, 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)	2014 Principal transactions	2014 All other income	2014 Total changes in fair value recorded	2013 Principal transactions	2013 All other income	2013 Total changes in fair value recorded	2012 Principal transactions	2012 All other income	2012 Total changes in fair value recorded
Federal funds sold and securities purchased under resale agreements	$ (15)	$ –	$ (15)	$ (454)	$ –	$ (454)	$ 161	$ –	$ 161
Securities borrowed	(10)	–	(10)	10	–	10	10	–	10
Trading assets:						–			–
Debt and equity instruments, excluding loans	639	–	639	582	7	589	513	7	520
Loans reported as trading assets:									
Changes in instrument-specific credit risk	885	29 (c)	914	1,161	23 (c)	1,184	1,489	81 (c)	1,570
Other changes in fair value	352	1,353 (c)	1,705	(133)	1,833 (c)	1,700	(183)	7,670 (c)	7,487
Loans:									
Changes in instrument-specific credit risk	40	–	40	36	–	36	(14)	–	(14)
Other changes in fair value	34	–	34	17	–	17	676	–	676
Other assets	24	(122) (d)	(98)	32	(29) (d)	3	–	(339) (d)	(339)
Deposits[(a)]	(287)	–	(287)	260	–	260	(188)	–	(188)
Federal funds purchased and securities loaned or sold under repurchase agreements	(33)	–	(33)	73	–	73	(25)	–	(25)
Other borrowed funds[(a)]	(891)	–	(891)	(399)	–	(399)	494	–	494
Trading liabilities	(17)	–	(17)	(46)	–	(46)	(41)	–	(41)
Beneficial interests issued by consolidated VIEs	(233)	–	(233)	(278)	–	(278)	(166)	–	(166)
Other liabilities	(27)	–	(27)	–	2	2	–	–	–
Long-term debt:									
Changes in instrument-specific credit risk[(a)]	101	–	101	(271)	–	(271)	(835)	–	(835)
Other changes in fair value[(b)]	(615)	–	(615)	1,280	–	1,280	(1,025)	–	(1,025)

(a) Total changes in instrument-specific credit risk (DVA) related to structured notes were $20 million, $(337) million and $(340) million for the years ended December 31, 2014, 2013 and 2012, respectively. These totals include such changes 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 that are 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, 2014 and 2013, for loans, long-term debt and long-term beneficial interests for which the fair value option has been elected.

	2014			2013		
December 31, (in millions)	Contractual principal outstanding	Fair value	Fair value over/(under) contractual principal outstanding	Contractual principal outstanding	Fair value	Fair value over/(under) contractual principal outstanding
Loans[a]						
Nonaccrual loans						
Loans reported as trading assets	**$ 3,847**	**$ 905**	**$ (2,942)**	$ 5,156	$ 1,491	$ (3,665)
Loans	**7**	**7**	**—**	209	154	(55)
Subtotal	**3,854**	**912**	**(2,942)**	5,365	1,645	(3,720)
All other performing loans						
Loans reported as trading assets	**37,608**	**35,462**	**(2,146)**	33,069	29,295	(3,774)
Loans	**2,397**	**2,389**	**(8)**	1,618	1,563	(55)
Total loans	**$ 43,859**	**$ 38,763**	**$ (5,096)**	$ 40,052	$ 32,503	$ (7,549)
Long-term debt						
Principal-protected debt	**$ 14,660** [c]	**$ 15,484**	**$ 824**	$ 15,797 [c]	$ 15,909	$ 112
Nonprincipal-protected debt[b]	**NA**	**14,742**	**NA**	NA	12,969	NA
Total long-term debt	**NA**	**$ 30,226**	**NA**	NA	$ 28,878	NA
Long-term beneficial interests						
Nonprincipal-protected debt[b]	**NA**	**$ 2,162**	**NA**	NA	$ 1,996	NA
Total long-term beneficial interests	**NA**	**$ 2,162**	**NA**	NA	$ 1,996	NA

(a) There were no performing loans that were ninety days or more past due as of December 31, 2014 and 2013, respectively.
(b) 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. However, investors are exposed to the credit risk of the Firm as issuer for both nonprincipal-protected and principal protected notes.
(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.

At December 31, 2014 and 2013, 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 $(147) million and $(99) million, respectively. For further information regarding off-balance sheet lending-related financial instruments, see Note 29.

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.

	December 31, 2014				December 31, 2013			
(in millions)	Long-term debt	Other borrowed funds	Deposits	Total	Long-term debt	Other borrowed funds	Deposits	Total
Risk exposure								
Interest rate	**$ 10,858**	**$ 460**	**$ 2,119**	**$ 13,437**	$ 9,516	$ 615	$ 1,270	$ 11,401
Credit	**4,023**	**450**	**—**	**4,473**	4,248	13	—	4,261
Foreign exchange	**2,150**	**211**	**17**	**2,378**	2,321	194	27	2,542
Equity	**12,348**	**12,412**	**4,415**	**29,175**	11,082	11,936	3,736	26,754
Commodity	**710**	**644**	**2,012**	**3,366**	1,260	310	1,133	2,703
Total structured notes	**$ 30,089**	**$ 14,177**	**$ 8,563**	**$ 52,829**	$ 28,427	$ 13,068	$ 6,166	$ 47,661

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. The Firm's wholesale exposure is managed through loan syndications and participations, loan sales, securitizations, credit derivatives, master netting agreements, and collateral and other risk-reduction techniques. For additional information on loans, see Note 14.

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.

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, 2014 and 2013.

	2014				2013			
	Credit exposure	On-balance sheet		Off-balance sheet[(d)]	Credit exposure	On-balance sheet		Off-balance sheet[(d)]
December 31, (in millions)		Loans	Derivatives			Loans	Derivatives	
Total consumer, excluding credit card	**$ 353,635**	**$ 295,374**	**$ –**	**$ 58,153**	$ 345,259	$ 289,063	$ –	$ 56,057
Total credit card	**657,011**	**131,048**	**–**	**525,963**	657,174	127,791	–	529,383
Total consumer	**1,010,646**	**426,422**	**–**	**584,116**	1,002,433	416,854	–	585,440
Wholesale-related								
Real Estate	**107,386**	**79,113**	**333**	**27,940**	87,102	69,151	460	17,491
Banks & Finance Cos	**68,203**	**24,244**	**22,057**	**21,902**	66,881	25,482	18,888	22,511
Healthcare	**57,707**	**13,793**	**4,630**	**39,284**	46,934	14,383	2,203	30,348
Oil & Gas	**48,315**	**15,616**	**1,872**	**30,827**	45,910	13,319	3,202	29,389
Consumer Products	**37,818**	**10,646**	**593**	**26,579**	35,666	8,708	3,319	23,639
Asset Managers	**36,374**	**8,043**	**9,569**	**18,762**	34,145	9,099	715	24,331
State & Municipal Govt	**31,858**	**7,593**	**4,079**	**20,186**	33,506	5,656	7,175	20,675
Retail & Consumer Services	**28,258**	**7,752**	**361**	**20,145**	28,983	5,582	2,248	21,153
Utilities	**28,060**	**4,843**	**2,317**	**20,900**	25,068	7,504	273	17,291
Central Govt	**21,081**	**1,081**	**11,819**	**8,181**	21,403	4,426	1,392	15,585
Technology	**20,977**	**4,727**	**1,341**	**14,909**	21,049	1,754	9,998	9,297
Machinery & Equipment Mfg	**20,573**	**6,537**	**553**	**13,483**	19,078	5,969	476	12,633
Transportation	**16,365**	**9,107**	**699**	**6,559**	17,434	5,825	560	11,049
Business Services	**16,201**	**4,867**	**456**	**10,878**	14,601	4,497	594	9,510
Metals/Mining	**15,911**	**5,628**	**601**	**9,682**	13,975	6,845	621	6,509
All other[(a)]	**320,446**	**120,912**	**17,695**	**181,839**	308,519	120,063	13,635	174,821
Subtotal	**875,533**	**324,502**	**78,975**	**472,056**	820,254	308,263	65,759	446,232
Loans held-for-sale and loans at fair value	**6,412**	**6,412**	**–**	**–**	13,301	13,301	–	–
Receivables from customers and other[(b)]	**28,972**	**–**	**–**	**–**	26,744	–	–	–
Total wholesale-related	**910,917**	**330,914**	**78,975**	**472,056**	860,299	321,564	65,759	446,232
Total exposure[(c)]	**$ 1,921,563**	**$ 757,336**	**$ 78,975**	**$ 1,056,172**	$ 1,862,732	$ 738,418	$ 65,759	$ 1,031,672

(a) For more information on exposures to SPEs included within All other, see Note 16.
(b) Primarily consists of margin loans to prime brokerage customers that are generally over-collateralized through a pledge of assets maintained in clients' brokerage accounts and are subject to daily 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.
(c) For further information regarding on–balance sheet credit concentrations by major product and/or geography, see Note 6 and Note 14. For information regarding concentrations of off–balance sheet lending-related financial instruments by major product, see Note 29.
(d) Represents lending-related financial instruments.

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.

Credit derivatives are used 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 213–215 of this Note.

For more information about risk management derivatives, see the risk management derivatives gains and losses table on page 213 of this Note, and the hedge accounting gains and losses tables on pages 211–213 of this Note.

Derivative counterparties and settlement types

The Firm enters into 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.

Derivative Clearing Services

The Firm provides clearing services for clients where the Firm acts as a clearing member with respect to certain derivative exchanges and clearinghouses. The Firm does not reflect the clients' derivative contracts in its Consolidated Financial Statements. For further information on the Firm's clearing services, see Note 29.

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.

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. 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 207–213 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.

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 not expected to 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.

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	211
◦ Interest rate	Hedge floating rate assets and liabilities	Cash flow hedge	Corporate	212
◦ Foreign exchange	Hedge foreign currency-denominated assets and liabilities	Fair value hedge	Corporate	211
◦ Foreign exchange	Hedge forecasted revenue and expense	Cash flow hedge	Corporate	212
◦ Foreign exchange	Hedge the value of the Firm's investments in non-U.S. subsidiaries	Net investment hedge	Corporate	213
◦ Commodity	Hedge commodity inventory	Fair value hedge	CIB	211
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	213
◦ Credit	Manage the credit risk of wholesale lending exposures	Specified risk management	CIB	213
◦ Commodity	Manage the risk of certain commodities-related contracts and investments	Specified risk management	CIB	213
◦ Interest rate and foreign exchange	Manage the risk of certain other specified assets and liabilities	Specified risk management	Corporate	213
Market-making derivatives and other activities:				
• Various	Market-making and related risk management	Market-making and other	CIB	213
• Various	Other derivatives[a]	Market-making and other	CIB, Corporate	213

(a) Other derivatives included the synthetic credit portfolio. The synthetic credit portfolio was a portfolio of index credit derivatives, including short and long positions, that was originally 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; these retained positions were effectively closed out during the third quarter of 2012. CIB effectively sold the positions that had been transferred to it by the end of 2014. 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 213 of this Note.

Notional amount of derivative contracts
The following table summarizes the notional amount of derivative contracts outstanding as of December 31, 2014 and 2013.

	Notional amounts[c]	
December 31, (in billions)	**2014**	2013
Interest rate contracts		
Swaps	**$ 29,734**	$ 35,221
Futures and forwards[a]	**10,189**	11,238
Written options[a]	**3,903**	4,059
Purchased options	**4,259**	4,187
Total interest rate contracts	**48,085**	54,705
Credit derivatives[a][b]	**4,249**	5,331
Foreign exchange contracts		
Cross-currency swaps	**3,346**	3,488
Spot, futures and forwards	**4,669**	3,773
Written options	**790**	659
Purchased options	**780**	652
Total foreign exchange contracts	**9,585**	8,572
Equity contracts		
Swaps[a]	**206**	187
Futures and forwards[a]	**50**	50
Written options	**432**	425
Purchased options	**375**	380
Total equity contracts	**1,063**	1,042
Commodity contracts		
Swaps	**126**	124
Spot, futures and forwards	**193**	234
Written options	**181**	202
Purchased options	**180**	203
Total commodity contracts	**680**	763
Total derivative notional amounts	**$ 63,662**	$ 70,413

(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) For more information on volumes and types of credit derivative contracts, see the Credit derivatives discussion on pages 213–215 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.

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, 2014 and 2013, 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[a]

	Gross derivative receivables				Gross derivative payables			
December 31, 2014 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[b]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[b]
Trading assets and liabilities								
Interest rate	**$ 951,151**	**$ 5,372**	**$ 956,523**	**$ 33,725**	**$ 921,634**	**$ 3,011**	**$ 924,645**	**$ 17,745**
Credit	**76,842**	**—**	**76,842**	**1,838**	**75,895**	**—**	**75,895**	**1,593**
Foreign exchange	**205,271**	**3,650**	**208,921**	**21,253**	**217,722**	**626**	**218,348**	**22,970**
Equity	**46,792**	**—**	**46,792**	**8,177**	**50,565**	**—**	**50,565**	**11,740**
Commodity	**43,151**	**502**	**43,653**	**13,982**	**45,455**	**168**	**45,623**	**17,068**
Total fair value of trading assets and liabilities	**$ 1,323,207**	**$ 9,524**	**$ 1,332,731**	**$ 78,975**	**$ 1,311,271**	**$ 3,805**	**$ 1,315,076**	**$ 71,116**

	Gross derivative receivables				Gross derivative payables			
December 31, 2013 (in millions)	Not designated as hedges	Designated as hedges	Total derivative receivables	Net derivative receivables[b]	Not designated as hedges	Designated as hedges	Total derivative payables	Net derivative payables[b]
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

(a) Balances exclude structured notes for which the fair value option has been elected. See Note 4 for further information.
(b) 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, 2014 and 2013, the gross and net derivative receivables by contract and settlement type. Derivative receivables have been netted on the Consolidated balance sheets against derivative payables and cash collateral 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 on the Consolidated balance sheets, and are shown separately in the table below.

	2014			2013		
December 31, (in millions)	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:						
OTC	**$ 548,373**	**$ (521,180)**	**$ 27,193**	$ 486,449	$ (466,493)	$ 19,956
OTC-cleared	**401,656**	**(401,618)**	**38**	362,426	(362,404)	22
Exchange-traded[(a)]	**—**	**—**	**—**	–	–	–
Total interest rate contracts	**950,029**	**(922,798)**	**27,231**	848,875	(828,897)	19,978
Credit contracts:						
OTC	**66,636**	**(65,720)**	**916**	66,269	(65,725)	544
OTC-cleared	**9,320**	**(9,284)**	**36**	16,841	(16,279)	562
Total credit contracts	**75,956**	**(75,004)**	**952**	83,110	(82,004)	1,106
Foreign exchange contracts:						
OTC	**202,537**	**(187,634)**	**14,903**	148,953	(136,763)	12,190
OTC-cleared	**36**	**(34)**	**2**	46	(46)	–
Exchange-traded[(a)]	**—**	**—**	**—**	–	–	–
Total foreign exchange contracts	**202,573**	**(187,668)**	**14,905**	148,999	(136,809)	12,190
Equity contracts:						
OTC	**23,258**	**(22,826)**	**432**	31,870	(29,289)	2,581
OTC-cleared	**—**	**—**	**—**	–	–	–
Exchange-traded[(a)]	**18,143**	**(15,789)**	**2,354**	17,732	(11,415)	6,317
Total equity contracts	**41,401**	**(38,615)**	**2,786**	49,602	(40,704)	8,898
Commodity contracts:						
OTC	**22,555**	**(14,327)**	**8,228**	21,619	(15,082)	6,537
OTC-cleared	**—**	**—**	**—**	–	–	–
Exchange-traded[(a)]	**19,500**	**(15,344)**	**4,156**	12,528	(11,212)	1,316
Total commodity contracts	**42,055**	**(29,671)**	**12,384**	34,147	(26,294)	7,853
Derivative receivables with appropriate legal opinion	**$ 1,312,014**	**$ (1,253,756)** [(b)]	**$ 58,258**	$ 1,164,733	$ (1,114,708) [(b)]	$ 50,025
Derivative receivables where an appropriate legal opinion has not been either sought or obtained	**20,717**		**20,717**	15,734		15,734
Total derivative receivables recognized on the Consolidated balance sheets	**$ 1,332,731**		**$ 78,975**	$ 1,180,467		$ 65,759

(a) Exchange-traded derivative amounts that relate to futures contracts are settled daily.
(b) Included cash collateral netted of $74.0 billion and $63.9 billion at December 31, 2014, and 2013, respectively.

The following table presents, as of December 31, 2014 and 2013, the gross and net derivative payables by contract and settlement type. Derivative payables have been netted on the Consolidated balance sheets against derivative receivables and cash collateral receivables from 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 on the Consolidated balance sheets, and are shown separately in the table below.

	2014			2013		
December 31, (in millions)	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	**$ 522,170**	**$ (509,650)**	**$ 12,520**	$ 467,850	$ (458,081)	$ 9,769
OTC–cleared	**398,518**	**(397,250)**	**1,268**	354,698	(353,990)	708
Exchange-traded[(a)]	**—**	**—**	**—**	—	—	—
Total interest rate contracts	**920,688**	**(906,900)**	**13,788**	822,548	(812,071)	10,477
Credit contracts:						
OTC	**65,432**	**(64,904)**	**528**	65,223	(63,671)	1,552
OTC–cleared	**9,398**	**(9,398)**	**—**	16,506	(16,450)	56
Total credit contracts	**74,830**	**(74,302)**	**528**	81,729	(80,121)	1,608
Foreign exchange contracts:						
OTC	**211,732**	**(195,312)**	**16,420**	155,110	(144,119)	10,991
OTC–cleared	**66**	**(66)**	**—**	61	(59)	2
Exchange-traded[(a)]	**—**	**—**	**—**	—	—	—
Total foreign exchange contracts	**211,798**	**(195,378)**	**16,420**	155,171	(144,178)	10,993
Equity contracts:						
OTC	**27,908**	**(23,036)**	**4,872**	33,295	(28,520)	4,775
OTC–cleared	**—**	**—**	**—**	—	—	—
Exchange-traded[(a)]	**17,167**	**(15,789)**	**1,378**	17,349	(11,415)	5,934
Total equity contracts	**45,075**	**(38,825)**	**6,250**	50,644	(39,935)	10,709
Commodity contracts:						
OTC	**25,129**	**(13,211)**	**11,918**	21,993	(15,318)	6,675
OTC–cleared	**—**	**—**	**—**	—	—	—
Exchange-traded[(a)]	**18,486**	**(15,344)**	**3,142**	12,367	(11,212)	1,155
Total commodity contracts	**43,615**	**(28,555)**	**15,060**	34,360	(26,530)	7,830
Derivative payables with appropriate legal opinions	**$ 1,296,006**	**$ (1,243,960)** [(b)]	**$ 52,046**	$ 1,144,452	$ (1,102,835) [(b)]	$ 41,617
Derivative payables where an appropriate legal opinion has not been either sought or obtained	**19,070**		**19,070**	15,697		15,697
Total derivative payables recognized on the Consolidated balance sheets	**$ 1,315,076**		**$ 71,116**	$ 1,160,149		$ 57,314

(a) Exchange-traded derivative balances that relate to futures contracts are settled daily.
(b) Included cash collateral netted of $64.2 billion and $52.1 billion related to OTC and OTC-cleared derivatives at December 31, 2014, and 2013, 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 comprised of 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, 2014 and 2013, 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

	2014			2013		
December 31, (in millions)	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	**$ 58,258**	**$ (16,194)** [(a)]	**$ 42,064**	$ 50,025	$ (12,414) [(a)]	$ 37,611

Derivative payable collateral[(b)]

	2014			2013		
December 31, (in millions)	Net derivative payables	Collateral not nettable on the Consolidated balance sheets	Net amount[(c)]	Net derivative payables	Collateral not nettable on the Consolidated balance sheets	Net amount[(c)]
Derivative payables with appropriate legal opinions	**$ 52,046**	**$ (10,505)** [(a)]	**$ 41,541**	$ 41,617	$ (6,873) [(a)]	$ 34,744

(a) 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.
(b) 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, 2014 and 2013.

OTC and OTC-cleared derivative payables containing downgrade triggers

December 31, (in millions)	2014	2013
Aggregate fair value of net derivative payables	**$ 32,303**	$ 24,631
Collateral posted	**27,585**	20,346

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, 2014 and 2013, 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

	2014		2013	
December 31, (in millions)	Single-notch downgrade	Two-notch downgrade	Single-notch downgrade	Two-notch downgrade
Amount of additional collateral to be posted upon downgrade[(a)]	**$ 1,046**	**$ 3,331**	$ 952	$ 3,244
Amount required to settle contracts with termination triggers upon downgrade[(b)]	**366**	**1,388**	540	876

(a) Includes the additional collateral to be posted for initial margin.
(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, 2014, 2013 and 2012, 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.

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2014 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[(d)]	Excluded components[(e)]
Contract type					
Interest rate[(a)]	**$ 2,106**	**$ (801)**	**$ 1,305**	**$ 131**	**$ 1,174**
Foreign exchange[(b)]	**8,279**	**(8,532)**	**(253)**	**—**	**(253)**
Commodity[(c)]	**49**	**145**	**194**	**42**	**152**
Total	**$ 10,434**	**$ (9,188)**	**$ 1,246**	**$ 173**	**$ 1,073**

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2013 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[(d)]	Excluded components[(e)]
Contract type					
Interest rate[(a)]	$ (3,469)	$ 4,851	$ 1,382	$ (132)	$ 1,514
Foreign exchange[(b)]	(1,096)	864	(232)	—	(232)
Commodity[(c)]	485	(1,304)	(819)	38	(857)
Total	$ (4,080)	$ 4,411	$ 331	$ (94)	$ 425

	Gains/(losses) recorded in income			Income statement impact due to:	
Year ended December 31, 2012 (in millions)	Derivatives	Hedged items	Total income statement impact	Hedge ineffectiveness[(d)]	Excluded components[(e)]
Contract type					
Interest rate[(a)]	$ (1,238)	$ 1,879	$ 641	$ (28)	$ 669
Foreign exchange[(b)]	(3,027)	2,925	(102)	—	(102)
Commodity[(c)]	(2,530)	1,131	(1,399)	107	(1,506)
Total	$ (6,795)	$ 5,935	$ (860)	$ 79	$ (939)

(a) Primarily consists of hedges of the benchmark (e.g., London Interbank Offered Rate ("LIBOR")) interest rate risk of 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.
(d) 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.
(e) 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.

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, 2014, 2013 and 2012, 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.

	Gains/(losses) recorded in income and other comprehensive income/(loss)[c]				
Year ended December 31, 2014 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	**$ (54)**	**$ –**	**$ (54)**	**$ 189**	**$ 243**
Foreign exchange[b]	**78**	**–**	**78**	**(91)**	**(169)**
Total	**$ 24**	**$ –**	**$ 24**	**$ 98**	**$ 74**

	Gains/(losses) recorded in income and other comprehensive income/(loss)[c]				
Year ended December 31, 2013 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ (108)	$ –	$ (108)	$ (565)	$ (457)
Foreign exchange[b]	7	–	7	40	33
Total	$ (101)	$ –	$ (101)	$ (525)	$ (424)

	Gains/(losses) recorded in income and other comprehensive income/(loss)[c]				
Year ended December 31, 2012 (in millions)	Derivatives – effective portion reclassified from AOCI to income	Hedge ineffectiveness recorded directly in income[d]	Total income statement impact	Derivatives – effective portion recorded in OCI	Total change in OCI for period
Contract type					
Interest rate[a]	$ (3)	$ 5	$ 2	$ 13	$ 16
Foreign exchange[b]	31	–	31	128	97
Total	$ 28	$ 5	$ 33	$ 141	$ 113

(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, 2014, 2013 or 2012.
(d) Hedge ineffectiveness is the amount by which the cumulative gain or loss on the designated derivative instrument 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 $33 million (after-tax) of net losses recorded in AOCI at December 31, 2014, related to cash flow hedges will be recognized in income. The maximum length of time over which forecasted transactions are hedged is 9 years, and such transactions primarily relate to core lending and borrowing activities.

Net investment hedge gains and losses

The following table presents 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, 2014, 2013 and 2012.

	Gains/(losses) recorded in income and other comprehensive income/(loss)					
	2014		2013		2012	
Year ended December 31, (in millions)	Excluded components recorded directly in income(a)	Effective portion recorded in OCI	Excluded components recorded directly in income(a)	Effective portion recorded in OCI	Excluded components recorded directly in income(a)	Effective portion recorded in OCI
Foreign exchange derivatives	**$(448)**	**$1,698**	$(383)	$773	$(306)	$(82)

(a) 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 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 significant ineffectiveness for net investment hedge accounting relationships during 2014, 2013 and 2012.

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.

	Derivatives gains/(losses) recorded in income		
Year ended December 31, (in millions)	**2014**	2013	2012
Contract type			
Interest rate(a)	**$ 2,308**	$ 617	$ 5,353
Credit(b)	**(58)**	(142)	(175)
Foreign exchange(c)	**(7)**	1	47
Commodity(d)	**156**	178	94
Total	**$ 2,399**	$ 654	$ 5,319

(a) Primarily represents interest rate derivatives used to hedge the interest rate risk inherent in the mortgage pipeline, warehouse loans and MSRs, as well as written commitments to originate warehouse loans. Gains and losses were recorded predominantly in mortgage fees and related income.

(b) Relates to credit derivatives used to mitigate credit risk associated with lending exposures in the Firm's wholesale businesses. These derivatives do not include credit derivatives used to mitigate counterparty credit risk arising from derivative receivables, which is 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 assets and liabilities. Gains and losses were recorded in principal transactions revenue.

(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. All derivatives 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 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 certain financial instruments in the Firm's market-making businesses. 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.

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, 2014 and 2013. 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

	Maximum payout/Notional amount			
December 31, 2014 (in millions)	Protection sold	Protection purchased with identical underlyings[c]	Net protection (sold)/ purchased[d]	Other protection purchased[e]
Credit derivatives				
Credit default swaps	**$ (2,056,982)**	**$ 2,078,096**	**$ 21,114**	**$ 18,631**
Other credit derivatives[a]	**(43,281)**	**32,048**	**(11,233)**	**19,475**
Total credit derivatives	**(2,100,263)**	**2,110,144**	**9,881**	**38,106**
Credit-related notes	**(40)**	**–**	**(40)**	**3,704**
Total	**$ (2,100,303)**	**$ 2,110,144**	**$ 9,841**	**$ 41,810**

	Maximum payout/Notional amount			
December 31, 2013 (in millions)	Protection sold	Protection purchased with identical underlyings[c]	Net protection (sold)/ purchased[d]	Other protection purchased[e]
Credit derivatives				
Credit default swaps	$ (2,601,581)	$ 2,610,198	$ 8,617	$ 8,722
Other credit derivatives[a]	(44,137) [b]	45,921	1,784	20,480 [b]
Total credit derivatives	(2,645,718)	2,656,119	10,401	29,202
Credit-related notes	(130)	–	(130)	2,720
Total	$ (2,645,848)	$ 2,656,119	$ 10,271	$ 31,922

(a) Other credit derivatives predominantly consists of credit swap options.
(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) Represents the total notional amount of protection purchased where the underlying reference instrument is identical 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.
(d) 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.
(e) 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 amounts by the ratings and maturity profile, and the total fair value, of credit derivatives as of December 31, 2014 and 2013, 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[a]/maturity profile

December 31, 2014 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[c]	Fair value of payables[c]	Net fair value
Risk rating of reference entity							
Investment-grade	$ (323,398)	$ (1,118,293)	$ (79,486)	$ (1,521,177)	$ 25,767	$ (6,314)	$ 19,453
Noninvestment-grade	(157,281)	(396,798)	(25,047)	(579,126)	20,677	(22,455)	(1,778)
Total	$ (480,679)	$ (1,515,091)	$ (104,533)	$ (2,100,303)	$ 46,444	$ (28,769)	$ 17,675

December 31, 2013 (in millions)	<1 year	1–5 years	>5 years	Total notional amount	Fair value of receivables[c]	Fair value of payables[c]	Net fair value
Risk rating of reference entity							
Investment-grade	$ (368,712) [b]	$ (1,469,773) [b]	$ (93,209) [b]	$ (1,931,694) [b]	$ 31,730 [b]	$ (5,664) [b]	$ 26,066 [b]
Noninvestment-grade	(140,540)	(544,671)	(28,943)	(714,154)	27,426	(16,674)	10,752
Total	$ (509,252)	$ (2,014,444)	$ (122,152)	$ (2,645,848)	$ 59,156	$ (22,338)	$ 36,818

(a) The ratings scale is primarily based on external credit ratings defined by S&P and Moody's.
(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) Amounts are shown on a gross basis, before the benefit of legally enforceable master netting agreements and cash collateral received by the Firm.

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)	2014	2013	2012
Underwriting			
Equity	**$ 1,571**	$ 1,499	$ 1,026
Debt	**3,340**	3,537	3,290
Total underwriting	**4,911**	5,036	4,316
Advisory	**1,631**	1,318	1,492
Total investment banking fees	**$ 6,542**	$ 6,354	$ 5,808

Principal transactions

Principal transactions revenue consists of realized and unrealized gains and losses on derivatives and other instruments (including those accounted for under the fair value option) used in client-driven market-making activities and on private equity investments. In connection with its client-driven market-making activities, the Firm transacts in debt and equity instruments, derivatives and commodities (including physical commodities inventories and financial instruments that reference commodities).

Principal transactions revenue also includes 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 specific risk management purposes, primarily to mitigate credit risk, foreign exchange risk and commodity risk, and (c) other derivatives, including the synthetic credit portfolio. For further information on the income statement classification of gains and losses from derivatives activities, see Note 6.

In the financial commodity markets, the Firm transacts in OTC derivatives (e.g., swaps, forwards, options) and exchange-traded derivatives that reference a wide range of underlying commodities. In the physical commodity markets, the Firm primarily purchases and sells precious and base metals and may hold other commodities inventories under financing and other arrangements with clients. Prior to the 2014 sale of certain parts of its physical commodity business, the Firm also engaged in the purchase, sale, transport and storage of power, gas, liquefied natural gas, coal, crude oil and refined products.

Physical commodities inventories are generally carried at the lower of cost or market (market approximates fair value) subject to any applicable fair value hedge accounting adjustments, with realized gains and losses and unrealized losses recorded in principal transactions revenue.

The following table presents all realized and unrealized gains and losses recorded in principal transactions revenue. This table excludes interest income and interest expense on trading assets and liabilities, which are an integral part of the overall performance of the Firm's client-driven market-making activities. See Note 8 for further information on interest income and interest expense. Trading revenue is presented primarily by instrument type. The Firm's client-driven market-making businesses generally utilize a variety of instrument types in connection with their market-making and related risk-management activities; accordingly, the trading revenue presented in the table below is not representative of the total revenue of any individual line of business.

Year ended December 31, (in millions)	2014	2013	2012
Trading revenue by instrument type [(a)]			
Interest rate[(b)]	**$ 1,362**	$ 284	$ 4,002
Credit[(c)]	**1,880**	2,654	(4,975)
Foreign exchange	**1,556**	1,801	918
Equity	**2,563**	2,517	2,455
Commodity[(d)]	**1,663**	2,083	2,365
Total trading revenue[(e)]	**9,024**	9,339	4,765
Private equity gains[(f)]	**1,507**	802	771
Principal transactions	**$ 10,531**	$ 10,141	$ 5,536

(a) Prior to the second quarter of 2014, trading revenue was presented by major underlying type of risk exposure, generally determined based upon the business primarily responsible for managing that risk exposure. Prior period amounts have been revised to conform with the current period presentation. This revision had no impact on the Firm's Consolidated balance sheets or results of operations.
(b) Includes a pretax gain of $665 million for the year ended December 31, 2012, reflecting the recovery on a Bear Stearns-related subordinated loan.
(c) 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.
(d) Commodity derivatives are frequently used to manage the Firm's risk exposure to its physical commodities inventories. For gains/(losses) related to commodity fair value hedges, see Note 6.
(e) During 2013, the Firm implemented a FVA framework in order to incorporate the impact of funding into its valuation estimates for OTC derivatives and structured notes. As a result, the Firm recorded a $1.5 billion loss in principal transactions revenue in 2013, reported in the CIB. This reflected 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, 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)	2014	2013	2012
Asset management fees			
Investment management fees[a]	$ 9,169	$ 8,044	$ 6,744
All other asset management fees[b]	477	505	357
Total asset management fees	9,646	8,549	7,101
Total administration fees[c]	2,179	2,101	2,135
Commissions and other fees			
Brokerage commissions	2,270	2,321	2,331
All other commissions and fees	1,836	2,135	2,301
Total commissions and fees	4,106	4,456	4,632
Total asset management, administration and commissions	$ 15,931	$ 15,106	$ 13,868

(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 MSRs; 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 MSRs are reported in mortgage fees and related income. Net interest income from mortgage loans is recorded in interest income. For a further discussion of MSRs, see Note 17.

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. Cost related to rewards programs is recorded when the rewards are earned by the customer and presented as a reduction to interchange income. Annual fees and direct loan origination costs are deferred and recognized on a straight-line basis over a 12-month period.

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 sales 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 $1.7 billion, $1.5 billion and $1.3 billion for the years ended December 31, 2014, 2013 and 2012, respectively. Additionally, included in other income for the year ended December 31, 2013, is a net pretax gain of approximately $1.3 billion, from the sale of Visa B Shares.

Note 8 – Interest income and Interest expense

Interest income and interest expense are 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)	2014	2013	2012
Interest income			
Loans	**$ 32,218**	$ 33,489	$ 35,832
Taxable securities	**7,617**	6,916	7,231
Non-taxable securities[(a)]	**1,423**	896	708
Total securities	**9,040**	7,812	7,939
Trading assets[(b)]	**7,312**	8,099	8,929
Federal funds sold and securities purchased under resale agreements	**1,642**	1,940	2,442
Securities borrowed [(c)]	**(501)**	(127)	(3)
Deposits with banks	**1,157**	918	555
Other assets[(d)]	**663**	538	259
Total interest income[(b)]	**51,531**	52,669	55,953
Interest expense			
Interest-bearing deposits	**1,633**	2,067	2,655
Short-term and other liabilities[(b)(e)]	**1,450**	1,798	1,678
Long-term debt	**4,409**	5,007	6,062
Beneficial interests issued by consolidated VIEs	**405**	478	648
Total interest expense[(b)]	**7,897**	9,350	11,043
Net interest income	**43,634**	43,319	44,910
Provision for credit losses	**3,139**	225	3,385
Net interest income after provision for credit losses	**$ 40,495**	$ 43,094	$ 41,525

(a) Represents securities which are tax exempt for U.S. Federal Income Tax purposes.
(b) Prior period amounts have been reclassified to conform with the current period presentation.
(c) Negative interest income for the years ended December 31, 2014, 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 short-term and other liabilities.
(d) Largely margin loans.
(e) Includes brokerage customer payables.

Note 9 – Pension and other postretirement employee benefit plans

The Firm's defined benefit pension plans and its other postretirement employee benefit ("OPEB") 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 years of service and eligible compensation (generally base pay capped at $100,000 annually; effective January 1, 2015, in addition to base pay, eligible compensation will include certain other types of variable incentive compensation capped at $100,000 annually). 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 2015. The 2015 contributions to the non-U.S. defined benefit pension plans are expected to be $47 million of which $31 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 ("PBO") in the amount of $257 million and $245 million, at December 31, 2014 and 2013, respectively.

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. Employees can contribute to the 401(k) Savings Plan on a pretax and/or Roth 401(k) after-tax basis. 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 eligible compensation (generally base pay; effective January 1, 2015, in addition to base pay, eligible compensation will include certain other types of variable incentive compensation) 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 United Kingdom ("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.

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.

	Defined benefit pension plans					
As of or for the year ended December 31,	U.S.		Non-U.S.		OPEB plans[d]	
(in millions)	**2014**	2013	**2014**	2013	**2014**	2013
Change in benefit obligation						
Benefit obligation, beginning of year	**$ (10,776)**	$(11,478)	**$ (3,433)**	$ (3,243)	**$ (826)**	$ (990)
Benefits earned during the year	**(281)**	(314)	**(33)**	(34)	**–**	(1)
Interest cost on benefit obligations	**(534)**	(447)	**(137)**	(125)	**(38)**	(35)
Plan amendments	**(53)**	–	**–**	–	**–**	–
Special termination benefits	**–**	–	**(1)**	–	**–**	–
Curtailments	**–**	–	**–**	–	**(3)**	–
Employee contributions	**NA**	NA	**(7)**	(7)	**(62)**	(72)
Net gain/(loss)	**(1,669)**	794	**(408)**	(62)	**(58)**	138
Benefits paid	**777**	669	**119**	106	**145**	144
Expected Medicare Part D subsidy receipts	**NA**	NA	**NA**	NA	**(2)**	(10)
Foreign exchange impact and other	**–**	–	**260**	(68)	**2**	–
Benefit obligation, end of year	**$ (12,536)**	$(10,776)	**$ (3,640)**	$ (3,433)	**$ (842)**	$ (826)
Change in plan assets						
Fair value of plan assets, beginning of year	**$ 14,354**	$ 13,012	**$ 3,532**	$ 3,330	**$ 1,757**	$ 1,563
Actual return on plan assets	**1,010**	1,979	**518**	187	**159**	211
Firm contributions	**36**	32	**46**	45	**3**	2
Employee contributions	**–**	–	**7**	7	**–**	–
Benefits paid	**(777)**	(669)	**(119)**	(106)	**(16)**	(19)
Foreign exchange impact and other	**–**	–	**(266)**	69	**–**	–
Fair value of plan assets, end of year	**$ 14,623**	$ 14,354 [b][c]	**$ 3,718**	$ 3,532	**$ 1,903**	$ 1,757
Net funded status[a]	**$ 2,087**	$ 3,578	**$ 78**	$ 99	**$ 1,061**	$ 931
Accumulated benefit obligation, end of year	**$ (12,375)**	$(10,685)	**$ (3,615)**	$ (3,406)	**NA**	NA

(a) Represents plans with an aggregate overfunded balance of $3.9 billion and $5.1 billion at December 31, 2014 and 2013, respectively, and plans with an aggregate underfunded balance of $708 million and $540 million at December 31, 2014 and 2013, respectively.
(b) At December 31, 2014 and 2013, approximately $336 million and $429 million, respectively, of U.S. plan assets included participation rights under participating annuity contracts.
(c) At December 31, 2014 and 2013, defined benefit pension plan amounts not measured at fair value included $106 million and $96 million, respectively, of accrued receivables, and $257 million and $104 million, respectively, of accrued liabilities, for U.S. plans.
(d) Includes an unfunded accumulated postretirement benefit obligation of $37 million and $34 million at December 31, 2014 and 2013, 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 PBO 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 seven 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 five 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 twelve 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,	Defined benefit pension plans					
	U.S.		Non-U.S.		OPEB plans	
(in millions)	**2014**	2013	**2014**	2013	**2014**	2013
Net gain/(loss)	**$ (3,346)**	$ (1,726)	**$ (628)**	$ (658)	**$ 130**	$ 125
Prior service credit/(cost)	**102**	196	**11**	14	**–**	1
Accumulated other comprehensive income/(loss), pretax, end of year	**$ (3,244)**	$ (1,530)	**$ (617)**	$ (644)	**$ 130**	$ 126

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.

	Pension plans								
	U.S.			Non-U.S.			OPEB plans		
Year ended December 31, (in millions)	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012
Components of net periodic benefit cost									
Benefits earned during the year	**$ 281**	$ 314	$ 272	**$ 33**	$ 34	$ 41	**$ –**	$ 1	$ 1
Interest cost on benefit obligations	**534**	447	466	**137**	125	126	**38**	35	44
Expected return on plan assets	**(985)**	(956)	(861)	**(172)**	(142)	(137)	**(101)**	(92)	(90)
Amortization:									
Net (gain)/loss	**25**	271	289	**47**	49	36	**–**	1	(1)
Prior service cost/(credit)	**(41)**	(41)	(41)	**(2)**	(2)	–	**(1)**	–	–
Net periodic defined benefit cost	**(186)**	35	125	**43**	64	66	**(64)**	(55)	(46)
Other defined benefit pension plans[(a)]	**14**	15	15	**6**	14	8	**NA**	NA	NA
Total defined benefit plans	**(172)**	50	140	**49**	78	74	**(64)**	(55)	(46)
Total defined contribution plans	**438**	447	409	**329**	321	302	**NA**	NA	NA
Total pension and OPEB cost included in compensation expense	**$ 266**	$ 497	$ 549	**$ 378**	$ 399	$ 376	**$ (64)**	$ (55)	$ (46)
Changes in plan assets and benefit obligations recognized in other comprehensive income									
Net (gain)/loss arising during the year	**$ 1,645**	$ (1,817)	$ 434	**$ 57**	$ 19	$ 146	**$ (5)**	$ (257)	$ (43)
Prior service credit arising during the year	**53**	–	–	**–**	–	(6)	**–**	–	–
Amortization of net loss	**(25)**	(271)	(289)	**(47)**	(49)	(36)	**–**	(1)	1
Amortization of prior service (cost)/credit	**41**	41	41	**2**	2	–	**1**	–	–
Foreign exchange impact and other	**–**	–	–	**(39)** [(a)]	14 [(a)]	22 [(a)]	**–**	–	(1)
Total recognized in other comprehensive income	**$ 1,714**	$ (2,047)	$ 186	**$ (27)**	$ (14)	$ 126	**$ (4)**	$ (258)	$ (43)
Total recognized in net periodic benefit cost and other comprehensive income	**$ 1,528**	$ (2,012)	$ 311	**$ 16**	$ 50	$ 192	**$ (68)**	$ (313)	$ (89)

(a) Includes various defined benefit pension plans which are individually immaterial.

The estimated pretax amounts that will be amortized from AOCI into net periodic benefit cost in 2015 are as follows.

	Defined benefit pension plans		OPEB plans	
(in millions)	U.S.	Non-U.S.	U.S.	Non-U.S.
Net loss/(gain)	$ 257	$ 37	$ –	$ –
Prior service cost/(credit)	(34)	(2)	–	–
Total	$ 223	$ 35	$ –	$ –

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.

	U.S.			Non-U.S.		
Year ended December 31,	**2014**	2013	2012	**2014**	2013	2012
Actual rate of return:						
Defined benefit pension plans	**7.29%**	15.95%	12.66%	**5.62 - 17.69%**	3.74 - 23.80%	7.21 - 11.72%
OPEB plans	**9.84**	13.88	10.10	**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.

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 of appropriate duration from the analysis of yield curves provided by our actuaries.

In 2014, the Society of Actuaries ("SOA") completed a comprehensive review of mortality experience of uninsured private retirement plans in the U.S. In October 2014, the SOA published new mortality tables and a new mortality improvement scale that reflects improved life expectancies and an expectation that this trend will continue. The Firm has adopted the SOA's tables and projection scale, resulting in an estimated increase in PBO of $533 million.

At December 31, 2014, the Firm decreased 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 an increase in expense of approximately $139 million for 2015. The 2015 expected long-term rate of return on U.S. defined benefit pension plan assets and U.S. OPEB plan assets are 6.50% and 6.00%, respectively. For 2015, the initial health care benefit obligation trend assumption has been set at 6.00%, and the ultimate health care trend assumption and the year to reach the ultimate rate remains at 5.00% and 2017, respectively, unchanged from 2014. As of December 31, 2014, the interest crediting rate assumption and the assumed rate of compensation increase remained at 5.00% and 3.50%, respectively.

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

	U.S.		Non-U.S.	
December 31,	**2014**	2013	**2014**	2013
Discount rate:				
Defined benefit pension plans	**4.00%**	5.00%	**1.00 - 3.60%**	1.10 - 4.40%
OPEB plans	**4.10**	4.90	**–**	–
Rate of compensation increase	**3.50**	3.50	**2.75 - 4.20**	2.75 - 4.60
Health care cost trend rate:				
Assumed for next year	**6.00**	6.50	**–**	–
Ultimate	**5.00**	5.00	**–**	–
Year when rate will reach ultimate	**2017**	2017	**–**	–

Weighted-average assumptions used to determine net periodic benefit costs

	U.S.			Non-U.S.		
Year ended December 31,	**2014**	2013	2012	**2014**	2013	2012
Discount rate:						
Defined benefit pension plans	**5.00%**	3.90%	4.60%	**1.10 - 4.40%**	1.40 - 4.40%	1.50 - 4.80%
OPEB plans	**4.90**	3.90	4.70	**–**	–	–
Expected long-term rate of return on plan assets:						
Defined benefit pension plans	**7.00**	7.50	7.50	**1.20 - 5.30**	2.40 - 4.90	2.50 - 4.60
OPEB plans	**6.25**	6.25	6.25	**NA**	NA	NA
Rate of compensation increase	**3.50**	4.00	4.00	**2.75 - 4.60**	2.75 - 4.10	2.75 - 4.20
Health care cost trend rate:						
Assumed for next year	**6.50**	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 accumulated postretirement benefit obligation. As of December 31, 2014, there was no material effect on total service and interest cost.

Year ended December 31, 2014 (in millions)	1-Percentage point increase	1-Percentage point decrease
Effect on accumulated postretirement benefit obligation	$ 9	$ (8)

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 $40 million in 2015 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 2015 U.S. defined benefit pension and OPEB plan expense of approximately an aggregate $36 million and an increase in the related benefit obligations of approximately an aggregate $333 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 2015 U.S. defined benefit pension expense of approximately $36 million and a decrease in the related PBO of approximately $148 million. A 25-basis point decline in the discount rates for the non-U.S. plans would result in an increase in the 2015 non-U.S. defined benefit pension plan expense of approximately $19 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 of an insurance company and are allocated to investments 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 of the plan 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 5%, 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 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, 2014, 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 $3.7 billion and $2.9 billion for U.S. plans and $1.4 billion and $242 million for non-U.S. plans, as of December 31, 2014 and 2013, 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.

	Defined benefit pension plans								
	U.S.			Non-U.S.			OPEB plans[c]		
	Target	% of plan assets		Target	% of plan assets		Target	% of plan assets	
December 31,	Allocation	**2014**	2013	Allocation	**2014**	2013	Allocation	**2014**	2013
Asset category									
Debt securities[a]	0-80%	**31%**	25%	62%	**61%**	63%	30-70%	**50%**	50%
Equity securities	0-85	**46**	48	37	**38**	36	30-70	**50**	50
Real estate	0-10	**4**	4	–	**–**	–	–	**–**	–
Alternatives[b]	0-35	**19**	23	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.

Pension and OPEB plan assets and liabilities measured at fair value

December 31, 2014 (in millions)	U.S. defined benefit pension plans Level 1	Level 2	Level 3	Total fair value	Non-U.S. defined benefit pension plans[i] Level 1	Level 2	Total fair value
Cash and cash equivalents	$ 87	$ –	$ –	$ 87	$ 128	$ 1	$ 129
Equity securities:							
Capital equipment	1,249	–	–	1,249	96	24	120
Consumer goods	1,198	8	–	1,206	250	32	282
Banks and finance companies	778	7	–	785	279	31	310
Business services	458	–	–	458	277	18	295
Energy	267	–	–	267	50	15	65
Materials	319	1	–	320	40	9	49
Real Estate	46	–	–	46	1	–	1
Other	971	4	4	979	26	40	66
Total equity securities	5,286	20	4	5,310	1,019	169	1,188
Common/collective trust funds[a]	345	1,277	8	1,630	112	251	363
Limited partnerships:[b]							
Hedge funds	–	26	77	103	–	–	–
Private equity	–	–	2,208	2,208	–	–	–
Real estate	–	–	533	533	–	–	–
Real assets[c]	70	–	202	272	–	–	–
Total limited partnerships	70	26	3,020	3,116	–	–	–
Corporate debt securities[d]	–	1,454	9	1,463	–	724	724
U.S. federal, state, local and non-U.S. government debt securities	446	161	–	607	235	540	775
Mortgage-backed securities	1	73	1	75	2	77	79
Derivative receivables	–	114	–	114	–	258	258
Other[e]	2,031	27	337	2,395	283	58	341
Total assets measured at fair value[f]	$ 8,266	$ 3,152	$ 3,379	$ 14,797 [g]	$ 1,779	$ 2,078	$ 3,857
Derivative payables	$ –	$ (23)	$ –	$ (23)	$ –	$ (139)	$ (139)
Total liabilities measured at fair value	$ –	$ (23)	$ –	$ (23) [h]	$ –	$ (139)	$ (139)

December 31, 2013 (in millions)	U.S. defined benefit pension plans Level 1	Level 2	Level 3	Total fair value	Non-U.S. defined benefit pension plans[i] 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[a]	–	1,308	4	1,312	98	248	346
Limited partnerships:[b]							
Hedge funds	–	355	718	1,073	–	–	–
Private equity	–	–	1,969	1,969	–	–	–
Real estate	–	–	558	558	–	–	–
Real assets[c]	–	–	271	271	–	–	–
Total limited partnerships	–	355	3,516	3,871	–	–	–
Corporate debt securities[d]	–	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[e]	1,214	41	430	1,685	148	52	200
Total assets measured at fair value[f]	$ 7,083	$ 3,324	$ 3,961	$ 14,368 [g]	$ 1,418	$ 2,412	$ 3,830
Derivative payables	$ –	$ (6)	$ –	$ (6)	$ –	$ (298)	$ (298)
Total liabilities measured at fair value	$ –	$ (6)	$ –	$ (6) [h]	$ –	$ (298)	$ (298)

(a) At December 31, 2014 and 2013, 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 $1.2 billion and $1.6 billion for 2014 and 2013, 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.
(e) 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 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.
(f) At December 31, 2014 and 2013, the fair value of investments valued at NAV were $2.1 billion and $2.7 billion, respectively, which were classified within the valuation hierarchy as follows: $500 million and $100 million in level 1, $1.6 billion and $1.9 billion in level 2, zero and $700 million in level 3.
(g) At December 31, 2014 and 2013, excluded U.S. defined benefit pension plan receivables for investments sold and dividends and interest receivables of $106 million and $96 million, respectively.
(h) At December 31, 2014 and 2013, excluded $241 million and $102 million, respectively, of U.S. defined benefit pension plan payables for investments purchased; and $16 million and $2 million, respectively, of other liabilities.
(i) There were no assets or liabilities classified as level 3 for the non-U.S. defined benefit pension plans as of December 31, 2014 and 2013.

The Firm's U.S. OPEB plan was partially funded with COLI policies of $1.9 billion and $1.7 billion at December 31, 2014 and 2013, 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, 2014 (in millions)	Fair value, January 1, 2014	Actual return on plan assets: Realized gains/(losses)	Actual return on plan assets: Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2014
U.S. defined benefit pension plans						
Equities	$ 4	$ –	$ –	$ –	$ –	$ 4
Common/collective trust funds	4	–	1	3	–	8
Limited partnerships:						
Hedge funds	718	193	(180)	(662)	8	77
Private equity	1,969	192	173	(126)	–	2,208
Real estate	558	29	36	(90)	–	533
Real assets	271	27	(6)	(90)	–	202
Total limited partnerships	3,516	441	23	(968)	8	3,020
Corporate debt securities	7	(2)	2	4	(2)	9
Mortgage-backed securities	–	–	–	1	–	1
Other	430	–	(93)	–	–	337
Total U.S. defined benefit pension plans	$ 3,961	$ 439	$ (67)	$ (960)	$ 6	$ 3,379
OPEB plans						
COLI	$ 1,749	$ –	$ 154	$ –	$ –	$ 1,903
Total OPEB plans	$ 1,749	$ –	$ 154	$ –	$ –	$ 1,903

Year ended December 31, 2013 (in millions)	Fair value, January 1, 2013	Actual return on plan assets: Realized gains/(losses)	Actual return on plan assets: Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2013
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
Mortgage-backed securities	–	–	–	–	–	–
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 Realized gains/(losses)	Actual return on plan assets Unrealized gains/(losses)	Purchases, sales and settlements, net	Transfers in and/or out of level 3	Fair value, December 31, 2012
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
Mortgage-backed securities	–	–	–	–	–	–
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

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
2015	$ 712	$ 110	$ 73	$ 1
2016	765	113	71	1
2017	899	118	70	1
2018	926	128	68	1
2019	966	132	66	1
Years 2020–2024	4,357	746	293	5

Note 10 – Employee stock-based incentives

Employee stock-based awards

In 2014, 2013 and 2012, 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, 2014, 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.

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 periodically grants employee stock options to individual employees. There were no material grants of stock options or SARs in 2014. Grants of SARs in 2013 and 2012 become exercisable ratably over five years (i.e., 20% per year) and contain clawback provisions similar to RSUs. The 2013 and 2012 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 2014, 2013 and 2012, 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. On July 15, 2014, the Compensation Committee and Board of Directors determined that all requirements for the vesting of the 2 million SAR awards had been met and thus, the awards became exercisable. The SARs, which will expire in January 2018, have an exercise price of $39.83 (the price of JPMorgan Chase common stock on the date of grant). The expense related to this award was dependent on changes in fair value of the SARs through July 15, 2014 (the date when the vested number of SARs were determined), and the cumulative expense was recognized ratably over the service period, which was initially assumed to be five years but, effective in the first quarter of 2013, had been extended to six and one-half years. The Firm recognized $3 million, $14 million and $5 million in compensation expense in 2014, 2013 and 2012, respectively, for this award.

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 2014.

Year ended December 31, 2014 (in thousands, except weighted-average data, and where otherwise stated)	RSUs Number of shares	RSUs Weighted-average grant date fair value	Options/SARs Number of awards	Options/SARs Weighted-average exercise price	Options/SARs Weighted-average remaining contractual life (in years)	Options/SARs Aggregate intrinsic value
Outstanding, January 1	121,241	$ 41.47	87,075	$ 44.24		
Granted	37,817	57.88	101	59.18		
Exercised or vested	(54,265)	40.67	(24,950)	36.59		
Forfeited	(4,225)	47.32	(2,059)	41.90		
Canceled	NA	NA	(972)	200.86		
Outstanding, December 31	100,568	$ 47.81	59,195	$ 45.00	5.2	$ 1,313,939
Exercisable, December 31	NA	NA	37,171	46.46	4.3	862,374

The total fair value of RSUs that vested during the years ended December 31, 2014, 2013 and 2012, was $3.2 billion, $2.9 billion and $2.8 billion, respectively. There were no material grants of stock options or SARs in 2014. The weighted-average grant date per share fair value of stock options and SARs granted during the years ended December 31, 2013 and 2012, was $9.58 and $8.89, respectively. The total intrinsic value of options exercised during the years ended December 31, 2014, 2013 and 2012, was $539 million, $507 million and $283 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)	**2014**	2013	2012
Cost of prior grants of RSUs and SARs that are amortized over their applicable vesting periods	**$ 1,371**	$ 1,440	$ 1,810
Accrual of estimated costs of stock-based awards to be granted in future periods including those to full-career eligible employees	**819**	779	735
Total noncash compensation expense related to employee stock-based incentive plans	**$ 2,190**	$ 2,219	$ 2,545

At December 31, 2014, approximately $758 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, 2014, 2013 and 2012, were $854 million, $865 million 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)	**2014**	2013	2012
Cash received for options exercised	**$ 63**	$ 166	$ 333
Tax benefit realized[(a)]	**104**	42	53

(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 and 2012, under the Black-Scholes valuation model. There were no material grants of stock options or SARs for the year ended December 31, 2014.

Year ended December 31,	2013	2012
Weighted-average annualized valuation assumptions		
Risk-free interest rate	1.18%	1.19%
Expected dividend yield	2.66	3.15
Expected common stock price volatility	28	35
Expected life (in years)	6.6	6.6

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)	**2014**	2013	2012
Compensation expense	$ 30,160	$ 30,810	$ 30,585
Noncompensation expense:			
Occupancy	3,909	3,693	3,925
Technology, communications and equipment	5,804	5,425	5,224
Professional and outside services	7,705	7,641	7,429
Marketing	2,550	2,500	2,577
Other[(a)(b)]	11,146	20,398	14,989
Total noncompensation expense	31,114	39,657	34,144
Total noninterest expense	$ 61,274	$ 70,467	$ 64,729

(a) Included firmwide legal expense of $2.9 billion, $11.1 billion and $5.0 billion and for the years ended December 31, 2014, 2013 and 2012, respectively.
(b) Included FDIC-related expense of $1.0 billion, $1.5 billion and $1.7 billion for the years ended December 31, 2014, 2013 and 2012, respectively.

Note 12 – Securities

Securities are classified as trading, AFS or held-to-maturity (“HTM”). Securities classified as trading assets are discussed in Note 3. Predominantly all of the Firm’s AFS and HTM investment securities (the “investment securities portfolio”) are held by CIO in connection with its asset-liability management objectives. At December 31, 2014, 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 generally amortized into interest income over the contractual life of the security.

During the first quarter of 2014, the Firm transferred U.S. government agency mortgage-backed securities and obligations of U.S. states and municipalities with a fair value of $19.3 billion from AFS to HTM. These securities were transferred at fair value, and the transfer was a non-cash transaction. AOCI included net pretax unrealized losses of $9 million on the securities at the date of transfer. The transfer reflected the Firm’s intent to hold the securities to maturity in order to reduce the impact of price volatility on AOCI and certain capital measures under Basel III.

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 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 that 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 cost basis. Any impairment loss on an equity security is equal to the full difference between the cost basis and the fair value of the security.

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)	**2014**	2013	2012
Realized gains	**$ 314**	$1,302	$2,610
Realized losses	**(233)**	(614)	(457)
Net realized gains	**81**	688	2,153
OTTI losses			
Credit-related	**(2)**	(1)	(28)
Securities the Firm intends to sell[a]	**(2)**	(20)	(15)
Total OTTI losses recognized in income	**(4)**	(21)	(43)
Net securities gains	**$ 77**	$ 667	$2,110

(a) Excludes realized losses on securities sold of $3 million, $12 million and $24 million for the years ended December 31, 2014, 2013 and 2012, respectively that had been previously reported as an OTTI loss due to the intention to sell the securities.

The amortized costs and estimated fair values of the investment securities portfolio were as follows for the dates indicated.

	2014				2013			
December 31, (in millions)	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[a]	**$ 63,089**	**$ 2,302**	**$ 72**	**$ 65,319**	$ 76,428	$ 2,364	$ 977	$ 77,815
Residential:								
Prime and Alt-A	**5,595**	**78**	**29**	**5,644**	2,744	61	27	2,778
Subprime	**677**	**14**	**–**	**691**	908	23	1	930
Non-U.S.	**43,550**	**1,010**	**–**	**44,560**	57,448	1,314	1	58,761
Commercial	**20,687**	**438**	**17**	**21,108**	15,891	560	26	16,425
Total mortgage-backed securities	**133,598**	**3,842**	**118**	**137,322**	153,419	4,322	1,032	156,709
U.S. Treasury and government agencies[a]	**13,603**	**56**	**14**	**13,645**	21,310	385	306	21,389
Obligations of U.S. states and municipalities	**27,841**	**2,243**	**16**	**30,068**	29,741	707	987	29,461
Certificates of deposit	**1,103**	**1**	**1**	**1,103**	1,041	1	1	1,041
Non-U.S. government debt securities	**51,492**	**1,272**	**21**	**52,743**	55,507	863	122	56,248
Corporate debt securities	**18,158**	**398**	**24**	**18,532**	21,043	498	29	21,512
Asset-backed securities:								
Collateralized loan obligations	**30,229**	**147**	**182**	**30,194**	28,130	236	136	28,230
Other	**12,442**	**184**	**11**	**12,615**	12,062	186	3	12,245
Total available-for-sale debt securities	**288,466**	**8,143**	**387**	**296,222**	322,253	7,198	2,616	326,835
Available-for-sale equity securities	**2,513**	**17**	**–**	**2,530**	3,125	17	–	3,142
Total available-for-sale securities	**$ 290,979**	**$ 8,160**	**$ 387**	**$ 298,752**	$ 325,378	$ 7,215	$ 2,616	$ 329,977
Total held-to-maturity securities[b]	**$ 49,252**	**$ 1,902**	**$ –**	**$ 51,154**	$ 24,026	$ 22	$ 317	$ 23,731

(a) Includes total U.S. government-sponsored enterprise obligations with fair values of $59.3 billion and $67.0 billion at December 31, 2014 and 2013, respectively, which were predominantly mortgage-related.
(b) As of December 31, 2014, consists of MBS issued by U.S. government-sponsored enterprises with an amortized cost of $35.3 billion, MBS issued by U.S. government agencies with an amortized cost of $3.7 billion and obligations of U.S. states and municipalities with an amortized cost of $10.2 billion. 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, 2014 and 2013.

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2014 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total gross unrealized losses
Available-for-sale debt securities						
Mortgage-backed securities:						
U.S. government agencies	$ **1,118**	$ **5**	$ **4,989**	$ **67**	$ **6,107**	$ **72**
Residential:						
Prime and Alt-A	**1,840**	**10**	**405**	**19**	**2,245**	**29**
Subprime	—	—	—	—	—	—
Non-U.S.	—	—	—	—	—	—
Commercial	**4,803**	**15**	**92**	**2**	**4,895**	**17**
Total mortgage-backed securities	**7,761**	**30**	**5,486**	**88**	**13,247**	**118**
U.S. Treasury and government agencies	**8,412**	**14**	—	—	**8,412**	**14**
Obligations of U.S. states and municipalities	**1,405**	**15**	**130**	**1**	**1,535**	**16**
Certificates of deposit	**1,050**	**1**	—	—	**1,050**	**1**
Non-U.S. government debt securities	**4,433**	**4**	**906**	**17**	**5,339**	**21**
Corporate debt securities	**2,492**	**22**	**80**	**2**	**2,572**	**24**
Asset-backed securities:						
Collateralized loan obligations	**13,909**	**76**	**9,012**	**106**	**22,921**	**182**
Other	**2,258**	**11**	—	—	**2,258**	**11**
Total available-for-sale debt securities	**41,720**	**173**	**15,614**	**214**	**57,334**	**387**
Available-for-sale equity securities	—	—	—	—	—	—
Held-to-maturity securities	—	—	—	—	—	—
Total securities with gross unrealized losses	$ **41,720**	$ **173**	$ **15,614**	$ **214**	$ **57,334**	$ **387**

	Securities with gross unrealized losses					
	Less than 12 months		12 months or more			
December 31, 2013 (in millions)	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Total fair value	Total 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

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)	2014	2013	2012
Debt securities the Firm does not intend to sell that have credit losses			
Total OTTI[a]	**$ (2)**	$ (1)	$ (113)
Losses recorded in/ (reclassified from) AOCI	**–**	–	85
Total credit losses recognized in income	**(2)**	(1)	(28)
Securities the Firm intends to sell[b]	**(2)**	(20)	(15)
Total OTTI losses recognized in income	**$ (4)**	$ (21)	$ (43)

(a) For initial OTTI, represents the excess of the amortized cost over the fair value of AFS debt securities. For subsequent impairments of the same security, represents additional declines in fair value subsequent to previously recorded OTTI, if applicable.

(b) Excludes realized losses on securities sold of $3 million, $12 million and $24 million for the years ended December 31, 2014, 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, 2014, 2013 and 2012, 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)	2014	2013	2012
Balance, beginning of period	**$ 1**	$ 522	$ 708
Additions:			
Newly credit-impaired securities	**2**	1	21
Losses reclassified from other comprehensive income on previously credit-impaired securities	**–**	–	7
Reductions:			
Sales and redemptions of credit-impaired securities	**–**	(522)	(214)
Balance, end of period	**$ 3**	$ 1	$ 522

Gross unrealized losses

Gross unrealized losses have generally decreased since December 31, 2013. Though losses on securities that have been in an unrealized loss position for 12 months or more have increased, the increase is not material. The Firm has recognized the unrealized losses on securities it intends to sell. As of December 31, 2014, 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, 2014.

Contractual maturities and yields

The following table presents the amortized cost and estimated fair value at December 31, 2014, of JPMorgan Chase's investment securities portfolio by contractual maturity.

By remaining maturity December 31, 2014 (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[c]	Total
Available-for-sale debt securities					
Mortgage-backed securities[a]					
Amortized cost	$ 996	$ 14,132	$ 5,768	$ 112,702	$ 133,598
Fair value	1,003	14,467	5,974	115,878	137,322
Average yield[b]	2.65%	1.85%	3.12%	2.93%	2.82%
U.S. Treasury and government agencies[a]					
Amortized cost	$ 2,209	$ –	$ 10,284	$ 1,110	$ 13,603
Fair value	2,215	–	10,275	1,155	13,645
Average yield[b]	0.80%	–%	0.62%	0.35%	0.63%
Obligations of U.S. states and municipalities					
Amortized cost	$ 65	$ 498	$ 1,432	$ 25,846	$ 27,841
Fair value	66	515	1,508	27,979	30,068
Average yield[b]	2.13%	4.00%	4.93%	6.78%	6.63%
Certificates of deposit					
Amortized cost	$ 1,052	$ 51	$ –	$ –	$ 1,103
Fair value	1,050	53	–	–	1,103
Average yield[b]	0.84%	3.28%	–%	–%	0.95%
Non-U.S. government debt securities					
Amortized cost	$ 13,559	$ 14,276	$ 21,220	$ 2,437	$ 51,492
Fair value	13,588	14,610	21,957	2,588	52,743
Average yield[b]	3.31%	2.04%	1.04%	1.19%	1.90%
Corporate debt securities					
Amortized cost	$ 3,830	$ 9,619	$ 4,523	$ 186	$ 18,158
Fair value	3,845	9,852	4,651	184	18,532
Average yield[b]	2.39%	2.40%	2.56%	3.43%	2.45%
Asset-backed securities					
Amortized cost	$ –	$ 2,240	$ 17,439	$ 22,992	$ 42,671
Fair value	–	2,254	17,541	23,014	42,809
Average yield[b]	–%	1.66%	1.75%	1.73%	1.73%
Total available-for-sale debt securities					
Amortized cost	$ 21,711	$ 40,816	$ 60,666	$ 165,273	$ 288,466
Fair value	21,767	41,751	61,906	170,798	296,222
Average yield[b]	2.74%	2.06%	1.58%	3.32%	2.73%
Available-for-sale equity securities					
Amortized cost	$ –	$ –	$ –	$ 2,513	$ 2,513
Fair value	–	–	–	2,530	2,530
Average yield[b]	–%	–%	–%	0.25%	0.25%
Total available-for-sale securities					
Amortized cost	$ 21,711	$ 40,816	$ 60,666	$ 167,786	$ 290,979
Fair value	21,767	41,751	61,906	173,328	298,752
Average yield[b]	2.74%	2.06%	1.58%	3.28%	2.71%
Total held-to-maturity securities					
Amortized cost	$ –	$ 54	$ 487	$ 48,711	$ 49,252
Fair value	–	54	512	50,588	51,154
Average yield[b]	–%	4.33%	4.81%	3.98%	3.98%

(a) U.S. government-sponsored enterprises were the only issuers whose securities exceeded 10% of JPMorgan Chase's total stockholders' equity at December 31, 2014.

(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, is approximately five years for agency residential mortgage-backed securities, three years for agency residential collateralized mortgage obligations and four 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. 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. 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, 2014 and 2013, 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.

	2014			2013		
December 31, (in millions)	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	**$ 341,989**	**$ (142,719)**	**$ 199,270**	$ 354,814	$ (115,408)	$ 239,406
Securities purchased under resale agreements where an appropriate legal opinion has not been either sought or obtained	**15,751**		**15,751**	8,279		8,279
Total securities purchased under resale agreements	**$ 357,740**	**$ (142,719)**	**$ 215,021** (a)	$ 363,093	$ (115,408)	$ 247,685 (a)
Securities borrowed	**$ 110,435**	**N/A**	**$ 110,435** (b)(c)	$ 111,465	N/A	$ 111,465 (b)(c)

(a) At December 31, 2014 and 2013, included securities purchased under resale agreements of $28.6 billion and $25.1 billion, respectively, accounted for at fair value.
(b) At December 31, 2014 and 2013, included securities borrowed of $992 million and $3.7 billion, respectively, accounted for at fair value.
(c) Included $28.0 billion and $26.9 billion at December 31, 2014 and 2013, respectively, of securities borrowed 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, 2014 and 2013, 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.

	2014				2013			
		Amounts not nettable on the Consolidated balance sheets[a]				Amounts not nettable on the Consolidated balance sheets[a]		
December 31, (in millions)	Net asset balance	Financial instruments[b]	Cash collateral	Net exposure	Net asset balance	Financial instruments[b]	Cash collateral	Net exposure
Securities purchased under resale agreements with an appropriate legal opinion	**$ 199,270**	**$ (196,136)**	**$ (232)**	**$ 2,902**	$ 239,406	$ (234,495)	$ (98)	$ 4,813
Securities borrowed	**$ 82,464**	**$ (80,267)**	**$ –**	**$ 2,197**	$ 84,531	$ (81,127)	$ –	$ 3,404

(a) 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.
(b) 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, 2014 and 2013, 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.

	2014			2013		
December 31, (in millions)	Gross liability balance	Amounts netted on the Consolidated balance sheets	Net liability balance	Gross liability balance	Amounts netted on the Consolidated balance sheets	Net liability balance
Securities sold under repurchase agreements						
Securities sold under repurchase agreements with an appropriate legal opinion	**$ 289,619**	**$ (142,719)**	**$ 146,900**	$ 257,630 [f]	$ (115,408)	$ 142,222 [f]
Securities sold under repurchase agreements where an appropriate legal opinion has not been either sought or obtained[a]	**22,906**		**22,906**	18,143 [f]		18,143 [f]
Total securities sold under repurchase agreements	**$ 312,525**	**$ (142,719)**	**$ 169,806** [c]	$ 275,773	$ (115,408)	$ 160,365 [c]
Securities loaned[b]	**$ 25,927**	**N/A**	**$ 25,927** [d][e]	$ 25,769	N/A	$ 25,769 [d][e]

(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 $4.1 billion and $5.8 billion at December 31, 2014 and 2013, respectively, when acting as lender and as presented within other liabilities in the Consolidated balance sheets.
(c) At December 31, 2014 and 2013, included securities sold under repurchase agreements of $3.0 billion and $4.9 billion, respectively, accounted for at fair value.
(d) At December 31, 2013, included securities loaned of $483 million accounted for at fair value; there were no securities loaned accounted for at fair value at December 31, 2014.
(e) Included $537 million and $397 million at December 31, 2014 and 2013, respectively, of securities loaned where an appropriate legal opinion has not been either sought or obtained with respect to the master netting agreement.
(f) 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.

The following table presents information as of December 31, 2014 and 2013, 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.

	2014				2013			
		Amounts not nettable on the Consolidated balance sheets[a]				Amounts not nettable on the Consolidated balance sheets[a]		
December 31, (in millions)	Net liability balance	Financial instruments[b]	Cash collateral	Net amount[c]	Net liability balance	Financial instruments[b]	Cash collateral	Net amount[c]
Securities sold under repurchase agreements with an appropriate legal opinion	**$ 146,900**	**$ (143,985)**	**$ (363)**	**$ 2,552**	$ 142,222 [d]	$ (139,051) [d]	$ (450)	$ 2,721
Securities loaned	**$ 25,390**	**$ (25,040)**	**$ –**	**$ 350**	$ 25,372	$ (25,125)	$ –	$ 247

(a) 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.
(b) 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.
(d) The prior period amounts have been revised with a corresponding impact in the table above. This revision had no impact on the Firm's Consolidated balance sheets or its results of operations.

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, 2014 and 2013.

For further information regarding assets pledged and collateral received in securities financing agreements, see Note 30.

Transfers not qualifying for sale accounting

In addition, at December 31, 2014 and 2013, the Firm held $13.8 billion and $14.6 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 predominantly recorded in other borrowed funds on the Consolidated balance sheets.

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, or when principal and interest has been in default for a period of 90 days or more, 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. 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 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 2013, 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 loss 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.

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 for further information on the Firm's elections of fair value accounting under the fair value option. See Note 3 and Note 4 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 251 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; non-credit related losses such as those 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.

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.

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[(a)]	**Credit card**	**Wholesale**[(c)]
Residential real estate – excluding PCI • Home equity – senior lien • Home equity – junior lien • Prime mortgage, including option ARMs • Subprime mortgage Other consumer loans • Auto[(b)] • Business banking[(b)] • Student and other Residential real estate – PCI • Home equity • Prime mortgage • Subprime mortgage • Option ARMs	• Credit card loans	• Commercial and industrial • Real estate • Financial institutions • Government agencies • Other[(d)]

(a) Includes loans held in CCB, prime mortgage and home equity loans held in AM and prime mortgage loans held in Corporate.
(b) 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.
(c) Includes loans held in CIB, CB, AM and Corporate. Excludes prime mortgage and home equity loans held in AM and prime mortgage loans held in Corporate. Classes are internally defined and may not align with regulatory definitions.
(d) Other primarily includes loans to SPEs and loans to private banking clients. See Note 1 for additional information on SPEs.

The following tables summarize the Firm's loan balances by portfolio segment.

December 31, 2014 (in millions)	Consumer, excluding credit card	Credit card[(a)]	Wholesale	Total
Retained	**$ 294,979**	**$ 128,027**	**$ 324,502**	**$ 747,508** [(b)]
Held-for-sale	**395**	**3,021**	**3,801**	**7,217**
At fair value	**–**	**–**	**2,611**	**2,611**
Total	**$ 295,374**	**$ 131,048**	**$ 330,914**	**$ 757,336**

December 31, 2013 (in millions)	Consumer, excluding credit card	Credit card[(a)]	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

(a) Includes billed finance charges and fees net of an allowance for uncollectible amounts.
(b) Loans (other than PCI loans and those for which the fair value option has been elected) are presented net of unearned income, unamortized discounts and premiums, and net deferred loan costs of $1.3 billion and $1.9 billion at December 31, 2014 and 2013, respectively.

The following tables provide 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.

	2014			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	**$ 7,434** [(a)(b)]	**$ –**	**$ 885**	**$ 8,319**
Sales	**6,655**	**291**	**7,381**	**14,327**
Retained loans reclassified to held-for-sale	**1,190**	**3,039**	**581**	**4,810**

	2013			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	$ 7,616 [(a)(b)]	$ 328	$ 697	$ 8,641
Sales	4,845	–	4,232	9,077
Retained loans reclassified to held-for-sale	1,261	309	5,641	7,211

	2012			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Purchases	$ 6,601 [(a)(b)]	$ –	$ 827	$ 7,428
Sales	1,852	–	3,423	5,275
Retained loans reclassified to held-for-sale	–	1,043	504	1,547

(a) 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 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").
(b) Excluded retained loans purchased from correspondents that were originated in accordance with the Firm's underwriting standards. Such purchases were $15.1 billion, $5.7 billion and $1.4 billion for the years ended December 31, 2014, 2013 and 2012, respectively.

The following table provides information about gains and losses, including lower of cost or fair value adjustments, on loan sales by portfolio segment.

Year ended December 31, (in millions)	**2014**	2013	2012
Net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)[(a)]			
Consumer, excluding credit card	**$ 341**	$ 313	$ 122
Credit card	**(241)**	3	(9)
Wholesale	**101**	(76)	180
Total net gains/(losses) on sales of loans (including lower of cost or fair value adjustments)	**$ 201**	$ 240	$ 293

(a) Excludes sales related to loans accounted for at fair value.

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)	2014	2013
Residential real estate – excluding PCI		
Home equity:		
Senior lien	**$ 16,367**	$ 17,113
Junior lien	**36,375**	40,750
Mortgages:		
Prime, including option ARMs	**104,921**	87,162
Subprime	**5,056**	7,104
Other consumer loans		
Auto	**54,536**	52,757
Business banking	**20,058**	18,951
Student and other	**10,970**	11,557
Residential real estate – PCI		
Home equity	**17,095**	18,927
Prime mortgage	**10,220**	12,038
Subprime mortgage	**3,673**	4,175
Option ARMs	**15,708**	17,915
Total retained loans	**$ 294,979**	$ 288,449

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.
- 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 255 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.

Residential real estate – excluding PCI loans

December 31, (in millions, except ratios)	Home equity – Senior lien 2014	Home equity – Senior lien 2013	Home equity – Junior lien 2014	Home equity – Junior lien 2013	Mortgages – Prime, including option ARMs 2014	Mortgages – Prime, including option ARMs 2013	Mortgages – Subprime 2014	Mortgages – Subprime 2013	Total residential real estate – excluding PCI 2014	Total residential real estate – excluding PCI 2013
Loan delinquency[(a)]										
Current	**$ 15,730**	$ 16,470	**$ 35,575**	$ 39,864	**$ 93,951**	$ 76,108	**$ 4,296**	$ 5,956	**$ 149,552**	$ 138,398
30–149 days past due	**275**	298	**533**	662	**4,091**	3,155	**489**	646	**5,388**	4,761
150 or more days past due	**362**	345	**267**	224	**6,879**	7,899	**271**	502	**7,779**	8,970
Total retained loans	**$ 16,367**	$ 17,113	**$ 36,375**	$ 40,750	**$ 104,921**	$ 87,162	**$ 5,056**	$ 7,104	**$ 162,719**	$ 152,129
% of 30+ days past due to total retained loans[(b)]	**3.89%**	3.76%	**2.20%**	2.17%	**1.42%**	2.32%	**15.03%**	16.16%	**2.27%**	3.09%
90 or more days past due and still accruing	**$ –**	$ –	**$ –**	$ –	**$ –**	$ –	**$ –**	$ –	**$ –**	$ –
90 or more days past due and government guaranteed[(c)]	**–**	–	**–**	–	**7,544**	7,823	**–**	–	**7,544**	7,823
Nonaccrual loans	**938**	932	**1,590**	1,876	**2,190**	2,666	**1,036**	1,390	**5,754**	6,864
Current estimated LTV ratios[(d)(e)(f)(g)]										
Greater than 125% and refreshed FICO scores:										
Equal to or greater than 660	**$ 21**	$ 40	**$ 467**	$ 1,101	**$ 120**	$ 236	**$ 10**	$ 52	**$ 618**	$ 1,429
Less than 660	**10**	22	**138**	346	**103**	281	**51**	197	**302**	846
101% to 125% and refreshed FICO scores:										
Equal to or greater than 660	**134**	212	**3,149**	4,645	**648**	1,210	**118**	249	**4,049**	6,316
Less than 660	**69**	107	**923**	1,407	**340**	679	**298**	597	**1,630**	2,790
80% to 100% and refreshed FICO scores:										
Equal to or greater than 660	**633**	858	**6,481**	7,995	**3,863**	4,749	**432**	614	**11,409**	14,216
Less than 660	**226**	326	**1,780**	2,128	**1,026**	1,590	**770**	1,141	**3,802**	5,185
Less than 80% and refreshed FICO scores:										
Equal to or greater than 660	**13,048**	13,186	**20,030**	19,732	**81,805**	59,634	**1,586**	1,961	**116,469**	94,513
Less than 660	**2,226**	2,362	**3,407**	3,396	**4,906**	5,071	**1,791**	2,293	**12,330**	13,122
U.S. government-guaranteed	**–**	–	**–**	–	**12,110**	13,712	**–**	–	**12,110**	13,712
Total retained loans	**$ 16,367**	$ 17,113	**$ 36,375**	$ 40,750	**$ 104,921**	$ 87,162	**$ 5,056**	$ 7,104	**$ 162,719**	$ 152,129
Geographic region										
California	**$ 2,232**	$ 2,397	**$ 8,144**	$ 9,240	**$ 28,133**	$ 21,876	**$ 718**	$ 1,069	**$ 39,227**	$ 34,582
New York	**2,805**	2,732	**7,685**	8,429	**16,550**	14,085	**677**	942	**27,717**	26,188
Illinois	**1,306**	1,248	**2,605**	2,815	**6,654**	5,216	**207**	280	**10,772**	9,559
Florida	**861**	847	**1,923**	2,167	**5,106**	4,598	**632**	885	**8,522**	8,497
Texas	**1,845**	2,044	**1,087**	1,199	**4,935**	3,565	**177**	220	**8,044**	7,028
New Jersey	**654**	630	**2,233**	2,442	**3,361**	2,679	**227**	339	**6,475**	6,090
Arizona	**927**	1,019	**1,595**	1,827	**1,805**	1,385	**112**	144	**4,439**	4,375
Washington	**506**	555	**1,216**	1,378	**2,410**	1,951	**109**	150	**4,241**	4,034
Michigan	**736**	799	**848**	976	**1,203**	998	**121**	178	**2,908**	2,951
Ohio	**1,150**	1,298	**778**	907	**615**	466	**112**	161	**2,655**	2,832
All other[(h)]	**3,345**	3,544	**8,261**	9,370	**34,149**	30,343	**1,964**	2,736	**47,719**	45,993
Total retained loans	**$ 16,367**	$ 17,113	**$ 36,375**	$ 40,750	**$ 104,921**	$ 87,162	**$ 5,056**	$ 7,104	**$ 162,719**	$ 152,129

(a) Individual delinquency classifications include mortgage loans insured by U.S. government agencies as follows: current included $2.6 billion and $4.7 billion; 30–149 days past due included $3.5 billion and $2.4 billion; and 150 or more days past due included $6.0 billion and $6.6 billion at December 31, 2014 and 2013, respectively.
(b) At December 31, 2014 and 2013, Prime, including option ARMs loans excluded mortgage loans insured by U.S. government agencies of $9.5 billion and $9.0 billion, respectively. These amounts have been excluded from nonaccrual loans based upon the government guarantee.
(c) 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, 2014 and 2013, these balances included $4.2 billion and $4.7 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.
(d) 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.
(e) 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.
(f) Refreshed FICO scores represent each borrower's most recent credit score, which is obtained by the Firm on at least a quarterly basis.
(g) The prior period prime, including option ARMs have been revised. This revision had no impact on the Firm's Consolidated balance sheets or its results of operations.
(h) At December 31, 2014 and 2013, included mortgage loans insured by U.S. government agencies of $12.1 billion and $13.7 billion, respectively.

The following tables represent the Firm's delinquency statistics for junior lien home equity loans and lines as of December 31, 2014 and 2013.

December 31, 2014 (in millions, except ratios)	Delinquencies: 30–89 days past due	Delinquencies: 90–149 days past due	Delinquencies: 150+ days past due	Total loans	Total 30+ day delinquency rate
HELOCs:[a]					
Within the revolving period[b]	**$ 233**	**$ 69**	**$ 141**	**$ 25,252**	**1.75%**
Beyond the revolving period	**108**	**37**	**107**	**7,979**	**3.16**
HELOANs	**66**	**20**	**19**	**3,144**	**3.34**
Total	**$ 407**	**$ 126**	**$ 267**	**$ 36,375**	**2.20%**

December 31, 2013 (in millions, except ratios)	Delinquencies: 30–89 days past due	Delinquencies: 90–149 days past due	Delinquencies: 150+ days past due	Total loans	Total 30+ day delinquency rate
HELOCs:[a]					
Within the revolving period[b]	$ 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%

(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.

December 31, (in millions)	Home equity – Senior lien 2014	Home equity – Senior lien 2013	Home equity – Junior lien 2014	Home equity – Junior lien 2013	Mortgages – Prime, including option ARMs 2014	Mortgages – Prime, including option ARMs 2013	Mortgages – Subprime 2014	Mortgages – Subprime 2013	Total residential real estate – excluding PCI 2014	Total residential real estate – excluding PCI 2013
Impaired loans										
With an allowance	**$ 552**	$ 567	**$ 722**	$ 727	**$ 4,949**	$ 5,871	**$ 2,239**	$ 2,989	**$ 8,462**	$ 10,154
Without an allowance[(a)]	**549**	579	**582**	592	**1,196**	1,133	**639**	709	**2,966**	3,013
Total impaired loans[(b)(c)]	**$ 1,101**	$ 1,146	**$ 1,304**	$ 1,319	**$ 6,145**	$ 7,004	**$ 2,878**	$ 3,698	**$ 11,428**	$ 13,167
Allowance for loan losses related to impaired loans	**$ 84**	$ 94	**$ 147**	$ 162	**$ 127**	$ 144	**$ 64**	$ 94	**$ 422**	$ 494
Unpaid principal balance of impaired loans[(d)]	**1,451**	1,515	**2,603**	2,625	**7,813**	8,990	**4,200**	5,461	**16,067**	18,591
Impaired loans on nonaccrual status[(e)]	**628**	641	**632**	666	**1,559**	1,737	**931**	1,127	**3,750**	4,171

(a) 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, 2014, Chapter 7 residential real estate loans included approximately 19% of senior lien home equity, 12% of junior lien home equity, 25% of prime mortgages, including option ARMs, and 18% of subprime mortgages that were 30 days or more past due.

(b) At December 31, 2014 and 2013, $4.9 billion and $7.6 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.

(c) Predominantly all residential real estate impaired loans, excluding PCI loans, are in the U.S.

(d) Represents the contractual amount of principal owed at December 31, 2014 and 2013. 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.

(e) As of December 31, 2014 and 2013, nonaccrual loans included $2.9 billion and $3.0 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 238–240 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 2014	Average impaired loans 2013	Average impaired loans 2012	Interest income on impaired loans[(a)] 2014	Interest income on impaired loans[(a)] 2013	Interest income on impaired loans[(a)] 2012	Interest income on impaired loans on a cash basis[(a)] 2014	Interest income on impaired loans on a cash basis[(a)] 2013	Interest income on impaired loans on a cash basis[(a)] 2012
Home equity									
Senior lien	**$ 1,122**	$ 1,151	$ 610	**$ 55**	$ 59	$ 27	**$ 37**	$ 40	$ 12
Junior lien	**1,313**	1,297	848	**82**	82	42	**53**	55	16
Mortgages									
Prime, including option ARMs	**6,730**	7,214	5,989	**262**	280	238	**54**	59	28
Subprime	**3,444**	3,798	3,494	**182**	200	183	**51**	55	31
Total residential real estate – excluding PCI	**$ 12,609**	$ 13,460	$ 10,941	**$ 581**	$ 621	$ 490	**$ 195**	$ 209	$ 87

(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.

Loan modifications

The Firm is required to provide borrower relief under the terms of certain Consent Orders and settlements entered into by the Firm related to its mortgage servicing, originations and residential mortgage-backed securities activities. This borrower relief includes reductions of principal and forbearance.

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.

The following table presents new TDRs reported by the Firm.

Year ended December 31, (in millions)	2014	2013	2012
Home equity:			
Senior lien	**$ 110**	$ 210	$ 835
Junior lien	**211**	388	711
Mortgages:			
Prime, including option ARMs	**287**	770	2,918
Subprime	**124**	319	1,043
Total residential real estate – excluding PCI	**$ 732**	$ 1,687	$ 5,507

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.

	Home equity						Mortgages								
	Senior lien			Junior lien			Prime, including option ARMs			Subprime			Total residential real estate - excluding PCI		
Year ended Dec. 31,	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012
Number of loans approved for a trial modification	**939**	1,719	1,695	**626**	884	918	**1,052**	2,846	3,895	**2,056**	4,233	4,841	**4,673**	9,682	11,349
Number of loans permanently modified	**1,171**	1,765	4,385	**2,813**	5,040	7,430	**2,507**	4,356	9,043	**3,141**	5,364	9,964	**9,632**	16,525	30,822
Concession granted:(a)															
Interest rate reduction	**53%**	70%	83%	**84%**	88%	88%	**43%**	73%	74%	**47%**	72%	69%	**58%**	77%	77%
Term or payment extension	**67**	76	47	**83**	80	76	**51**	73	57	**53**	56	41	**63**	70	55
Principal and/or interest deferred	**16**	12	6	**23**	24	17	**19**	30	16	**12**	13	7	**18**	21	12
Principal forgiveness	**36**	38	11	**22**	32	23	**51**	38	29	**53**	48	42	**41**	39	29
Other(b)	**–**	–	–	**–**	–	–	**10**	23	29	**10**	14	8	**6**	11	11

(a) 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.

(b) Represents variable interest rate to fixed interest rate modifications.

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 table presents only the financial effects of permanent modifications. This table also excludes 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 PCI		
	Senior lien			Junior lien			Prime, including option ARMs			Subprime					
	2014	2013	2012	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012
Weighted-average interest rate of loans with interest rate reductions – before TDR	**6.38%**	6.35%	7.20%	**4.81%**	5.05%	5.45%	**4.82%**	5.28%	6.14%	**7.16%**	7.33%	7.73%	**5.61%**	5.88%	6.57%
Weighted-average interest rate of loans with interest rate reductions – after TDR	**3.03**	3.23	4.61	**2.00**	2.14	1.94	**2.69**	2.77	3.67	**3.37**	3.52	4.14	**2.78**	2.92	3.69
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – before TDR	**17**	19	18	**19**	20	20	**25**	25	25	**24**	24	24	**23**	23	24
Weighted-average remaining contractual term (in years) of loans with term or payment extensions – after TDR	**30**	31	28	**35**	34	32	**37**	37	36	**36**	35	32	**36**	36	34
Charge-offs recognized upon permanent modification	**$ 2**	$ 7	$ 8	**$ 25**	$ 70	$ 65	**$ 9**	$ 16	$ 35	**$ 3**	$ 5	$ 29	**$ 39**	$ 98	$ 137
Principal deferred	**5**	7	4	**11**	24	23	**39**	129	133	**19**	43	43	**74**	203	203
Principal forgiven	**14**	30	20	**21**	51	58	**83**	206	249	**89**	218	324	**207**	505	651
Balance of loans that redefaulted within one year of permanent modification(a)	**$ 19**	$ 26	$ 30	**$ 10**	$ 20	$ 46	**$ 121**	$ 164	$ 255	**$ 93**	$ 106	$ 156	**$ 243**	$ 316	$ 487

(a) 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 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.

At December 31, 2014, 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, 8 years for junior lien home equity, 9 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).

Active and suspended foreclosure

At December 31, 2014 and 2013, the Firm had non-PCI residential real estate loans, excluding those insured by U.S. government agencies, with a carrying value of $1.5 billion and $2.1 billion, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

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 2014	Auto 2013	Business banking 2014	Business banking 2013	Student and other 2014	Student and other 2013	Total other consumer 2014	Total other consumer 2013
Loan delinquency[(a)]								
Current	**$53,866**	$52,152	**$19,710**	$18,511	**$10,080**	$10,529	**$83,656**	$81,192
30–119 days past due	**663**	599	**208**	280	**576**	660	**1,447**	1,539
120 or more days past due	**7**	6	**140**	160	**314**	368	**461**	534
Total retained loans	**$54,536**	$52,757	**$20,058**	$18,951	**$10,970**	$11,557	**$85,564**	$83,265
% of 30+ days past due to total retained loans	**1.23%**	1.15%	**1.73%**	2.32%	**2.15%**[(d)]	2.52%[(d)]	**1.47%**[(d)]	1.60%[(d)]
90 or more days past due and still accruing[(b)]	**$ —**	$ —	**$ —**	$ —	**$ 367**	$ 428	**$ 367**	$ 428
Nonaccrual loans	**115**	161	**279**	385	**270**	86	**664**	632
Geographic region								
California	**$ 6,294**	$ 5,615	**$ 3,008**	$ 2,374	**$ 1,143**	$ 1,112	**$ 10,445**	$ 9,101
New York	**3,662**	3,898	**3,187**	3,084	**1,259**	1,218	**8,108**	8,200
Illinois	**3,175**	2,917	**1,373**	1,341	**729**	740	**5,277**	4,998
Florida	**2,301**	2,012	**827**	646	**521**	539	**3,649**	3,197
Texas	**5,608**	5,310	**2,626**	2,646	**868**	878	**9,102**	8,834
New Jersey	**1,945**	2,014	**451**	392	**378**	397	**2,774**	2,803
Arizona	**2,003**	1,855	**1,083**	1,046	**239**	252	**3,325**	3,153
Washington	**1,019**	950	**258**	234	**235**	227	**1,512**	1,411
Michigan	**1,633**	1,902	**1,375**	1,383	**466**	513	**3,474**	3,798
Ohio	**2,157**	2,229	**1,354**	1,316	**629**	708	**4,140**	4,253
All other	**24,739**	24,055	**4,516**	4,489	**4,503**	4,973	**33,758**	33,517
Total retained loans	**$54,536**	$52,757	**$20,058**	$18,951	**$10,970**	$11,557	**$ 85,564**	$83,265
Loans by risk ratings[(c)]								
Noncriticized	**$ 9,822**	$ 9,968	**$14,619**	$13,622	**NA**	NA	**$ 24,441**	$23,590
Criticized performing	**35**	54	**708**	711	**NA**	NA	**743**	765
Criticized nonaccrual	**—**	38	**213**	316	**NA**	NA	**213**	354

(a) Individual delinquency classifications included loans insured by U.S. government agencies under the Federal Family Education Loan Program ("FFELP") as follows: current included $4.3 billion and $4.9 billion; 30-119 days past due included $364 million and $387 million; and 120 or more days past due included $290 million and $350 million at December 31, 2014 and 2013, respectively.

(b) 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.

(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.

(d) December 31, 2014 and 2013, excluded loans 30 days or more past due and still accruing, which are insured by U.S. government agencies under the FFELP, of $654 million and $737 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)		2014		2013
Impaired loans				
With an allowance	**$**	**557**	$	571
Without an allowance[(a)]		**35**		47
Total impaired loans[(b)(c)]	**$**	**592**	$	618
Allowance for loan losses related to impaired loans	**$**	**117**	$	107
Unpaid principal balance of impaired loans[(d)]		**719**		788
Impaired loans on nonaccrual status		**456**		441

(a) When discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the 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.
(b) Predominantly all other consumer impaired loans are in the U.S.
(c) Other consumer average impaired loans were $599 million, $648 million and $733 million for the years ended December 31, 2014, 2013 and 2012, respectively. The related interest income on impaired loans, including those on a cash basis, was not material for the years ended December 31, 2014, 2013 and 2012.
(d) Represents the contractual amount of principal owed at December 31, 2014 and 2013. The unpaid principal balance 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.

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)		2014		2013
Loans modified in troubled debt restructurings[(a)(b)]	**$**	**442**	$	378
TDRs on nonaccrual status		**306**		201

(a) The impact of these modifications was not material to the Firm for the years ended December 31, 2014 and 2013.
(b) Additional commitments to lend to borrowers whose loans have been modified in TDRs as of December 31, 2014 and 2013 were immaterial.

Other consumer new TDRs were $291 million, $156 million, and $249 million for the years ended December 31, 2014, 2013 and 2012, respectively.

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.

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 $25 million, $43 million and $42 million, during the years ended December 31, 2014, 2013 and 2012, 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 $43 million, $54 million, and $46 million, during the years ended December 31, 2014, 2013, and 2012, respectively. 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.

In May 2014 the Firm began extending the deferment period for up to 24 months for certain student loans, which resulted in extending the maturity of the loans at their original contractual interest rates. These modified loans are considered TDRs and placed on nonaccrual status.

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. Beginning in the fourth quarter of 2014, write-offs of PCI loans also include other adjustments, primarily related to interest forgiveness modifications. 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, 2014, 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 2014	Home equity 2013	Prime mortgage 2014	Prime mortgage 2013	Subprime mortgage 2014	Subprime mortgage 2013	Option ARMs 2014	Option ARMs 2013	Total PCI 2014	Total PCI 2013
Carrying value[(a)]	**$17,095**	$18,927	**$10,220**	$12,038	**$ 3,673**	$ 4,175	**$15,708**	$17,915	**$46,696**	$53,055
Related allowance for loan losses[(b)]	**1,758**	1,758	**1,193**	1,726	**180**	180	**194**	494	**3,325**	4,158
Loan delinquency (based on unpaid principal balance)										
Current	**$16,295**	$18,135	**$ 8,912**	$10,118	**$ 3,565**	$ 4,012	**$13,814**	$15,501	**$42,586**	$47,766
30–149 days past due	**445**	583	**500**	589	**536**	662	**858**	1,006	**2,339**	2,840
150 or more days past due	**1,000**	1,112	**837**	1,169	**551**	797	**1,824**	2,716	**4,212**	5,794
Total loans	**$17,740**	$19,830	**$10,249**	$11,876	**$ 4,652**	$ 5,471	**$16,496**	$19,223	**$49,137**	$56,400
% of 30+ days past due to total loans	**8.15%**	8.55%	**13.05%**	14.80%	**23.37%**	26.67%	**16.26%**	19.36%	**13.33%**	15.31%
Current estimated LTV ratios (based on unpaid principal balance)[(c)(d)]										
Greater than 125% and refreshed FICO scores:										
Equal to or greater than 660	**$ 513**	$ 1,168	**$ 45**	$ 240	**$ 34**	$ 115	**$ 89**	$ 301	**$ 681**	$ 1,824
Less than 660	**273**	662	**97**	290	**160**	459	**150**	575	**680**	1,986
101% to 125% and refreshed FICO scores:										
Equal to or greater than 660	**2,245**	3,248	**456**	1,017	**215**	316	**575**	1,164	**3,491**	5,745
Less than 660	**1,073**	1,541	**402**	884	**509**	919	**771**	1,563	**2,755**	4,907
80% to 100% and refreshed FICO scores:										
Equal to or greater than 660	**4,171**	4,473	**2,154**	2,787	**519**	544	**2,418**	3,311	**9,262**	11,115
Less than 660	**1,647**	1,782	**1,316**	1,699	**1,006**	1,197	**1,996**	2,769	**5,965**	7,447
Lower than 80% and refreshed FICO scores:										
Equal to or greater than 660	**5,824**	5,077	**3,663**	2,897	**719**	521	**6,593**	5,671	**16,799**	14,166
Less than 660	**1,994**	1,879	**2,116**	2,062	**1,490**	1,400	**3,904**	3,869	**9,504**	9,210
Total unpaid principal balance	**$17,740**	$19,830	**$10,249**	$11,876	**$ 4,652**	$ 5,471	**$16,496**	$19,223	**$49,137**	$56,400
Geographic region (based on unpaid principal balance)										
California	**$10,671**	$11,937	**$ 5,965**	$ 6,845	**$ 1,138**	$ 1,293	**$ 9,190**	$10,419	**$26,964**	$30,494
New York	**876**	962	**672**	807	**463**	563	**933**	1,196	**2,944**	3,528
Illinois	**405**	451	**301**	353	**229**	283	**397**	481	**1,332**	1,568
Florida	**1,696**	1,865	**689**	826	**432**	526	**1,440**	1,817	**4,257**	5,034
Texas	**273**	327	**92**	106	**281**	328	**85**	100	**731**	861
New Jersey	**348**	381	**279**	334	**165**	213	**553**	701	**1,345**	1,629
Arizona	**323**	361	**167**	187	**85**	95	**227**	264	**802**	907
Washington	**959**	1,072	**225**	266	**95**	112	**395**	463	**1,674**	1,913
Michigan	**53**	62	**166**	189	**130**	145	**182**	206	**531**	602
Ohio	**20**	23	**48**	55	**72**	84	**69**	75	**209**	237
All other	**2,116**	2,389	**1,645**	1,908	**1,562**	1,829	**3,025**	3,501	**8,348**	9,627
Total unpaid principal balance	**$17,740**	$19,830	**$10,249**	$11,876	**$ 4,652**	$ 5,471	**$16,496**	$19,223	**$49,137**	$56,400

(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.

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, 2014 and 2013.

December 31, 2014 (in millions, except ratios)	Delinquencies 30–89 days past due	90–149 days past due	150+ days past due	Total loans	Total 30+ day delinquency rate
HELOCs:[a]					
Within the revolving period[b]	**$ 155**	**$ 50**	**$ 371**	**$ 8,972**	**6.42%**
Beyond the revolving period[c]	**76**	**24**	**166**	**4,143**	**6.42**
HELOANs	**20**	**7**	**38**	**736**	**8.83**
Total	**$ 251**	**$ 81**	**$ 575**	**$ 13,851**	**6.55%**

December 31, 2013 (in millions, except ratios)	Delinquencies 30–89 days past due	90–149 days past due	150+ days past due	Total loans	Total 30+ day delinquency rate
HELOCs:[a]					
Within the revolving period[b]	$ 243	$ 88	$ 526	$ 12,670	6.76%
Beyond the revolving period[c]	54	21	82	2,336	6.72
HELOANs	24	11	39	908	8.15
Total	$ 321	$ 120	$ 647	$ 15,914	6.84%

(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, 2014, 2013 and 2012, 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 **2014**	2013	2012
Beginning balance	**$ 16,167**	$ 18,457	$ 19,072
Accretion into interest income	**(1,934)**	(2,201)	(2,491)
Changes in interest rates on variable-rate loans	**(174)**	(287)	(449)
Other changes in expected cash flows[a]	**533**	198	2,325
Balance at December 31	**$ 14,592**	$ 16,167	$ 18,457
Accretable yield percentage	**4.19%**	4.31%	4.38%

(a) 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, 2014, other changes in expected cash flows were driven by changes in prepayment 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 year ended December 31, 2012, 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.

Active and suspended foreclosure

At December 31, 2014 and 2013, the Firm had PCI residential real estate loans with an unpaid principal balance of $3.2 billion and $4.8 billion, respectively, that were not included in REO, but were in the process of active or suspended foreclosure.

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)	**2014**	2013
Net charge-offs	**$ 3,429**	$ 3,879
% of net charge-offs to retained loans	**2.75%**	3.14%
Loan delinquency		
Current and less than 30 days past due and still accruing	**$ 126,189**	$ 125,335
30–89 days past due and still accruing	**943**	1,108
90 or more days past due and still accruing	**895**	1,022
Nonaccrual loans	**—**	—
Total retained credit card loans	**$ 128,027**	$ 127,465
Loan delinquency ratios		
% of 30+ days past due to total retained loans	**1.44%**	1.67%
% of 90+ days past due to total retained loans	**0.70**	0.80
Credit card loans by geographic region		
California	**$ 17,940**	$ 17,194
Texas	**11,088**	10,400
New York	**10,940**	10,497
Illinois	**7,497**	7,412
Florida	**7,398**	7,178
New Jersey	**5,750**	5,554
Ohio	**4,707**	4,881
Pennsylvania	**4,489**	4,462
Michigan	**3,552**	3,618
Virginia	**3,263**	3,239
All other	**51,403**	53,030
Total retained credit card loans	**$ 128,027**	$ 127,465
Percentage of portfolio based on carrying value with estimated refreshed FICO scores		
Equal to or greater than 660	**85.7%**	85.1%
Less than 660	**14.3**	14.9

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)	2014	2013
Impaired credit card loans with an allowance[(a)(b)]		
Credit card loans with modified payment terms[(c)]	**$ 1,775**	$ 2,746
Modified credit card loans that have reverted to pre-modification payment terms[(d)]	**254**	369
Total impaired credit card loans[(e)]	**$ 2,029**	$ 3,115
Allowance for loan losses related to impaired credit card loans	**$ 500**	$ 971

(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, 2014 and 2013, $159 million and $226 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 $95 million and $143 million at December 31, 2014 and 2013, 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.
(e) Predominantly all impaired credit card loans are in the U.S.

The following table presents average balances of impaired credit card loans and interest income recognized on those loans.

Year ended December 31, (in millions)	2014	2013	2012
Average impaired credit card loans	**$ 2,503**	$ 3,882	$ 5,893
Interest income on impaired credit card loans	**123**	198	308

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.

New enrollments in these loan modification programs for the years ended December 31, 2014, 2013 and 2012, were $807 million, $1.2 billion and $1.7 billion, respectively.

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)	2014	2013	2012
Weighted-average interest rate of loans – before TDR	**14.96%**	15.37%	15.67%
Weighted-average interest rate of loans – after TDR	**4.40**	4.38	5.19
Loans that redefaulted within one year of modification[(a)]	**$ 119**	$ 167	$ 309

(a) Represents loans 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 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 for credit card loans modified was expected to be 27.91%, 30.72% and 38.23% as of December 31, 2014, 2013 and 2012, 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"). The PD is the likelihood that a loan will default and not be fully repaid by the borrower. 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 for further detail on industry concentrations.

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		Financial institutions		Government agencies		Other[d]		Total retained loans	
	2014	2013	**2014**	2013	**2014**	2013	**2014**	2013	**2014**	2013	**2014**	2013
Loans by risk ratings												
Investment grade	**$ 63,069**	$ 57,690	**$ 61,006**	$ 52,195	**$ 27,111**	$ 26,712	**$ 8,393**	$ 9,979	**$ 82,087**	$ 79,494	**$ 241,666**	$ 226,070
Noninvestment grade:												
Noncriticized	**44,117**	43,477	**16,541**	14,381	**7,085**	6,674	**300**	440	**10,075**	10,992	**78,118**	75,964
Criticized performing	**2,251**	2,385	**1,313**	2,229	**316**	272	**3**	42	**236**	480	**4,119**	5,408
Criticized nonaccrual	**188**	294	**253**	346	**18**	25	**—**	1	**140**	155	**599**	821
Total noninvestment grade	**46,556**	46,156	**18,107**	16,956	**7,419**	6,971	**303**	483	**10,451**	11,627	**82,836**	82,193
Total retained loans	**$ 109,625**	$ 103,846	**$ 79,113**	$ 69,151	**$ 34,530**	$ 33,683	**$ 8,696**	$ 10,462	**$ 92,538**	$ 91,121	**$ 324,502**	$ 308,263
% of total criticized to total retained loans	**2.22%**	2.58%	**1.98 %**	3.72%	**0.97 %**	0.88 %	**0.03%**	0.41%	**0.41 %**	0.70%	**1.45%**	2.02%
% of nonaccrual loans to total retained loans	**0.17**	0.28	**0.32**	0.50	**0.05**	0.07	**—**	0.01	**0.15**	0.17	**0.18**	0.27
Loans by geographic distribution[a]												
Total non-U.S.	**$ 33,739**	$ 34,440	**$ 2,099**	$ 1,369	**$ 20,944**	$ 22,726	**$ 1,122**	$ 2,146	**$ 42,961**	$ 43,376	**$ 100,865**	$ 104,057
Total U.S.	**75,886**	69,406	**77,014**	67,782	**13,586**	10,957	**7,574**	8,316	**49,577**	47,745	**223,637**	204,206
Total retained loans	**$ 109,625**	$ 103,846	**$ 79,113**	$ 69,151	**$ 34,530**	$ 33,683	**$ 8,696**	$ 10,462	**$ 92,538**	$ 91,121	**$ 324,502**	$ 308,263
Net charge-offs/(recoveries)	**$ 22**	$ 99	**$ (9)**	$ 6	**$ (12)**	$ (99)	**$ 25**	$ 1	**$ (14)**	$ 9	**$ 12**	$ 16
% of net charge-offs/(recoveries) to end-of-period retained loans	**0.02%**	0.10%	**(0.01)%**	0.01%	**(0.04)%**	(0.29)%	**0.29%**	0.01%	**(0.02)%**	0.01%	**—%**	0.01%
Loan delinquency[b]												
Current and less than 30 days past due and still accruing	**$ 108,857**	$ 103,357	**$ 78,552**	$ 68,627	**$ 34,408**	$ 33,426	**$ 8,627**	$ 10,421	**$ 91,168**	$ 89,717	**$ 321,612**	$ 305,548
30–89 days past due and still accruing	**566**	181	**275**	164	**104**	226	**69**	40	**1,201**	1,233	**2,215**	1,844
90 or more days past due and still accruing[c]	**14**	14	**33**	14	**—**	6	**—**	—	**29**	16	**76**	50
Criticized nonaccrual	**188**	294	**253**	346	**18**	25	**—**	1	**140**	155	**599**	821
Total retained loans	**$ 109,625**	$ 103,846	**$ 79,113**	$ 69,151	**$ 34,530**	$ 33,683	**$ 8,696**	$ 10,462	**$ 92,538**	$ 91,121	**$ 324,502**	$ 308,263

(a) The U.S. and non-U.S. distribution is determined based predominantly on the domicile of the borrower.
(b) The credit quality of wholesale loans is assessed primarily through ongoing review and monitoring of an obligor's 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 pages 255–256 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 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		Commercial construction and development		Other		Total real estate loans	
	2014	2013	**2014**	2013	**2014**	2013	**2014**	2013	**2014**	2013
Real estate retained loans	**$ 51,049**	$ 44,389	**$ 17,438**	$ 15,949	**$ 4,264**	$ 3,674	**$ 6,362**	$ 5,139	**$ 79,113**	$ 69,151
Criticized	**652**	1,142	**841**	1,323	**42**	81	**31**	29	**1,566**	2,575
% of criticized to total real estate retained loans	**1.28%**	2.57%	**4.82%**	8.30%	**0.98%**	2.20%	**0.49%**	0.56%	**1.98%**	3.72%
Criticized nonaccrual	**$ 126**	$ 191	**$ 110**	$ 143	**$ –**	$ 3	**$ 17**	$ 9	**$ 253**	$ 346
% of criticized nonaccrual to total real estate retained loans	**0.25%**	0.43%	**0.63%**	0.90%	**–%**	0.08%	**0.27%**	0.18%	**0.32%**	0.50%

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.

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	
	2014	2013	**2014**	2013	**2014**	2013	**2014**	2013	**2014**	2013	**2014**	2013
Impaired loans												
With an allowance	**$ 174**	$ 236	**$ 193**	$ 258	**$ 15**	$ 17	**$ –**	$ 1	**$ 89**	$ 85	**$ 471**	$ 597
Without an allowance[a]	**24**	58	**87**	109	**3**	8	**–**	–	**52**	73	**166**	248
Total impaired loans	**$ 198**	$ 294	**$ 280**	$ 367	**$ 18**	$ 25	**$ –**	$ 1	**$ 141**	$ 158	**$ 637** [c]	$ 845 [c]
Allowance for loan losses related to impaired loans	**$ 34**	$ 75	**$ 36**	$ 63	**$ 4**	$ 16	**$ –**	$ –	**$ 13**	$ 27	**$ 87**	$ 181
Unpaid principal balance of impaired loans[b]	**266**	448	**345**	454	**22**	24	**–**	1	**202**	241	**835**	1,168

(a) When the discounted cash flows, collateral value or market price equals or exceeds the recorded investment in the 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.
(b) Represents the contractual amount of principal owed at December 31, 2014 and 2013. The unpaid principal balance 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.
(c) Based upon the domicile of the borrower, predominantly all wholesale impaired loans are in the U.S.

The following table presents the Firm's average impaired loans for the years ended 2014, 2013 and 2012.

Year ended December 31, (in millions)	**2014**	2013	2012
Commercial and industrial	**$ 243**	$ 412	$ 873
Real estate	**297**	484	784
Financial institutions	**20**	17	17
Government agencies	**–**	–	9
Other	**155**	211	277
Total[a]	**$ 715**	$ 1,124	$ 1,960

(a) The related interest income on accruing impaired loans and interest income recognized on a cash basis were not material for the years ended December 31, 2014, 2013 and 2012.

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. TDRs were not material as of December 31, 2014 and 2013.

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 2014, 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 are other impaired loans. See Note 14 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 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. Estimates of PD and LGD are subject to periodic refinement based on changes to underlying external and Firm-specific historical data.

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 made 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 take into consideration model imprecision, deteriorating conditions within an industry, product or portfolio type, geographic location, credit concentration, and current economic events that have occurred but that are not yet reflected in the factors used to derive the statistical calculation.

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, 2014, JPMorgan Chase deemed the allowance for credit losses to be appropriate (i.e., sufficient to absorb probable credit losses inherent in the portfolio).

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.

	2014			
Year ended December 31, (in millions)	Consumer, excluding credit card	Credit card	Wholesale	Total
Allowance for loan losses				
Beginning balance at January 1,	$ 8,456	$ 3,795	$ 4,013	$ 16,264
Gross charge-offs	2,132	3,831	151	6,114
Gross recoveries	(814)	(402)	(139)	(1,355)
Net charge-offs/(recoveries)	1,318	3,429	12	4,759
Write-offs of PCI loans[(a)]	533	–	–	533
Provision for loan losses	414	3,079	(269)	3,224
Other	31	(6)	(36)	(11)
Ending balance at December 31,	$ 7,050	$ 3,439	$ 3,696	$ 14,185
Allowance for loan losses by impairment methodology				
Asset-specific[(b)]	$ 539	$ 500 [(c)]	$ 87	$ 1,126
Formula-based	3,186	2,939	3,609	9,734
PCI	3,325	–	–	3,325
Total allowance for loan losses	$ 7,050	$ 3,439	$ 3,696	$ 14,185
Loans by impairment methodology				
Asset-specific	$ 12,020	$ 2,029	$ 637	$ 14,686
Formula-based	236,263	125,998	323,861	686,122
PCI	46,696	–	4	46,700
Total retained loans	$ 294,979	$ 128,027	$ 324,502	$ 747,508
Impaired collateral-dependent loans				
Net charge-offs	$ 133	$ –	$ 21	$ 154
Loans measured at fair value of collateral less cost to sell	3,025	–	326	3,351
Allowance for lending-related commitments				
Beginning balance at January 1,	$ 8	$ –	$ 697	$ 705
Provision for lending-related commitments	5	–	(90)	(85)
Other	–	–	2	2
Ending balance at December 31,	$ 13	$ –	$ 609	$ 622
Allowance for lending-related commitments by impairment methodology				
Asset-specific	$ –	$ –	$ 60	$ 60
Formula-based	13	–	549	562
Total allowance for lending-related commitments	$ 13	$ –	$ 609	$ 622
Lending-related commitments by impairment methodology				
Asset-specific	$ –	$ –	$ 103	$ 103
Formula-based	58,153	525,963	471,953	1,056,069
Total lending-related commitments	$ 58,153	$ 525,963	$ 472,056	$ 1,056,172

(a) Write-offs of PCI loans are recorded against the allowance for loan losses when actual losses for a pool exceed estimated losses that were recorded as purchase accounting adjustments at the time of acquisition. A write-off of a PCI loan is recognized when the underlying loan is removed from a pool (e.g., upon liquidation). During the fourth quarter of 2014, the Firm recorded a $291 million adjustment to reduce the PCI allowance and the recorded investment in the Firm's PCI loan portfolio, primarily reflecting the cumulative effect of interest forgiveness modifications. This adjustment had no impact to the Firm's Consolidated statements of income.

(b) Includes risk-rated loans that have been placed on nonaccrual status and loans that have been modified in a TDR.

(c) The asset-specific credit card allowance for loan losses is related to loans that have been modified in a TDR; such allowance is calculated based on the loans' original contractual interest rates and does not consider any incremental penalty rates.

(table continued from previous page)

2013				2012			
Consumer, excluding credit card	Credit card	Wholesale	Total	Consumer, excluding credit card	Credit card	Wholesale	Total
$ 12,292	$ 5,501	$ 4,143	$ 21,936	$ 16,294	$ 6,999	$ 4,316	$ 27,609
2,754	4,472	241	7,467	4,805	5,755	346	10,906
(847)	(593)	(225)	(1,665)	(508)	(811)	(524)	(1,843)
1,907	3,879	16	5,802	4,297	4,944	(178)	9,063
53	–	–	53	–	–	–	–
(1,872)	2,179	(119)	188	302	3,444	(359)	3,387
(4)	(6)	5	(5)	(7)	2	8	3
$ 8,456	$ 3,795	$ 4,013	$ 16,264	$ 12,292	$ 5,501	$ 4,143	$ 21,936
$ 601	$ 971 [c]	$ 181	$ 1,753	$ 729	$ 1,681 [c]	$ 319	$ 2,729
3,697	2,824	3,832	10,353	5,852	3,820	3,824	13,496
4,158	–	–	4,158	5,711	–	–	5,711
$ 8,456	$ 3,795	$ 4,013	$ 16,264	$ 12,292	$ 5,501	$ 4,143	$ 21,936
$ 13,785	$ 3,115	$ 845	$ 17,745	$ 13,938	$ 4,762	$ 1,475	$ 20,175
221,609	124,350	307,412	653,371	218,945	123,231	304,728	646,904
53,055	–	6	53,061	59,737	–	19	59,756
$ 288,449	$ 127,465	$ 308,263	$ 724,177	$ 292,620	$ 127,993	$ 306,222	$ 726,835
$ 235	$ –	$ 37	$ 272	$ 973	$ –	$ 77	$ 1,050
3,105	–	362	3,467	3,272	–	445	3,717
$ 7	$ –	$ 661	$ 668	$ 7	$ –	$ 666	$ 673
1	–	36	37	–	–	(2)	(2)
–	–	–	–	–	–	(3)	(3)
$ 8	$ –	$ 697	$ 705	$ 7	$ –	$ 661	$ 668
$ –	$ –	$ 60	$ 60	$ –	$ –	$ 97	$ 97
8	–	637	645	7	–	564	571
$ 8	$ –	$ 697	$ 705	$ 7	$ –	$ 661	$ 668
$ –	$ –	$ 206	$ 206	$ –	$ –	$ 355	$ 355
56,057	529,383	446,026	1,031,466	60,156	533,018	434,459	1,027,633
$ 56,057	$ 529,383	$ 446,232	$ 1,031,672	$ 60,156	$ 533,018	$ 434,814	$ 1,027,988

Note 16 – Variable interest entities

For a further description of JPMorgan Chase's accounting policies regarding consolidation of VIEs, see Note 1.

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	262
	Mortgage securitization trusts	Securitization of originated and purchased residential mortgages	263-265
	Other securitization trusts	Securitization of originated student loans	263-265
CIB	Mortgage and other securitization trusts	Securitization of both originated and purchased residential and commercial mortgages, automobile and student loans	263-265
	Multi-seller conduits Investor intermediation activities:	Assist clients in accessing the financial markets in a cost-efficient manner and structures transactions to meet investor needs	265-267
	Municipal bond vehicles		265-266
	Credit-related note and asset swap vehicles		267

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: The Private Equity business, within Corporate, 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 268 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, 2014 and 2013, the Firm held undivided interests in Firm-sponsored credit card securitization trusts of $10.9 billion and $14.3 billion, respectively. The Firm maintained an average undivided interest in principal receivables owned by those trusts of approximately 22% and 30% for the years ended December 31, 2014 and 2013, respectively. The Firm also retained $40 million and $130 million of senior securities and $5.3 billion and $5.5 billion of subordinated securities in certain of its credit card securitization trusts as of December 31, 2014 and 2013, 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 CCB and CIB businesses. Depending on the particular transaction, as well as the line of business involved, the Firm may act as the servicer of the loans and/or retain certain beneficial interests in the securitization trusts.

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 269 of this Note for further information regarding the Firm's cash flows with and interests retained in nonconsolidated VIEs, and pages 269–270 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[c][d][e]		
December 31, 2014 [a] (in billions)	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
Securitization-related						
Residential mortgage:						
Prime/Alt-A and Option ARMs	$ **96.3**	$ **2.7**	$ **78.3**	$ **0.5**	$ **0.7**	$ **1.2**
Subprime	**28.4**	**0.8**	**25.7**	**0.1**	**—**	**0.1**
Commercial and other[b]	**129.6**	**0.2**	**94.4**	**0.4**	**3.5**	**3.9**
Total	$ **254.3**	$ **3.7**	$ **198.4**	$ **1.0**	$ **4.2**	$ **5.2**

	Principal amount outstanding			JPMorgan Chase interest in securitized assets in nonconsolidated VIEs[c][d][e]		
December 31, 2013[a] (in billions)	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
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[b]	130.4	—	98.0	0.5	3.5	4.0
Total	$ 271.7	$ 4.5	$ 216.4	$ 1.1	$ 3.8	$ 4.9

(a) Excludes U.S. government agency securitizations. See pages 269–270 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 table above excludes the following: retained servicing (see Note 17 for a discussion of MSRs); securities retained from loan 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 for further information on derivatives); senior and subordinated securities of $136 million and $34 million, respectively, at December 31, 2014, and $151 million and $30 million, respectively, at December 31, 2013, which the Firm purchased in connection with CIB's secondary market-making activities.
(d) Includes interests held in re-securitization transactions.
(e) As of December 31, 2014 and 2013, 77% and 69%, 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 $1.1 billion and $551 million of investment-grade and $185 million and $260 million of noninvestment-grade retained interests at December 31, 2014 and 2013, respectively. The retained interests in commercial and other securitizations trusts consisted of $3.7 billion and $3.9 billion of investment-grade and $194 million and $80 million of noninvestment-grade retained interests at December 31, 2014 and 2013, 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 268 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, 2014 and 2013, 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 268 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 268 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 retains servicing responsibilities for certain student loan securitizations. The Firm has the power to direct the activities of these VIEs through these servicing responsibilities. See the table on page 268 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, 2014, 2013 and 2012, the Firm transferred $22.7 billion, $25.3 billion and $10.0 billion, respectively, of securities to agency VIEs, and $1.1 billion, $55 million and $286 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 is 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 clients, 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.

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 was not 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, 2014 and 2013, the Firm did not consolidate any agency re-securitizations. As of December 31, 2014 and 2013, the Firm consolidated assets of $77 million and $86 million, respectively, and liabilities of $21 million and $23 million, respectively, of private-label re-securitizations. See the table on page 268 of this Note for more information on the consolidated re-securitization transactions.

As of December 31, 2014 and 2013, 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 $2.9 billion and $2.8 billion, respectively. At December 31, 2014 and 2013, the Firm held approximately $2.4 billion and $1.3 billion, respectively, of interests in nonconsolidated agency re-securitization entities, and $36 million and $6 million, respectively, of senior and subordinated interests in nonconsolidated private-label re-securitization entities. See the table on page 263 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 268 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 issued by the Firm-administered multi-seller conduits. The Firm held $5.7 billion and $4.1 billion of the commercial paper issued by the Firm-administered multi-seller conduits at December 31, 2014 and 2013, respectively. The Firm's investments reflect the Firm's funding needs and capacity and were not driven by market illiquidity. 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 $9.9 billion and $9.1 billion at December 31, 2014 and 2013, respectively, and are reported as off-balance sheet lending-related commitments. For more information on off-balance sheet lending-related commitments, see Note 29.

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, 2014 and 2013, the Firm held $55 million and $262 million, respectively, of these certificates on its Consolidated balance sheets. The largest amount held by the Firm at any end of day during 2014 was $250 million, or 3.0%, 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.

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 268 of this Note for further information on consolidated municipal bond vehicles.

The Firm's exposure to nonconsolidated municipal bond VIEs at December 31, 2014 and 2013, 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)[(a)]	Maximum exposure
Nonconsolidated municipal bond vehicles				
2014	**$ 11.5**	**$ 6.3**	**$ 5.2**	**$ 6.3**
2013	11.8	6.9	4.9	6.9

	Ratings profile of VIE assets[(b)]						
	Investment-grade				Noninvestment-grade		
December 31, (in billions, except where otherwise noted)	AAA to AAA-	AA+ to AA-	A+ to A-	BBB+ to BBB-	BB+ and below	Fair value of assets held by VIEs	Wt. avg. expected life of assets (years)
2014	**$ 2.7**	**$ 8.4**	**$ 0.4**	**$ –**	**$ –**	**$ 11.5**	**4.9**
2013	2.7	8.9	0.2	–	–	$ 11.8	7.2

(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.

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 (generally investment-grade), such as government bonds, corporate bonds or 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") to transfer the risk of the referenced credit to the VIE's investors. Clients and investors often prefer using a CLN vehicle since they may be of the view that the CLNs issued by the VIE is of a higher credit quality than equivalent notes issued directly by JPMorgan Chase. 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.

The Firm's involvement with CLN vehicles is generally limited to being a derivative counterparty and it does not act as a portfolio manager for managed CLN VIEs. The Firm does not provide any additional contractual financial support to the VIE over and above its contractual obligations as derivative counterparty, but may also make a market in the CLNs issued by such VIEs, although it is under no obligation to do so. The Firm has not historically provided any financial support to the CLN vehicles over and above its contractual obligations. As a derivative counterparty the assets held by the VIE serve as collateral for any derivatives receivables. As such the collateral represents the maximum exposure the Firm has to these vehicles, which was $5.9 billion and $8.7 billion as of December 31, 2014 and 2013, respectively. 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

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. The Firm consolidates credit-related note entities only in limited circumstances where it holds positions in these entities that provided the Firm with control over the entity. The Firm consolidated credit-related note vehicles with collateral fair values of $163 million and $311 million, at December 31, 2014 and 2013, 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 reports derivatives with unconsolidated CLN vehicles as well as any CLNs that it holds as market-maker on its Consolidated balance sheets at fair value with changes in fair value reported in principal transactions revenue. The Firm's exposure to non-consolidated CLN VIEs as of December 31, 2014 and 2013 was not material.

Asset swap vehicles

The Firm structures transactions with asset swap vehicles on behalf of investors. In such transactions, the VIE purchases a specific asset or assets (substantially all of which are investment-grade) 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. 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 Firm's involvement with asset swap vehicles is generally limited to being an interest rate or foreign exchange derivative counterparty. The Firm does not provide any additional contractual financial support to the VIE over and above its contractual obligations as derivative counterparty, but may also make a market in the notes issued by such VIEs, although it is under no obligation to do so. The Firm has not historically provided any financial support to asset swap vehicles over and above its contractual obligations. As a derivative counterparty the assets held by the VIE serve as collateral for any derivatives receivables. As such the collateral represents the maximum exposure the Firm has to these vehicles, which was $5.7 billion and $7.7 billion as of December 31, 2014 and 2013, respectively. 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

Since each asset swap vehicle 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 entity. Accordingly, the Firm does not generally consolidate these asset swap vehicles and did not consolidate any asset swap vehicles at December 31, 2014 and 2013.

The Firm reports derivatives with unconsolidated asset swap vehicles that it holds as market-maker on its Consolidated balance sheets at fair value with changes in fair value reported in principal transactions revenue. The Firm's exposure to non-consolidated asset swap VIEs as of December 31, 2014 and 2013 was not material.

VIEs sponsored by third parties

The Firm enters into transactions with VIEs structured by other parties. These include, for example, acting as a derivative counterparty, liquidity provider, investor, underwriter, placement agent, trustee or custodian. These transactions are conducted at arm's-length, and individual credit decisions are based on the analysis of the specific VIE, taking into consideration the quality of the underlying assets. Where the Firm does not have the power to direct the activities of the VIE that most significantly impact the VIE's economic performance, or a variable interest that could potentially be significant, the Firm records and reports these positions on its Consolidated balance sheets similarly to the way it would record and report positions in respect of any other third-party transaction.

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, 2014 and 2013.

	Assets				Liabilities		
December 31, 2014 (in billions)[(a)]	Trading assets	Loans	Other[(c)]	Total assets[(d)]	Beneficial interests in VIE assets[(e)]	Other[(f)]	Total liabilities
VIE program type							
Firm-sponsored credit card trusts	**$ –**	**$ 48.3**	**$ 0.7**	**$ 49.0**	**$ 31.2**	**$ –**	**$ 31.2**
Firm-administered multi-seller conduits	**–**	**17.7**	**0.1**	**17.8**	**12.0**	**–**	**12.0**
Municipal bond vehicles	**5.3**	**–**	**–**	**5.3**	**4.9**	**–**	**4.9**
Mortgage securitization entities[(b)]	**3.3**	**0.7**	**–**	**4.0**	**2.1**	**0.8**	**2.9**
Student loan securitization entities	**0.2**	**2.2**	**–**	**2.4**	**2.1**	**–**	**2.1**
Other	**0.3**	**–**	**1.0**	**1.3**	**0.1**	**0.1**	**0.2**
Total	**$ 9.1**	**$ 68.9**	**$ 1.8**	**$ 79.8**	**$ 52.4**	**$ 0.9**	**$ 53.3**

	Assets				Liabilities		
December 31, 2013 (in billions)[(a)]	Trading assets	Loans	Other[(c)]	Total assets[(d)]	Beneficial interests in VIE assets[(e)]	Other[(f)]	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[(b)]	2.3	1.7	–	4.0	2.9	0.9	3.8
Student loan securitization entities	–	2.4	0.1	2.5	2.2	–	2.2
Other	0.7	0.1	0.9	1.7	0.1	0.2	0.3
Total	$ 6.4	$ 70.1	$ 2.2	$ 78.7	$ 49.6	$ 1.1	$ 50.7

(a) Excludes intercompany transactions, which were eliminated in consolidation.
(b) Includes residential and commercial mortgage securitizations as well as re-securitizations.
(c) Includes assets classified as cash, derivative receivables, AFS securities, and other assets within the Consolidated balance sheets.
(d) The assets of the consolidated VIEs included in the program types above are used to settle the liabilities of those 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.
(e) 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 beneficial interests in VIE assets are long-term beneficial interests of $35.4 billion and $31.8 billion at December 31, 2014 and 2013, respectively. The maturities of the long-term beneficial interests as of December 31, 2014, were as follows: $10.9 billion under one year, $19.0 billion between one and five years, and $5.5 billion over five years, all respectively.
(f) Includes liabilities classified as accounts payable and other liabilities in the Consolidated balance sheets.

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 table provides information related to the Firm's securitization activities for the years ended December 31, 2014, 2013 and 2012, 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.

	2014		2013		2012	
Year ended December 31, (in millions, except rates)[a]	Residential mortgage[d][e]	Commercial and other[e][f]	Residential mortgage[d][e]	Commercial and other[e][f]	Residential mortgage[d][e]	Commercial and other[e][f]
Principal securitized	**$ 2,558**	**$ 11,911**	$ 1,404	$ 11,318	$ –	$ 5,421
All cash flows during the period:						
Proceeds from new securitizations[b]	**$ 2,569**	**$ 12,079**	$ 1,410	$ 11,507	$ –	$ 5,705
Servicing fees collected	**557**	**4**	576	5	662	4
Purchases of previously transferred financial assets (or the underlying collateral)[c]	**121**	**–**	294	–	222	–
Cash flows received on interests	**179**	**578**	156	325	185	163

(a) Excludes re-securitization transactions.
(b) Proceeds from residential mortgage securitizations were received in the form of securities. During 2014, $2.4 billion of residential mortgage securitizations were received as securities and classified in level 2, and $185 million were in level 3 of the fair value hierarchy. During 2013, $1.4 billion of residential mortgage securitizations were received as securities and classified in level 2 of the fair value hierarchy. Proceeds from commercial mortgage securitizations were received as securities and cash. During 2014, $11.4 billion of proceeds from commercial mortgage securitizations were received as securities and classified in level 2, and $130 million of proceeds were classified as level 3 of the fair value hierarchy; and $568 million of proceeds from commercial mortgage securitizations were received as 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.
(c) 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.
(d) Includes prime, Alt-A, subprime, and option ARMs. Excludes certain loan securitization transactions entered into with Ginnie Mae, Fannie Mae and Freddie Mac.
(e) Key assumptions used to measure residential mortgage retained interests originated during the year included weighted-average life (in years) of 5.9 and 3.9 for the years ended December 31, 2014 and 2013, respectively, and weighted-average discount rate of 3.4% and 2.5% for the years ended December 31, 2014 and 2013, respectively. There were no residential mortgage securitizations during 2012. Key assumptions used to measure commercial and other retained interests originated during the year included weighted-average life (in years) of 6.5, 8.3 and 8.8 for the years ended December 31, 2014, 2013, and 2012, respectively, and weighted-average discount rate of 4.8%, 3.2% and 3.6% for the years ended December 31, 2014, 2013 and 2012, respectively.
(f) Includes commercial and student loan securitizations.

Loans and excess MSRs sold to the GSEs, loans in securitization transactions pursuant to Ginnie Mae guidelines, 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 MSRs on a nonrecourse basis, predominantly to Fannie Mae and Freddie Mac (the "GSEs"). These loans and excess MSRs are sold primarily for the purpose of securitization by the GSEs, who provide certain guarantee provisions (e.g., credit enhancement of the loans). The Firm also sells loans into securitization transactions pursuant to Ginnie Mae guidelines; these loans are typically insured or guaranteed by another U.S. government agency. The Firm does not consolidate the securitization vehicles underlying these transactions 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 for additional information about the Firm's loan sales- and securitization-related indemnifications.

See Note 17 for additional information about the impact of the Firm's sale of certain excess mortgage servicing rights.

The following table summarizes the activities related to loans sold to the GSEs, loans in securitization transactions pursuant to Ginnie Mae guidelines, and other third-party-sponsored securitization entities.

Year ended December 31, (in millions)	2014	2013	2012
Carrying value of loans sold[(a)]	$ 55,802	$ 166,028	$ 179,008
Proceeds received from loan sales as cash	$ 260	$ 782	$ 195
Proceeds from loans sales as securities[(b)]	55,117	163,373	176,592
Total proceeds received from loan sales[(c)]	$ 55,377	$ 164,155	$ 176,787
Gains on loan sales[(d)]	$ 316	$ 302	$ 141

(a) Predominantly to the GSEs and in securitization transactions pursuant to Ginnie Mae guidelines.
(b) Predominantly includes securities from the GSEs and Ginnie Mae that are generally sold shortly after receipt.
(c) Excludes the value of MSRs retained upon the sale of loans. Gains on loans sales include the value of MSRs.
(d) The carrying value of the loans accounted for at fair value approximated the proceeds received upon loan sale.

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, 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, 2014 and 2013, the Firm had recorded on its Consolidated balance sheets $12.4 billion and $14.3 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 $464 million and $2.0 billion as of December 31, 2014 and 2013, 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.

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, 2014 and 2013.

	Securitized assets		90 days past due		Liquidation losses	
As of or for the year ended December 31, (in millions)	2014	2013	2014	2013	2014	2013
Securitized loans[(a)]						
Residential mortgage:						
Prime/ Alt-A & Option ARMs	$ 78,294	$ 90,381	$ 11,363	$ 14,882	$ 2,166	$ 4,688
Subprime mortgage	25,659	28,008	6,473	7,726	1,931	2,420
Commercial and other	94,438	98,018	1,522	2,350	1,267	1,003
Total loans securitized[(b)]	$ 198,391	$ 216,407	$ 19,358	$ 24,958	$ 5,364	$ 8,111

(a) Total assets held in securitization-related SPEs were $254.3 billion and $271.7 billion, respectively, at December 31, 2014 and 2013. The $198.4 billion and $216.4 billion, respectively, of loans securitized at December 31, 2014 and 2013, excludes: $52.2 billion and $50.8 billion, respectively, of securitized loans in which the Firm has no continuing involvement, and $3.7 billion and $4.5 billion, respectively, of loan securitizations consolidated on the Firm's Consolidated balance sheets at December 31, 2014 and 2013.
(b) Includes securitized loans that were previously recorded at fair value and classified as trading assets.

Note 17 – Goodwill and other intangible assets

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)	2014	2013	2012
Consumer & Community Banking	**$ 30,941**	$ 30,985	$ 31,048
Corporate & Investment Bank	**6,780**	6,888	6,895
Commercial Banking	**2,861**	2,862	2,863
Asset Management	**6,964**	6,969	6,992
Corporate[(a)]	**101**	377	377
Total goodwill	**$ 47,647**	$ 48,081	$ 48,175

(a) The remaining $101 million of Private Equity goodwill was disposed of as part of the Private Equity sale completed in January 2015. For further information on the Private Equity sale, see Note 2.

The following table presents changes in the carrying amount of goodwill.

Year ended December 31, (in millions)	2014	2013	2012
Balance at beginning of period	**$ 48,081**	$ 48,175	$ 48,188
Changes during the period from:			
Business combinations	**43**	64	43
Dispositions	**(80)**	(5)	(4)
Other[(a)]	**(397)**	(153)	(52)
Balance at December 31,	**$ 47,647**	$ 48,081	$ 48,175

(a) Includes foreign currency translation adjustments, other tax-related adjustments, and, during 2014, goodwill impairment associated with the Firm's Private Equity business of $276 million.

Impairment testing

During 2014, the Firm recognized impairments of the Private Equity business' goodwill totaling $276 million. The Firm's remaining goodwill was not impaired at December 31, 2014. Further, the Firm's goodwill was not impaired at December 31, 2013 nor was any goodwill written off due to impairment during 2013 or 2012.

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.

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 senior management 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 Firms' 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.

Deterioration in economic market conditions, increased estimates of the effects of 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 Banking 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, including decreases in home prices that result in increased credit losses. 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 in the future, which could 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 has 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 MSRs 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, 2014, 2013 and 2012.

As of or for the year ended December 31, (in millions, except where otherwise noted)	**2014**	2013	2012
Fair value at beginning of period	**$ 9,614**	$ 7,614	$ 7,223
MSR activity:			
Originations of MSRs	**757**	2,214	2,376
Purchase of MSRs	**11**	1	457
Disposition of MSRs[(a)]	**(209)**	(725)	(579)
Net additions	**559**	1,490	2,254
Changes due to collection/realization of expected cash flows[(b)]	**(911)**	(1,102)	(1,228)
Changes in valuation due to inputs and assumptions:			
Changes due to market interest rates and other[(c)]	**(1,608)**	2,122	(589)
Changes in valuation due to other inputs and assumptions:			
Projected cash flows (e.g., cost to service)[(d)]	**133**	109	(452)
Discount rates	**(459)** [(h)]	(78)	(98)
Prepayment model changes and other[(e)]	**108**	(541)	504
Total changes in valuation due to other inputs and assumptions	**(218)**	(510)	(46)
Total changes in valuation due to inputs and assumptions[(b)]	**$ (1,826)**	$ 1,612	$ (635)
Fair value at December 31,[(f)]	**$ 7,436**	$ 9,614	$ 7,614
Change in unrealized gains/(losses) included in income related to MSRs held at December 31,	**$ (1,826)**	$ 1,612	$ (635)
Contractual service fees, late fees and other ancillary fees included in income	**$ 2,884**	$ 3,309	$ 3,783
Third-party mortgage loans serviced at December 31, (in billions)	**$ 756**	$ 822	$ 867
Servicer advances, net of an allowance for uncollectible amounts, at December 31, (in billions)[(g)]	**$ 8.5**	$ 9.6	$ 10.9

(a) 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.
(b) Included changes related to commercial real estate of $(7) million, $(5) million and $(8) million for the years ended December 31, 2014, 2013 and 2012, respectively.
(c) 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.
(d) 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.
(e) 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 $11 million, $18 million and $23 million related to commercial real estate at December 31, 2014, 2013, and 2012, respectively.
(g) 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 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.
(h) For the year ending December 31, 2014, the decrease was primarily related to higher capital allocated to the Mortgage Servicing business, which, in turn, resulted in an increase in the option adjusted spread ("OAS"). The resulting OAS assumption continues to be consistent with capital and return requirements that the Firm believes a market participant would consider, taking into account factors such as the current operating risk environment and regulatory and economic capital requirements.

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, 2014, 2013 and 2012.

Year ended December 31, (in millions)	2014	2013	2012
CCB mortgage fees and related income			
Net production revenue:			
Production revenue	**$ 732**	$ 2,673	$ 5,783
Repurchase (losses)/benefits	**458**	331	(272)
Net production revenue	**1,190**	3,004	5,511
Net mortgage servicing revenue			
Operating revenue:			
Loan servicing revenue	**3,303**	3,552	3,772
Changes in MSR asset fair value due to collection/realization of expected cash flows	**(905)**	(1,094)	(1,222)
Total operating revenue	**2,398**	2,458	2,550
Risk management:			
Changes in MSR asset fair value due to market interest rates and other[(a)]	**(1,606)**	2,119	(587)
Other changes in MSR asset fair value due to other inputs and assumptions in model[(b)]	**(218)**	(511)	(46)
Change in derivative fair value and other	**1,796**	(1,875)	1,252
Total risk management	**(28)**	(267)	619
Total CCB net mortgage servicing revenue	**2,370**	2,191	3,169
All other	**3**	10	7
Mortgage fees and related income	**$ 3,563**	$ 5,205	$ 8,687

(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.
(b) 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 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, 2014 and 2013, and outlines the sensitivities of those fair values to immediate adverse changes in those assumptions, as defined below.

December 31, (in millions, except rates)	2014	2013
Weighted-average prepayment speed assumption ("CPR")	**9.80%**	8.07%
Impact on fair value of 10% adverse change	**$ (337)**	$ (362)
Impact on fair value of 20% adverse change	**(652)**	(705)
Weighted-average option adjusted spread	**9.43%**	7.77%
Impact on fair value of 100 basis points adverse change	**$ (300)**	$ (389)
Impact on fair value of 200 basis points adverse change	**(578)**	(750)

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.

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 $426 million decrease in other intangible assets during 2014 was predominantly due to $380 million in amortization.

The components of credit card relationships, core deposits and other intangible assets were as follows.

	2014			2013		
December 31, (in millions)	Gross amount[(a)]	Accumulated amortization[(a)]	Net carrying value	Gross amount	Accumulated amortization	Net carrying value
Purchased credit card relationships	**$ 200**	**$ 166**	**$ 34**	$ 3,540	$ 3,409	$ 131
Other credit card-related intangibles	**497**	**378**	**$ 119**	542	369	$ 173
Core deposit intangibles	**814**	**757**	**$ 57**	4,133	3,974	$ 159
Other intangibles[(b)]	**1,880**	**898**	**$ 982**	2,374	1,219	$ 1,155
Total other intangible assets	**$ 3,391**	**$ 2,199**	**$ 1,192**	**$ 10,589**	**$ 8,971**	**$ 1,618**

(a) The decrease in the gross amount and accumulated amortization from December 31, 2013, was due to the removal of fully amortized assets, predominantly related to intangible assets acquired in the 2004 merger with Bank One Corporation ("Bank One").
(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)	**2014**	2013	2012
Purchased credit card relationships	**$ 97**	$ 195	$ 309
Other credit card-related intangibles	**51**	58	265
Core deposit intangibles	**102**	196	239
Other intangibles	**130**	188	144
Total amortization expense[(a)]	**$ 380**	$ 637	$ 957

(a) The decline in amortization expense during 2014 predominantly related to intangible assets acquired in the 2004 merger with Bank One, most of which became fully amortized during the second quarter of 2014.

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, 2014.

Year ended December 31, (in millions)	Purchased credit card relationships	Other credit card-related intangibles	Core deposit intangibles	Other intangibles	**Total**
2015	$ 13	$ 38	$ 26	$ 89	$ 166
2016	6	33	14	73	126
2017	5	28	7	70	110
2018	3	20	5	50	78
2019	2	–	3	37	42

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.

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 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, 2014 and 2013, noninterest-bearing and interest-bearing deposits were as follows.

December 31, (in millions)	**2014**	2013
U.S. offices		
Noninterest-bearing	**$ 437,558**	$ 389,863
Interest-bearing		
Demand[(a)]	**90,319**	84,631
Savings[(b)]	**466,730**	450,405
Time (included **$7,501** and $5,995 at fair value)[(c)]	**86,301**	91,356
Total interest-bearing deposits	**643,350**	626,392
Total deposits in U.S. offices	**1,080,908**	1,016,255
Non-U.S. offices		
Noninterest-bearing	**19,078**	17,611
Interest-bearing		
Demand	**217,011**	214,391
Savings	**2,673**	1,083
Time (included **$1,306** and $629 at fair value)[(c)]	**43,757**	38,425
Total interest-bearing deposits	**263,441**	253,899
Total deposits in non-U.S. offices	**282,519**	271,510
Total deposits	**$ 1,363,427**	$ 1,287,765

(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.

At December 31, 2014 and 2013, time deposits in denominations of $100,000 or more were as follows.

December 31, (in millions)	**2014**	2013
U.S. offices	**$ 71,630**	$ 74,804
Non-U.S. offices	**43,743**	38,412
Total	**$115,373**	$113,216

At December 31, 2014, the maturities of interest-bearing time deposits were as follows.

December 31, 2014 (in millions)	U.S.	Non-U.S.	**Total**
2015	$ 70,929	$ 43,031	$ 113,960
2016	6,511	424	6,935
2017	1,480	61	1,541
2018	1,750	75	1,825
2019	1,423	166	1,589
After 5 years	4,208	–	4,208
Total	$ 86,301	$ 43,757	$ 130,058

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 security purchases that did not settle; 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)	**2014**	2013
Brokerage payables[(a)]	**$ 134,467**	$ 116,391
Accounts payable and other liabilities[(b)]	**72,487**	78,100
Total	**$ 206,954**	$ 194,491

(a) Includes payables to customers, brokers, dealers and clearing organizations, and payables from security purchases that did not settle.
(b) Includes $36 million and $25 million accounted for at fair value at December 31, 2014 and 2013, respectively.

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, 2014.

By remaining maturity at December 31,		2014				2013
(in millions, except rates)		Under 1 year	1-5 years	After 5 years	**Total**	Total
Parent company						
Senior debt:	Fixed rate	**$ 13,214**	**$ 46,275**	**$ 49,300**	**$ 108,789**	$ 101,074
	Variable rate	**7,196**	**28,482**	**6,572**	**42,250**	41,030
	Interest rates[(a)]	**0.33-6.75%**	**0.27-7.25%**	**0.18-6.40%**	**0.18-7.25%**	0.19-7.25%
Subordinated debt:	Fixed rate	**$ 2,581**	**$ 2,373**	**$ 11,763**	**$ 16,717**	$ 15,198
	Variable rate	**1,446**	**2,000**	**9**	**3,455**	4,566
	Interest rates[(a)]	**0.48-5.25%**	**1.06-8.53%**	**3.38-8.00%**	**0.48-8.53%**	0.63-8.53%
	Subtotal	**$ 24,437**	**$ 79,130**	**$ 67,644**	**$ 171,211**	$ 161,868
Subsidiaries						
Federal Home Loan Banks (“FHLB”) advances:	Fixed rate	**$ 2,006**	**$ 32**	**$ 166**	**$ 2,204**	$ 3,236
	Variable rate	**7,800**	**53,490**	**1,500**	**62,790**	58,640
	Interest rates[(a)]	**0.27-2.04%**	**0.11-0.43%**	**0.39%**	**0.11-2.04%**	0.16-2.04%
Senior debt:	Fixed rate	**$ 334**	**$ 1,493**	**$ 3,924**	**$ 5,751**	$ 5,428
	Variable rate	**3,805**	**13,692**	**2,587**	**20,084**	23,458
	Interest rates[(a)]	**0.36-0.48%**	**0.26-8.00%**	**1.30-7.28%**	**0.26-8.00%**	0.12-8.00%
Subordinated debt:	Fixed rate	**$ —**	**$ 5,289**	**$ 1,647**	**$ 6,936**	$ 7,286
	Variable rate	**—**	**2,364**	**—**	**2,364**	2,528
	Interest rates[(a)]	**—%**	**0.57-6.00%**	**4.38-8.25%**	**0.57-8.25%**	0.57-8.25%
	Subtotal	**$ 13,945**	**$ 76,360**	**$ 9,824**	**$ 100,129**	$ 100,576
Junior subordinated debt:	Fixed rate	**$ —**	**$ —**	**$ 2,226**	**$ 2,226**	$ 2,176
	Variable rate	**—**	**—**	**3,270**	**3,270**	3,269
	Interest rates[(a)]	**—%**	**—%**	**0.73-8.75%**	**0.73-8.75%**	0.74-8.75%
	Subtotal	**$ —**	**$ —**	**$ 5,496**	**$ 5,496**	$ 5,445
Total long-term debt[(b)(c)(d)]		**$ 38,382**	**$ 155,490**	**$ 82,964**	**$ 276,836** [(f)(g)]	$ 267,889
Long-term beneficial interests:						
	Fixed rate	**$ 4,650**	**$ 7,924**	**$ 1,398**	**$ 13,972**	$ 10,958
	Variable rate	**6,230**	**11,079**	**4,128**	**21,437**	20,872
	Interest rates	**0.18-1.36%**	**0.20-5.23%**	**0.05-15.93%**	**0.05-15.93%**	0.04-15.93%
Total long-term beneficial interests[(e)]		**$ 10,880**	**$ 19,003**	**$ 5,526**	**$ 35,409**	$ 31,830

(a) 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, 2014, for total long-term debt was (0.10)% to 8.55%, versus the contractual range of 0.11% to 8.75% presented in the table above. The interest rate ranges shown exclude structured notes accounted for at fair value.

(b) Included long-term debt of $69.2 billion and $68.4 billion secured by assets totaling $156.7 billion and $131.3 billion at December 31, 2014 and 2013, respectively. The amount of long-term debt secured by assets does not include amounts related to hybrid instruments.

(c) Included $30.2 billion and $28.9 billion of long-term debt accounted for at fair value at December 31, 2014 and 2013, respectively.

(d) Included $2.9 billion and $2.7 billion of outstanding zero-coupon notes at December 31, 2014 and 2013, respectively. The aggregate principal amount of these notes at their respective maturities is $7.5 billion and $4.5 billion, respectively.

(e) Included on the Consolidated balance sheets in beneficial interests issued by consolidated VIEs. Also included $2.2 billion and $2.0 billion of outstanding structured notes accounted for at fair value at December 31, 2014 and 2013, respectively. Excluded short-term commercial paper and other short-term beneficial interests of $17.0 billion and $17.8 billion at December 31, 2014 and 2013, respectively.

(f) At December 31, 2014, long-term debt in the aggregate of $23.5 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.

(g) The aggregate carrying values of debt that matures in each of the five years subsequent to 2014 is $38.4 billion in 2015, $50.0 billion in 2016, $42.0 billion in 2017, $35.3 billion in 2018 and $28.2 billion in 2019.

The weighted-average contractual interest rates for total long-term debt excluding structured notes accounted for at fair value were 2.43% and 2.56% as of December 31, 2014 and 2013, 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 1.50% and 1.54% as of December 31, 2014 and 2013, 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 $352 million and $478 million at December 31, 2014 and 2013, 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, 2014, the Firm had outstanding nine 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 $5.5 billion and $5.4 billion at December 31, 2014 and 2013, 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, 2014 and 2013. Beginning in 2014, the debentures issued to the issuer trusts by the Firm, less the common capital securities of the issuer trusts, began being phased out from inclusion as Tier 1 capital under Basel III. As of December 31, 2014, $2.7 billion of these debentures qualified as Tier 1 capital, while $2.7 billion qualified as Tier 2 capital. As of December 31, 2013, under Basel I, the entire balance of these debentures qualified as Tier 1 capital.

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, 2014.

December 31, 2014 (in millions)	Amount of trust preferred securities issued by trust[(a)]	Principal amount of debenture issued to trust[(b)]	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	$ 726	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	242	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	466	480	2004	2034	Any time	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XXI	836	838	2007	2037	Any time	LIBOR + 0.95%	Quarterly
JPMorgan Chase Capital XXIII	643	643	2007	2047	Any time	LIBOR + 1.00%	Quarterly
JPMorgan Chase Capital XXIX	1,500	1,500	2010	2040	2015	6.70%	Quarterly
Total	$ 5,188	$ 5,496					

(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, 2014 and 2013, JPMorgan Chase was authorized to issue 200 million shares of preferred stock, in one or more series, with a par value of $1.00 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 non-cumulative preferred stock outstanding as of December 31, 2014 and 2013.

	Shares at December 31, (represented by depositary shares)[a]		Carrying value (in millions) at December 31,		Issue date	Contractual rate in effect at December 31, 2014	Earliest redemption date	Date at which dividend rate becomes floating	Floating annual rate of three-month LIBOR plus:
	2014	2013	**2014**	2013					
Fixed-rate:									
Series O	**125,750**	125,750	**$ 1,258**	$ 1,258	8/27/2012	**5.500%**	9/1/2017	NA	NA
Series P	**90,000**	90,000	**900**	900	2/5/2013	**5.450**	3/1/2018	NA	NA
Series T	**92,500**	–	**925**	–	1/30/2014	**6.700**	3/1/2019	NA	NA
Series W	**88,000**	–	**880**	–	6/23/2014	**6.300**	9/1/2019	NA	NA
Fixed-to-floating rate:									
Series I	**600,000**	600,000	**6,000**	6,000	4/23/2008	**7.900%**	4/30/2018	4/30/2018	LIBOR + 3.47 %
Series Q	**150,000**	150,000	**1,500**	1,500	4/23/2013	**5.150**	5/1/2023	5/1/2023	LIBOR + 3.25
Series R	**150,000**	150,000	**1,500**	1,500	7/29/2013	**6.000**	8/1/2023	8/1/2023	LIBOR + 3.30
Series S	**200,000**	–	**2,000**	–	1/22/2014	**6.750**	2/1/2024	2/1/2024	LIBOR + 3.78
Series U	**100,000**	–	**1,000**	–	3/10/2014	**6.125**	4/30/2024	4/30/2024	LIBOR + 3.33
Series V	**250,000**	–	**2,500**	–	6/9/2014	**5.000**	7/1/2019	7/1/2019	LIBOR + 3.32
Series X	**160,000**	–	**1,600**	–	9/23/2014	**6.100**	10/1/2024	10/1/2024	LIBOR + 3.33
Total preferred stock	**2,006,250**	1,115,750	**$ 20,063**	$ 11,158					

(a) Represented by depositary shares.

Each series of preferred stock has a liquidation value and redemption price per share of $10,000, plus any accrued but unpaid dividends.

Dividends on fixed-rate preferred stock are payable quarterly. Dividends on fixed-to-floating rate preferred stock are payable semiannually while at a fixed rate, and will become payable quarterly after converting to a floating rate.

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. All outstanding preferred stock series except Series I may also be redeemed following a capital treatment event, as described in the terms of each 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 February 12, 2015, the Firm issued $1.4 billion of noncumulative preferred stock.

Note 23 – Common stock

At December 31, 2014 and 2013, 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, 2014, 2013 and 2012 were as follows.

Year ended December 31, (in millions)	**2014**	2013	2012
Total issued – balance at January 1 and December 31	**4,104.9**	4,104.9	4,104.9
Treasury – balance at January 1	**(348.8)**	(300.9)	(332.2)
Purchase of treasury stock	**(82.3)**	(96.1)	(33.5)
Share repurchases related to employee stock-based awards[a]	**–**	–	(0.2)
Issued from treasury:			
Employee benefits and compensation plans	**39.8**	47.1	63.7
Employee stock purchase plans	**1.2**	1.1	1.3
Total issued from treasury	**41.0**	48.2	65.0
Total treasury – balance at December 31	**(390.1)**	(348.8)	(300.9)
Outstanding	**3,714.8**	3,756.1	3,804.0

(a) Participants in the Firm's stock-based incentive plans may have shares withheld to cover income taxes.

At each of December 31, 2014, 2013, and 2012, respectively, the Firm had 59.8 million warrants outstanding to purchase shares of common stock (the "Warrants"). The Warrants are currently traded on the New York Stock Exchange, and they are exercisable, in whole or in part, at any time and from time to time until October 28, 2018. The original warrant exercise price was $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, but not limited to, the extent regular quarterly cash dividends exceed $0.38 per share. As a result of the increase in the Firm's quarterly common stock dividend to $0.40 per share commencing with the second quarter of 2014, the exercise price of the Warrants was adjusted each subsequent quarter, and was $42.391 as of December 31, 2014. There has been no change in the number of shares issuable upon exercise.

On March 13, 2012, the Board of Directors authorized a $15.0 billion common equity (i.e., common stock and warrants) repurchase program. As of December 31, 2014, $3.8 billion (on a trade-date basis) of authorized repurchase capacity remained under the program. The amount of equity that may be repurchased by the Firm 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 Comprehensive Capital Analysis and Review ("CCAR") process.

The following table sets forth the Firm's repurchases of common equity for the years ended December 31, 2014, 2013 and 2012, on a trade-date basis. There were no warrants repurchased during the years ended December 31, 2014, and 2013.

Year ended December 31, (in millions)	**2014**	2013	2012
Total number of shares of common stock repurchased	**83.4**	96.1	30.9
Aggregate purchase price of common stock repurchases	**$ 4,834**	$ 4,789	$ 1,329
Total number of Warrants repurchased	**–**	–	18.5
Aggregate purchase price of Warrant repurchases	**$ –**	$ –	$ 238

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 "blackout 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 18–19.

As of December 31, 2014, approximately 240 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, 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, 2014, 2013 and 2012.

Year ended December 31, (in millions, except per share amounts)	**2014**	2013	2012
Basic earnings per share			
Net income	**$ 21,762**	$ 17,923	$ 21,284
Less: Preferred stock dividends	**1,125**	805	653
Net income applicable to common equity	**20,637**	17,118	20,631
Less: Dividends and undistributed earnings allocated to participating securities	**544**	525	754
Net income applicable to common stockholders	**$ 20,093**	$ 16,593	$ 19,877
Total weighted-average basic shares outstanding	**3,763.5**	3,782.4	3,809.4
Net income per share	**$ 5.34**	$ 4.39	$ 5.22
Diluted earnings per share			
Net income applicable to common stockholders	**$ 20,093**	$ 16,593	$ 19,877
Total weighted-average basic shares outstanding	**3,763.5**	3,782.4	3,809.4
Add: Employee stock options, SARs and warrants[(a)]	**34.0**	32.5	12.8
Total weighted-average diluted shares outstanding[(b)]	**3,797.5**	3,814.9	3,822.2
Net income per share	**$ 5.29**	$ 4.35	$ 5.20

(a) Excluded from the computation of diluted EPS (due to the antidilutive effect) were certain options issued under employee benefit plans and the Warrants. The aggregate number of shares issuable upon the exercise of such options and Warrants was 1 million, 6 million and 148 million for the years ended December 31, 2014, 2013 and 2012, 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.

Note 25 – Accumulated other comprehensive income/(loss)

AOCI includes the after-tax change in unrealized gains and losses on investment 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 investment securities[a]	Translation adjustments, net of hedges	Cash flow hedges	Defined benefit pension and OPEB plans	Accumulated other comprehensive income/(loss)
Balance at December 31, 2011	$ 3,565 [b]	$ (26)	$ 51	$ (2,646)	$ 944
Net change	3,303	(69)	69	(145)	3,158
Balance at December 31, 2012	$ 6,868 [b]	$ (95)	$ 120	$ (2,791)	$ 4,102
Net change	(4,070)	(41)	(259)	1,467	(2,903)
Balance at December 31, 2013	$ 2,798 [b]	$ (136)	$ (139)	$ (1,324)	$ 1,199
Net change	**1,975**	**(11)**	**44**	**(1,018)**	**990**
Balance at December 31, 2014	**$ 4,773** [b]	**$ (147)**	**$ (95)**	**$ (2,342)**	**$ 2,189**

(a) Represents the after-tax difference between the fair value and amortized cost of securities accounted for as AFS including, as of the date of transfer during the first quarter of 2014, $9 million of net unrealized losses related to AFS securities that were transferred to HTM. Subsequent to transfer, includes any net unamortized unrealized gains and losses related to the transferred securities.

(b) At December 31, 2011, included after-tax non-credit related unrealized losses of $56 million on debt securities for which credit losses have been recognized in income. There were no such losses for the other periods presented.

The following table presents the before- and after-tax changes in the components of other comprehensive income/(loss).

	2014			2013			2012		
Year ended December 31, (in millions)	Pretax	Tax effect	After-tax	Pretax	Tax effect	After-tax	Pretax	Tax effect	After-tax
Unrealized gains/(losses) on investment securities:									
Net unrealized gains/(losses) arising during the period	**$ 3,193**	**$ (1,170)**	**$ 2,023**	$ (5,987)	$ 2,323	$ (3,664)	$ 7,521	$ (2,930)	$ 4,591
Reclassification adjustment for realized (gains)/losses included in net income[a]	**(77)**	**29**	**(48)**	(667)	261	(406)	(2,110)	822	(1,288)
Net change	**3,116**	**(1,141)**	**1,975**	(6,654)	2,584	(4,070)	5,411	(2,108)	3,303
Translation adjustments:									
Translation[b]	**(1,638)**	**588**	**(1,050)**	(807)	295	(512)	(26)	8	(18)
Hedges[b]	**1,698**	**(659)**	**1,039**	773	(302)	471	(82)	31	(51)
Net change	**60**	**(71)**	**(11)**	(34)	(7)	(41)	(108)	39	(69)
Cash flow hedges:									
Net unrealized gains/(losses) arising during the period	**98**	**(39)**	**59**	(525)	206	(319)	141	(55)	86
Reclassification adjustment for realized (gains)/losses included in net income[c]	**(24)**	**9**	**(15)**	101	(41)	60	(28)	11	(17)
Net change	**74**	**(30)**	**44**	(424)	165	(259)	113	(44)	69
Defined benefit pension and OPEB plans:									
Prior service credits arising during the period	**(53)**	**21**	**(32)**	–	–	–	6	(2)	4
Net gains/(losses) arising during the period	**(1,697)**	**688**	**(1,009)**	2,055	(750)	1,305	(537)	228	(309)
Reclassification adjustments included in net income[d]:									
Amortization of net loss	**72**	**(29)**	**43**	321	(124)	197	324	(126)	198
Prior service costs/(credits)	**(44)**	**17**	**(27)**	(43)	17	(26)	(41)	16	(25)
Foreign exchange and other	**39**	**(32)**	**7**	(14)	5	(9)	(21)	8	(13)
Net change	**(1,683)**	**665**	**(1,018)**	2,319	(852)	1,467	(269)	124	(145)
Total other comprehensive income/(loss)	**$ 1,567**	**$ (577)**	**$ 990**	$ (4,793)	$ 1,890	$ (2,903)	$ 5,147	$ (1,989)	$ 3,158

(a) The pretax amount is reported in securities gains in the Consolidated statements of income.

(b) Reclassifications of pretax realized gains/(losses) on translation adjustments and related hedges are reported in other income/expense in the Consolidated statements of income. The amounts were not material for the periods presented.

(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, 2014, 2013 and 2012, is presented in the following table.

Effective tax rate

Year ended December 31,	**2014**	2013	2012
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	**2.7**	2.2	1.6
Tax-exempt income	**(3.1)**	(3.1)	(2.9)
Non-U.S. subsidiary earnings[(a)]	**(2.0)**	(4.9)	(2.4)
Business tax credits	**(5.4)**	(5.4)	(4.2)
Nondeductible legal expense	**2.4**	8.0	(0.2)
Other, net	**(2.6)**	(1.0)	(0.5)
Effective tax rate	**27.0%**	30.8%	26.4%

(a) Predominantly includes earnings of U.K. subsidiaries that are deemed to be reinvested indefinitely.

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, 2014, 2013, and 2012.

Income tax expense/(benefit)

Year ended December 31, (in millions)	**2014**	2013	2012
Current income tax expense/(benefit)			
U.S. federal	**$ 1,610**	$ (1,316)	$ 3,225
Non-U.S.	**1,353**	1,308	1,782
U.S. state and local	**857**	(4)	1,496
Total current income tax expense/ (benefit)	**3,820**	(12)	6,503
Deferred income tax expense/(benefit)			
U.S. federal	**3,738**	7,080	2,238
Non-U.S.	**71**	10	(327)
U.S. state and local	**401**	913	(781)
Total deferred income tax expense/ (benefit)	**4,210**	8,003	1,130
Total income tax expense	**$ 8,030**	$ 7,991	$ 7,633

Total income tax expense includes $451 million, $531 million and $200 million of tax benefits recorded in 2014, 2013, and 2012, respectively, as a result of tax audit resolutions. In 2013, the relationship between current and deferred income tax expense was largely driven by the reversal of significant deferred tax assets as well as prior-year tax adjustments and 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 a decrease of $140 million in 2014, an increase of $2.1 billion in 2013, and a decrease of $1.9 billion in 2012.

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 2014, pretax earnings of $2.6 billion were generated and will be indefinitely reinvested in these subsidiaries. At December 31, 2014, the cumulative amount of undistributed pretax earnings in these subsidiaries were $31.1 billion. If the Firm were to record a deferred tax liability associated with these undistributed earnings, the amount would be $7.0 billion at December 31, 2014.

These undistributed earnings are related to subsidiaries located predominantly in the U.K. where the 2014 statutory tax rate was 21.5%.

Tax expense applicable to securities gains and losses for the years 2014, 2013 and 2012 was $30 million, $261 million, and $822 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, 2014 and 2013.

Deferred taxes

December 31, (in millions)	2014	2013
Deferred tax assets		
Allowance for loan losses	**$ 5,756**	$ 6,593
Employee benefits	**3,378**	4,468
Accrued expenses and other	**8,637**	9,179
Non-U.S. operations	**5,106**	5,493
Tax attribute carryforwards	**570**	748
Gross deferred tax assets	**23,447**	26,481
Valuation allowance	**(820)**	(724)
Deferred tax assets, net of valuation allowance	**$ 22,627**	$ 25,757
Deferred tax liabilities		
Depreciation and amortization	**$ 3,073**	$ 3,196
Mortgage servicing rights, net of hedges	**5,533**	5,882
Leasing transactions	**2,495**	2,352
Non-U.S. operations	**4,444**	4,705
Other, net	**4,891**	3,459
Gross deferred tax liabilities	**20,436**	19,594
Net deferred tax assets	**$ 2,191**	$ 6,163

JPMorgan Chase has recorded deferred tax assets of $570 million at December 31, 2014, in connection with U.S. federal net operating loss ("NOL") carryforwards. At December 31, 2014, total U.S. federal NOL carryforwards were approximately $1.6 billion. If not utilized, the U.S. federal NOL carryforwards will expire between 2025 and 2034.

The valuation allowance at December 31, 2014, was due to losses associated with non-U.S. subsidiaries.

At December 31, 2014, 2013 and 2012, JPMorgan Chase's unrecognized tax benefits, excluding related interest expense and penalties, were $4.9 billion, $5.5 billion and $7.2 billion, respectively, of which $3.5 billion, $3.7 billion and $4.2 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 these examinations could result in a reduction in the gross balance of unrecognized tax benefits in the range of $0 to approximately $2 billion. Upon settlement of an audit, the gross unrecognized tax benefits would decline either because of tax payments or the recognition of tax benefits.

The following table presents a reconciliation of the beginning and ending amount of unrecognized tax benefits for the years ended December 31, 2014, 2013 and 2012.

Unrecognized tax benefits

Year ended December 31, (in millions)	2014	2013	2012
Balance at January 1,	**$ 5,535**	$ 7,158	$ 7,189
Increases based on tax positions related to the current period	**810**	542	680
Increases based on tax positions related to prior periods	**477**	88	234
Decreases based on tax positions related to prior periods	**(1,902)**	(2,200)	(853)
Decreases related to settlements with taxing authorities	**(9)**	(53)	(50)
Decreases related to a lapse of applicable statute of limitations	**–**	–	(42)
Balance at December 31,	**$ 4,911**	$ 5,535	$ 7,158

After-tax interest expense/(benefit) and penalties related to income tax liabilities recognized in income tax expense were $17 million, $(184) million and $147 million in 2014, 2013 and 2012, respectively.

At both December 31, 2014 and 2013, in addition to the liability for unrecognized tax benefits, the Firm had accrued $1.2 billion 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, 2014.

Tax examination status

December 31, 2014	Periods under examination	Status
JPMorgan Chase – U.S.	2003 - 2005	Field examination completed; at Appellate level
JPMorgan Chase – U.S.	2006 - 2010	Field examination
JPMorgan Chase – U.K.	2006 – 2012	Field examination of certain select entities
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, 2014, 2013 and 2012.

Income before income tax expense - U.S. and non-U.S.

Year ended December 31, (in millions)	**2014**	2013	2012
U.S.	**$ 22,515**	$ 17,229	$ 24,895
Non-U.S.[(a)]	**7,277**	8,685	4,022
Income before income tax expense	**$ 29,792**	$ 25,914	$ 28,917

(a) For purposes of this table, non-U.S. income is defined as income generated from operations located outside the U.S.

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 $10.6 billion and $5.3 billion in 2014 and 2013, 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 Office of the Comptroller of the Currency ("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, 2015, JPMorgan Chase's banking subsidiaries could pay, in the aggregate, approximately $31 billion in dividends to their respective bank holding companies without the prior approval of their relevant banking regulators. The capacity to pay dividends in 2015 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, 2014 and 2013, cash in the amount of $16.8 billion and $17.2 billion, respectively, and securities with a fair value of $10.1 billion and $1.5 billion, respectively, were segregated in special bank accounts for the benefit of securities and futures brokerage customers. In addition, as of December 31, 2014 and 2013, the Firm had other restricted cash of $3.3 billion and $3.9 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.

Basel III rules under the transitional Standardized and Advanced Approaches ("Basel III Standardized Transitional" and "Basel III Advanced Transitional," respectively) became effective on January 1, 2014; December 31, 2013 data is based on Basel I rules. Basel III establishes two comprehensive methodologies for calculating RWA (a Standardized approach and an Advanced approach) which include capital requirements for credit risk, market risk, and in the case of Basel III Advanced, also operational risk. Key differences in the calculation of credit risk RWA between the Standardized and Advanced approaches are that for Basel III Advanced, credit risk RWA is based on risk-sensitive approaches which largely rely on the use of internal credit models and parameters, whereas for Basel III Standardized, credit risk RWA is generally based on supervisory risk-weightings which vary primarily by counterparty type and asset class. Market risk RWA is calculated mostly consistent across Basel III Standardized and Basel III Advanced, both of which incorporate the requirements set forth in Basel 2.5. For 2014, Basel III Standardized Transitional 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.

Beginning in 2014, there are three categories of risk-based capital under the Basel III Transitional rules: Common Equity Tier 1 capital ("CET1 capital"), as well as Tier 1 capital and Tier 2 capital. CET1 capital predominantly includes common stockholders' equity (including capital for AOCI related to debt and equity securities classified as AFS as well as for defined benefit pension and OPEB plans), less certain deductions for goodwill, MSRs and deferred tax assets that arise from NOL and tax credit carryforwards. Tier 1 capital is predominantly comprised of CET1 capital as well as perpetual preferred stock. Tier 2 capital includes long-term debt qualifying as Tier 2 and qualifying allowance for credit losses. Total capital is Tier 1 capital plus Tier 2 capital.

On February 21, 2014, the Federal Reserve and the OCC informed the Firm and its national bank subsidiaries that they had satisfactorily completed the parallel run requirements and were approved to calculate capital under Basel III Advanced, in addition to Basel III Standardized, as of April 1, 2014. In conjunction with its exit from the parallel run, the capital adequacy of the Firm and its national bank subsidiaries is evaluated against the Basel III approach (Standardized or Advanced) which results, for each quarter beginning with the second quarter of 2014, in the lower ratio (the "Collins Floor"), as required by the Collins Amendment of the Dodd-Frank Act.

The following tables present the regulatory capital, assets and risk-based capital ratios for JPMorgan Chase and its significant national bank subsidiaries under both Basel III Standardized Transitional and Basel III Advanced Transitional at December 31, 2014, and under Basel I at December 31, 2013.

	JPMorgan Chase & Co.[d]		
	Basel III Standardized Transitional	**Basel III Advanced Transitional**	**Basel I**
(in millions, except ratios)	**Dec 31, 2014**	**Dec 31, 2014**	**Dec 31, 2013**
Regulatory capital			
CET1 capital	**$ 164,764**	**$ 164,764**	NA
Tier 1 capital[a]	**186,632**	**186,632**	$ 165,663
Total capital	**221,563**	**211,022**	199,286
Assets			
Risk-weighted	**1,472,602**	**1,608,240**	1,387,863
Adjusted average[b]	**2,465,414**	**2,465,414**	2,343,713
Capital ratios[c]			
CET1	**11.2%**	**10.2%**	NA
Tier 1[a]	**12.7**	**11.6**	11.9%
Total	**15.0**	**13.1**	14.4
Tier 1 leverage	**7.6**	**7.6**	7.1

	JPMorgan Chase Bank, N.A.[d]		
	Basel III Standardized Transitional	**Basel III Advanced Transitional**	**Basel I**
(in millions, except ratios)	**Dec 31, 2014**	**Dec 31, 2014**	**Dec 31, 2013**
Regulatory capital			
CET1 capital	**$ 156,898**	**$ 156,898**	NA
Tier 1 capital[a]	**157,222**	**157,222**	$ 139,727
Total capital	**173,659**	**166,662**	165,496
Assets			
Risk-weighted	**1,230,358**	**1,330,175**	1,171,574
Adjusted average[b]	**1,968,131**	**1,968,131**	1,900,770
Capital ratios[c]			
CET1	**12.8%**	**11.8%**	NA
Tier 1[a]	**12.8**	**11.8**	11.9%
Total	**14.1**	**12.5**	14.1
Tier 1 leverage	**8.0**	**8.0**	7.4

	Chase Bank USA, N.A.[d]		
	Basel III Standardized Transitional	**Basel III Advanced Transitional**	**Basel I**
(in millions, except ratios)	**Dec 31, 2014**	**Dec 31, 2014**	**Dec 31, 2013**
Regulatory capital			
CET1 capital	**$ 14,556**	**$ 14,556**	NA
Tier 1 capital[a]	**14,556**	**14,556**	$ 12,956
Total capital	**20,517**	**19,206**	16,389
Assets			
Risk-weighted	**103,468**	**157,565**	100,990
Adjusted average[b]	**128,111**	**128,111**	109,731
Capital ratios[c]			
CET1	**14.1%**	**9.2%**	NA
Tier 1[a]	**14.1**	**9.2**	12.8%
Total	**19.8**	**12.2**	16.2
Tier 1 leverage	**11.4**	**11.4**	11.8

(a) At December 31, 2014, trust preferred securities included in Basel III Tier 1 capital were $2.7 billion and $300 million for JPMorgan Chase and JPMorgan Chase Bank, N.A., respectively. At December 31, 2014, Chase Bank USA, N.A. had no trust preferred securities.

(b) Adjusted average assets, for purposes of calculating the leverage ratio, includes 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.

(c) For each of the risk-based capital ratios the lower of the Standardized Transitional or Advanced Transitional ratio represents the Collins Floor.

(d) 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.

Note: Rating agencies allow measures of capital to be adjusted upward for deferred tax liabilities, which have resulted from both non-taxable business combinations and from tax-deductible goodwill. The Firm had deferred tax liabilities resulting from non-taxable business combinations totaling $130 million and $192 million at December 31, 2014, and December 31, 2013, respectively; and deferred tax liabilities resulting from tax-deductible goodwill of $2.7 billion and $2.8 billion at December 31, 2014, and December 31, 2013, respectively.

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. Bank subsidiaries also are subject to these capital requirements by their respective primary regulators. The following table presents the minimum ratios to which the Firm and its national bank subsidiaries are subject as of December 31, 2014.

	Minimum capital ratios[a]	Well-capitalized ratios[a]
Capital ratios		
CET1	4.0%	NA
Tier 1	5.5	6.0%
Total	8.0	10.0
Tier 1 leverage	4.0	5.0 [b]

(a) As defined by the regulations issued by the Federal Reserve, OCC and FDIC. The CET1 capital ratio became a relevant measure of capital under the prompt corrective action requirements on January 1, 2015.

(b) Represents requirements for bank 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.

As of December 31, 2014, and 2013, JPMorgan Chase and all of its banking subsidiaries were well-capitalized and met all capital requirements to which each was subject.

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 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, 2014 and 2013. 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 as permitted by law, without notice. 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.

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

	Contractual amount						Carrying value[i]	
	2014					2013	2014	2013
By remaining maturity at December 31, (in millions)	Expires in 1 year or less	Expires after 1 year through 3 years	Expires after 3 years through 5 years	Expires after 5 years	Total	Total		
Lending-related								
Consumer, excluding credit card:								
Home equity – senior lien	$ 2,166	$ 4,389	$ 1,841	$ 3,411	$ 11,807	$ 13,158	$ –	$ –
Home equity – junior lien	3,469	5,920	2,141	3,329	14,859	17,837	–	–
Prime mortgage[a]	8,579	–	–	–	8,579	4,817	–	–
Subprime mortgage	–	–	–	–	–	–	–	–
Auto	9,302	921	192	47	10,462	8,309	2	1
Business banking	10,557	807	117	413	11,894	11,251	11	7
Student and other	97	8	–	447	552	685	–	–
Total consumer, excluding credit card	34,170	12,045	4,291	7,647	58,153	56,057	13	8
Credit card	525,963	–	–	–	525,963	529,383	–	–
Total consumer[b]	560,133	12,045	4,291	7,647	584,116	585,440	13	8
Wholesale:								
Other unfunded commitments to extend credit[c][d]	68,688	83,877	112,992	7,119	272,676	246,495	374	432
Standby letters of credit and other financial guarantees[c][d][e]	22,584	29,753	34,982	2,555	89,874	92,723	788	943
Unused advised lines of credit	90,816	13,702	519	138	105,175	101,994	–	–
Other letters of credit[c]	3,363	877	91	–	4,331	5,020	1	2
Total wholesale[f]	185,451	128,209	148,584	9,812	472,056	446,232	1,163	1,377
Total lending-related	$ 745,584	$ 140,254	$ 152,875	$ 17,459	$ 1,056,172	$1,031,672	$ 1,176	$ 1,385
Other guarantees and commitments								
Securities lending indemnification agreements and guarantees[g]	$ 171,059	$ –	$ –	$ –	$ 171,059	$ 169,709	$ –	$ –
Derivatives qualifying as guarantees	3,009	167	12,313	38,100	53,589	56,274	80	72
Unsettled reverse repurchase and securities borrowing agreements	40,993	–	–	–	40,993	38,211	–	–
Loan sale and securitization-related indemnifications:								
Mortgage repurchase liability	NA	NA	NA	NA	NA	NA	275	681
Loans sold with recourse	NA	NA	NA	NA	6,063	7,692	102	131
Other guarantees and commitments[h]	487	506	3,391	1,336	5,720	6,786	(121)	(99)

(a) Includes certain commitments to purchase loans from correspondents.
(b) Predominantly all consumer lending-related commitments are in the U.S.
(c) At December 31, 2014 and 2013, reflects the contractual amount net of risk participations totaling $243 million and $476 million, respectively, for other unfunded commitments to extend credit; $13.0 billion and $14.8 billion, respectively, for standby letters of credit and other financial guarantees; and $469 million and $622 million, respectively, for other letters of credit. In regulatory filings with the Federal Reserve these commitments are shown gross of risk participations.
(d) At December 31, 2014 and 2013, included credit enhancements and bond and commercial paper liquidity commitments to U.S. states and municipalities, hospitals and other non-profit entities of $14.8 billion and $18.9 billion, respectively, within other unfunded commitments to extend credit; and $13.3 billion and $17.2 billion, respectively, within standby letters of credit and other financial guarantees. Other unfunded commitments to extend credit also include liquidity facilities to nonconsolidated municipal bond VIEs; see Note 16.
(e) At December 31, 2014 and 2013, included unissued standby letters of credit commitments of $45.6 billion and $42.8 billion, respectively.
(f) At December 31, 2014 and 2013, the U.S. portion of the contractual amount of total wholesale lending-related commitments was 65% and 68%, respectively.
(g) At December 31, 2014 and 2013, collateral held by the Firm in support of securities lending indemnification agreements was $177.1 billion and $176.4 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.
(h) At December 31, 2014 and 2013, included unfunded commitments of $147 million and $215 million, respectively, to third-party private equity funds; and $961 million and $1.9 billion, respectively, to other equity investments. These commitments included $150 million and $184 million, respectively, related to investments that are generally fair valued at net asset value as discussed in Note 3. In addition, at both December 31, 2014 and 2013, included letters of credit hedged by derivative transactions and managed on a market risk basis of $4.5 billion.
(i) 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.

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 finance activities, which were $23.7 billion and $18.3 billion at December 31, 2014 and 2013, respectively. For further information, see Note 3 and Note 4.

The Firm acts as a settlement and custody bank in the U.S. tri-party repurchase transaction market. In its role as settlement and custody bank, the Firm is exposed to the intra-day credit risk of its cash borrower clients, usually broker-dealers. This exposure is secured by collateral and typically extinguished by the end of the day. During 2014, the Firm extended secured clearance advance facilities to its clients (i.e. cash borrowers); these facilities contractually limit the Firm's intra-day credit risk to the facility amount and must be repaid by the end of the day. Through these facilities, the Firm has reduced its intra-day credit risk substantially; the average daily tri-party repo balance was $253 billion during the year ended December 31, 2013, and as of December 31, 2014, the secured clearance advance facility maximum outstanding commitment amount was $12.6 billion.

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, 2014 and 2013, 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 $789 million and $945 million at December 31, 2014 and 2013, respectively, which were classified in accounts payable and other liabilities on the Consolidated balance sheets; these carrying values included $235 million and $265 million, respectively, for the allowance for lending-related commitments, and $554 million and $680 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, 2014 and 2013.

Standby letters of credit, other financial guarantees and other letters of credit

	2014		2013	
December 31, (in millions)	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[(a)]	**$ 66,856**	**$ 3,476**	$ 69,109	$ 3,939
Noninvestment-grade[(a)]	**23,018**	**855**	23,614	1,081
Total contractual amount	**$ 89,874**	**$ 4,331**	$ 92,723	$ 5,020
Allowance for lending-related commitments	**$ 234**	**$ 1**	$ 263	$ 2
Commitments with collateral	**39,726**	**1,509**	40,410	1,473

(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. Derivatives deemed to be 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.

Derivatives deemed to be 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 $53.6 billion and $56.3 billion at December 31, 2014 and 2013, 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 $27.5 billion and $27.0 billion at December 31, 2014 and 2013, respectively, and the maximum exposure to loss was $2.9 billion and $2.8 billion at both December 31, 2014 and 2013. The fair values of the contracts reflect the probability of whether the Firm will be required to perform under the contract. The fair value of derivatives that the Firm deems to be guarantees were derivative payables of $102 million and $109 million and derivative receivables of $22 million and $37 million at December 31, 2014 and 2013, 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.

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 therefore, are not recorded on the Consolidated balance sheets until settlement date. The unsettled reverse repurchase agreements and securities borrowing agreements predominantly consist of agreements with regular-way settlement periods.

Loan sales- and securitization-related indemnifications

Mortgage repurchase liability

In connection with the Firm's mortgage loan sale and securitization activities with the GSEs, as described in Note 16, 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). 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.

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

Summary of changes in mortgage repurchase liability[(a)]

Year ended December 31, (in millions)	2014	2013	2012
Repurchase liability at beginning of period	**$ 681**	$ 2,811	$ 3,557
Net realized gains/(losses)[(b)]	**53**	(1,561)	(1,158)
Reclassification to litigation reserve	**–**	(179)	–
(Benefit)/provision for repurchase[(c)]	**(459)**	(390)	412
Repurchase liability at end of period	**$ 275**	$ 681	$ 2,811

(a) 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.
(b) Presented net of third-party recoveries and included principal losses and accrued interest on repurchased loans, "make-whole" settlements, settlements with claimants, and certain related expense. Make-whole settlements were $11 million, $414 million and $524 million, for the years ended December 31, 2014, 2013 and 2012, respectively.
(c) Included a provision related to new loan sales of $4 million, $20 million and $112 million, for the years ended December 31, 2014, 2013 and 2012, 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 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 seven trustees (or separate and successor trustees) for this group of 330 trusts have accepted the RMBS Trust Settlement for 319 trusts in whole or in part and excluded from the settlement 16 trusts in whole or in part. The trustees' acceptance is subject to a judicial approval proceeding initiated by the trustees, which is pending in New York state court.

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 $78 billion has been repaid. In addition, approximately $49 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, 2014, was approximately $38 billion, of which $8 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.

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, 2014 and 2013, the unpaid principal balance of loans sold with recourse totaled $6.1 billion and $7.7 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 $102 million and $131 million at December 31, 2014 and 2013, 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 $10 million, $14 million, and $16 million on $847.9 billion, $750.1 billion, and $655.2 billion of aggregate volume processed for the years ended December 31, 2014, 2013 and 2012, 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 $4 million and $5 million at December 31, 2014 and 2013, respectively, which the Firm believes, based on historical experience and the collateral held by Chase Paymentech of $174 million and $208 million at December 31, 2014 and 2013, 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 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.

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. The Firm 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.

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 maintained by a clearing house or exchange as part of the resources available to cover any losses in the event of a member default. Alternatively, these obligations may be a full pro-rata share of the residual losses after applying the guarantee fund. Additionally, certain clearinghouses require the Firm as a member to pay a pro rata share of losses resulting from the clearinghouse's investment of guarantee fund contributions and initial margin, unrelated to and independent of the default of another member. Generally a payment would only be required should such losses exceed the resources of the clearing house or exchange that are contractually required to absorb the losses in the first instance. 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 288 of this Note. For additional information, see Note 21.

Note 30 – Commitments, pledged assets and collateral

Lease commitments

At December 31, 2014, 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, 2014.

Year ended December 31, (in millions)	
2015	$ 1,722
2016	1,682
2017	1,534
2018	1,281
2019	1,121
After 2019	5,101
Total minimum payments required[(a)]	12,441
Less: Sublease rentals under noncancelable subleases	(2,238)
Net minimum payment required	$ 10,203

(a) 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)	2014	2013	2012
Gross rental expense	**$ 2,255**	$ 2,187	$ 2,212
Sublease rental income	**(383)**	(341)	(288)
Net rental expense	**$ 1,872**	$ 1,846	$ 1,924

Pledged assets

Financial assets are 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, 2014 and 2013, the Firm had pledged assets of $324.5 billion and $251.3 billion, respectively, at Federal Reserve Banks and FHLBs. In addition, as of December 31, 2014 and 2013, the Firm had pledged to third parties $60.1 billion and $68.4 billion, respectively, of financial instruments it owns that may not be sold or repledged by such secured parties. Total assets pledged do not include assets of consolidated VIEs; these assets are used to settle the liabilities of those entities. See Note 16 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 and Note 21, respectively. The significant components of the Firm's pledged assets were as follows.

December 31, (in billions)	2014	2013
Securities	**$ 118.7**	$ 68.1
Loans	**248.2**	230.3
Trading assets and other	**169.0**	163.3
Total assets pledged	**$ 535.9**	$ 461.7

Collateral

At December 31, 2014 and 2013, the Firm had accepted assets as collateral that it could sell or repledge, deliver or otherwise use with a fair value of approximately $761.7 billion and $725.0 billion, respectively. This collateral was generally obtained under resale agreements, securities borrowing agreements, customer margin loans and derivative agreements. Of the collateral received, approximately $596.8 billion and $520.1 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.

Certain prior period amounts for both collateral, as well as pledged assets (including the corresponding pledged assets parenthetical disclosure for trading assets on the Consolidated balance sheets) have been revised to conform with the current period presentation.

Note 31 – Litigation

Contingencies

As of December 31, 2014, 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 $5.8 billion at December 31, 2014. 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, particularly proceedings that could result from government investigations. 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.

Auto Dealer Regulatory Matter. The Firm is engaged in discussions with the U.S. Department of Justice ("DOJ") about potential statistical disparities in markups charged to different races and ethnicities by automobile dealers on loans originated by those dealers and purchased by the Firm.

CIO Litigation. The Firm has been sued in a consolidated shareholder putative class action, a consolidated putative class action brought under the Employee Retirement Income Security Act ("ERISA") and seven shareholder derivative actions brought in Delaware state court and in New York federal and state courts relating to 2012 losses in the synthetic credit portfolio managed by the Firm's Chief Investment Office ("CIO"). Four of the shareholder derivative actions have been dismissed, and plaintiffs in three of those actions have appealed those dismissals. Motions to dismiss have also been filed in two other shareholder derivative actions.

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. The Firm submitted a response to the Statement of Objections in January 2014, and the EC held a hearing in May 2014. DOJ also has an ongoing investigation into the CDS marketplace, which was initiated in July 2009.

Separately, the Firm and other industry members are defendants in a consolidated putative class action filed in the United States District Court for the Southern District of New York on behalf of purchasers and sellers of CDS. The complaint 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 market for exchange-traded CDS products. Defendants moved to dismiss this action, and in September 2014, the Court granted defendants' motion in part, dismissing claims for damages based on transactions effected before the Autumn of 2008, as well as certain other claims.

Foreign Exchange Investigations and Litigation. In November 2014, JPMorgan Chase Bank, N.A. reached separate settlements with the U.K. Financial Conduct Authority ("FCA"), the U.S. Commodity Futures Trading Commission ("CFTC") and the U.S. Office of the Comptroller of the Currency ("OCC") to resolve the agencies' respective civil enforcement claims relating to the Bank's foreign exchange ("FX") trading business (collectively, the "Settlement Agreements"). Under the Settlement Agreements, JPMorgan Chase Bank, N.A. agreed to take certain remedial measures and paid penalties of £222 million to the FCA, $310 million to the CFTC and $350 million to the OCC.

In December 2014, the Hong Kong Monetary Authority ("HKMA") announced the conclusion of its FX-related investigation regarding JPMorgan Chase Bank, N.A. and several other banks. The HKMA required the banks, including JPMorgan Chase Bank, N.A., to take certain remedial measures.

Other FX-related regulatory investigations of the Firm are ongoing, including a criminal investigation by DOJ. These investigations are focused on the Firm's spot FX trading and sales activities as well as controls applicable to those activities. The Firm continues to cooperate with these investigations. The Firm is also engaged in discussions regarding potential resolution with DOJ.

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. In March 2014, plaintiffs filed a consolidated amended U.S. class action complaint; two other class actions were brought by non-U.S.-based plaintiffs. The Court denied defendants' motion to dismiss the U.S. class action and granted the motion to dismiss the two non-U.S. class actions. In January 2015, the Firm settled the U.S. class action, and this settlement is subject to court approval.

General Motors Litigation. JPMorgan Chase Bank, N.A. participated in, and was the Administrative Agent on behalf of a syndicate of lenders on, a $1.5 billion syndicated Term Loan facility ("Term Loan") for General Motors Corporation ("GM"). In July 2009, in connection with the GM bankruptcy proceedings, the Official Committee of Unsecured Creditors of Motors Liquidation Company ("Creditors Committee") filed a lawsuit against JPMorgan Chase Bank, N.A., in its individual capacity and as Administrative Agent for other lenders on the Term Loan, seeking to hold the underlying lien invalid. In March 2013, the Bankruptcy Court granted JPMorgan Chase Bank, N.A.'s motion for summary judgment and dismissed the Creditors Committee's complaint on the grounds that JPMorgan Chase Bank, N.A. did not authorize the filing of the UCC-3 termination statement at issue. The Creditors Committee appealed the Bankruptcy Court's dismissal of its claim to the United States Court of Appeals for the Second Circuit. In January 2015, the Court of Appeals reversed the Bankruptcy Court's dismissal of the Creditors Committee's claim and remanded the case to the Bankruptcy Court with instructions to enter partial summary judgment for the Creditors Committee as to the termination statement. JPMorgan Chase Bank, N.A. has filed a petition requesting that the full Court of Appeals rehear the case en banc. In the event that the request for rehearing is denied, continued proceedings in the Bankruptcy Court are anticipated with respect to, among other things, additional defenses asserted by JPMorgan Chase Bank, N.A. and the value of additional collateral on the Term Loan, which was not the subject of the termination statement.

Interchange Litigation. A group of merchants and retail associations filed a series of class action complaints alleging 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. The parties have entered into an agreement to settle the cases for a cash payment of $6.1 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. In December 2013, the Court issued a decision granting final approval of the settlement. A number of merchants have appealed. 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. Defendants' motion to dismiss the actions was denied in July 2014.

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.

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 $7.9 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 filed counterclaims against LBHI alleging that LBHI fraudulently induced the Firm to make large extensions of credit against inappropriate collateral in connection with the Firm's role as the clearing bank for Lehman Brothers Inc. ("LBI"), LBHI's broker-dealer subsidiary. These extensions of credit left the Firm with more than $25 billion in claims against the estate of LBI. The case has been transferred from the Bankruptcy Court to the District Court, and the Firm has moved for summary judgment seeking the dismissal of all of LBHI's claims. LBHI has also moved for summary judgment on certain of its claims and seeking the dismissal of the Firm's counterclaims.

In the Bankruptcy Court proceedings, 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 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. LBHI and the Committee have also filed an objection to the claims asserted by JPMorgan Chase Bank, N.A. against LBHI with respect to clearing advances made to LBI, principally on the grounds that the Firm had not conducted the sale of the securities collateral held for its claims in a commercially reasonable manner. Discovery regarding both objections is ongoing. In January 2015, LBHI filed additional objections relating to a variety of claims that the Firm had filed in the Bankruptcy Court proceedings. The bankruptcy claims and other claims of the Firm against Lehman entities have been paid in full, subject to potential adjustment depending on the outcome of the objections filed by LBHI and the Committee.

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 DOJ, the CFTC, the Securities and Exchange Commission (the "SEC") and various state attorneys general, as well as the EC, the FCA, the Canadian Competition Bureau, the 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 responding to and continuing to cooperate with these inquiries. In December 2013, JPMorgan Chase reached a settlement with the EC regarding its Japanese Yen LIBOR investigation and agreed to pay a fine of €80 million. In January 2014, the Canadian Competition Bureau announced that it has discontinued its investigation related to Yen LIBOR. In May 2014, the EC issued a Statement of Objections outlining its case against the Firm (and others) as to EURIBOR, to which the Firm has filed a response. In October 2014, JPMorgan Chase reached a settlement with the EC regarding the EC's Swiss franc LIBOR investigation and agreed to pay a fine of €72 million. In January 2015, the FCA informed JPMorgan Chase that it has discontinued its investigation of the Firm concerning LIBOR and EURIBOR.

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, Swiss franc LIBOR, Euroyen TIBOR and/or EURIBOR 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 affected by changes in U.S. dollar LIBOR, Yen LIBOR, Swiss franc LIBOR, Euroyen TIBOR or EURIBOR and assert a variety of claims including antitrust claims seeking treble damages.

The U.S. dollar LIBOR-related putative class actions were consolidated for pre-trial purposes in the United States District Court for the Southern District of New York. The Court stayed all related cases while motions to dismiss the three lead class actions were pending. In March 2013, the Court granted in part and denied in part the defendants' motions to dismiss the claims in the three lead class actions, including dismissal with prejudice of the antitrust claims. In relation to the Firm, the Court has permitted certain claims under the Commodity Exchange Act and common law claims to proceed. In September 2013, class plaintiffs in two of the three lead class actions filed amended complaints, which defendants moved to dismiss. Plaintiffs in the third class action appealed the dismissal of the antitrust claims and the United States Court of Appeals for the Second Circuit dismissed the appeal for lack of jurisdiction. In January 2015, the United States Supreme Court reversed the decision of the Court of Appeals, holding that plaintiffs have the jurisdictional right to appeal and remanding the case to the Court of Appeals for further proceedings. In February 2015, the District Court entered a judgment on certain other plaintiffs' antitrust claims so that those plaintiffs could also participate in the appeal. Motions to dismiss are pending in the remaining previously stayed individual actions and class actions.

The Firm is one of the defendants in a putative class action alleging manipulation of Euroyen TIBOR and Yen LIBOR which was 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. In March 2014, the Court granted in part and denied in part the defendants' motions to dismiss, including dismissal of plaintiff's antitrust and unjust enrichment claims.

The Firm is one of the defendants in a putative class action filed in the United States District Court for the Southern District of New York relating to the interest rate benchmark EURIBOR. The case is currently stayed.

The Firm is also one of the defendants in a number of putative class actions alleging that defendant banks and ICAP conspired to manipulate the U.S. dollar ISDAFIX rates. Plaintiffs primarily assert claims under the federal antitrust laws and Commodities Exchange Act. In December 2014, defendants filed a motion to dismiss.

Madoff Litigation. 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, so-called Madoff feeder funds. These actions seek to recover payments made by the funds to defendants totaling approximately $155 million. All but two of these actions have been dismissed.

In addition, a putative 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 putative class action in the same court. The allegations in these complaints largely track those previously raised by the court-appointed trustee for Bernard L. Madoff Investment Securities LLC. The District Court dismissed these complaints and the United States Court of Appeals for the Second Circuit affirmed the District Court's decision. Plaintiffs have petitioned the United States Supreme Court for a writ of certiorari.

The Firm is a defendant in five other Madoff-related individual 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. In August 2014, the Court dismissed all claims against the Firm. Plaintiffs have filed a notice of appeal.

A putative class action has been filed in the United States District Court for the District of New Jersey by investors who were net winners (i.e., Madoff customers who had taken more money out of their accounts than had been invested) in Madoff's Ponzi scheme and were not included in the previous class action settlement. These plaintiffs allege violations of the federal securities law, federal and state racketeering statutes and multiple common law and statutory claims including breach of trust, aiding and abetting embezzlement, unjust enrichment, conversion and commercial bad faith. A similar action has been filed in the United States District Court for the Middle District of Florida, although it is not styled as a class action, and includes a claim pursuant to a Florida statute. The Firm has moved to transfer these cases to the United States District Court for the Southern District of New York.

Three shareholder derivative actions have also been filed in New York federal and state court against the Firm, as nominal defendant, and certain of its current and former Board members, alleging breach of fiduciary duty in connection with the Firm's relationship with Bernard Madoff and the alleged failure to maintain effective internal controls to detect fraudulent transactions. The actions seek declaratory relief and damages. In July 2014, the federal court granted defendants' motions to dismiss two of the actions. One plaintiff chose not to appeal and the other filed a motion for reconsideration which was denied in November 2014. The latter plaintiff has filed an appeal. In the remaining state court action, a hearing on defendants' motion to dismiss was held in October 2014, and the court reserved decision.

MF Global. J.P. Morgan Securities LLC has been named as one of several defendants in a number of putative 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. These actions have been settled, subject to final approval by the court. The Firm also 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.

Mortgage-Backed Securities and Repurchase Litigation and Related Regulatory Investigations. JPMorgan Chase and affiliates (together, "JPMC"), Bear Stearns and affiliates (together, "Bear Stearns") and certain 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 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 $41 billion, of which $38 billion involves JPMC, Bear Stearns or Washington Mutual as issuer and $3 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.

<u>Issuer Litigation – Class Actions.</u> Two class actions remain pending against JPMC and Bear Stearns as MBS issuers in the United States District Court for the Southern District of New York. In the action concerning JPMC, plaintiffs' motion for class certification has been granted with respect to liability but denied without prejudice as to damages. In the action concerning Bear Stearns, the parties have reached a settlement in principle, which is subject to court approval. The Firm is also defending a class action brought against Bear Stearns in the United States District Court for the District of Massachusetts, in which the court's decision on defendants' motion to dismiss is pending.

<u>Issuer Litigation – Individual Purchaser Actions.</u> 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 U.S. and are in various stages of litigation.

<u>Monoline Insurer Litigation.</u> The Firm is defending two pending actions relating to the same monoline insurer's guarantees of principal and interest on certain classes of 11 different Bear Stearns MBS offerings. These actions are pending in state court in New York and are in various stages of litigation.

<u>Underwriter Actions.</u> 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 actions of this type pending against the Firm in federal and state courts in

various stages of litigation. One such class action has been settled, subject to final approval by the court.

Repurchase Litigation. The Firm is defending a number of actions brought by trustees, securities administrators 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 JPMorgan Chase Bank, N.A. and the Federal Deposit Insurance Corporation (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 and a group of 21 institutional MBS investors made a binding offer to the trustees of MBS issued by JPMC and Bear Stearns providing for the payment of $4.5 billion and the implementation of certain servicing changes 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 issued between 2005 and 2008. The offer does not resolve claims relating to Washington Mutual MBS. The seven trustees (or separate and successor trustees) for this group of 330 trusts has accepted the settlement for 319 trusts in whole or in part and excluded from the settlement 16 trusts in whole or in part. The trustees' acceptance is subject to a judicial approval proceeding initiated by the trustees and pending in New York state court. Certain investors in some of the trusts for which the settlement has been accepted have intervened in the judicial approval proceeding, challenging the trustees' acceptance of the settlement.

Additional actions have been filed against third-party trustees that relate to loan repurchase and servicing claims involving trusts that the Firm sponsored.

Derivative Actions. Shareholder derivative actions relating to the Firm's MBS activities have been filed 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. Two of the New York actions have been dismissed and one is on appeal. A consolidated action in California federal court has been dismissed without prejudice for lack of personal jurisdiction and plaintiffs are pursuing discovery.

Government Enforcement Investigations and Litigation. 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 subpoenas and informal requests for information from 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 continues to cooperate with investigations by DOJ, including the U.S. Attorney's Office for the District of Connecticut, the SEC Division of Enforcement and the Office of the Special Inspector General for the Troubled Asset Relief Program, all of which relate to, among other matters, communications with counterparties in connection with certain secondary market trading in residential and commercial 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. In January 2015, the Firm entered into a settlement resolving this action.

The Firm entered into a settlement resolving a putative class action lawsuit relating to its filing of affidavits or other documents in connection with mortgage foreclosure proceedings, and the court granted final approval of the settlement in January 2015.

One shareholder derivative action has 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. In December 2014, the court granted defendants' motion to dismiss the complaint.

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, three municipalities and a school district have commenced litigation against the Firm alleging violations of an unfair competition law and of the FHA and ECOA and seeking statutory damages for the unfair competition claim, and, for the FHA and ECOA claims, damages in the form of lost tax revenue and increased municipal costs associated with foreclosed properties. The court denied a motion to dismiss in one of the municipal actions, the school district action was dismissed with prejudice, another municipal action was recently served, and motions to dismiss are pending in the remaining actions.

JPMorgan Chase Bank, N.A. is responding to inquiries by the Executive Office of the U.S. Bankruptcy Trustee and various regional U.S. Bankruptcy Trustees relating to mortgage payment change notices and escrow statements in bankruptcy proceedings.

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.

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, in which the judge will determine whether to recommend that the matter go to a full trial, is ongoing. The final hearings have been scheduled for March 2015.

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.

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 putative 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 responding to and cooperating with the investigation.

Referral Hiring Practices Investigations. Various regulators 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 responding to and continuing to cooperate with these investigations.

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.

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 and amended to include JPMorgan Chase Bank, N.A. as a defendant, 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 affiliates in connection with those securitization agreements. The case includes assertions that JPMorgan Chase Bank, N.A. may have assumed liabilities for the alleged breaches of representations and warranties in the mortgage securitization agreements. The Firm and the FDIC have filed opposing motions, each seeking a ruling that the liabilities at issue are borne by the other.

Certain holders of Washington Mutual Bank debt filed an action against JPMorgan Chase which alleged that by acquiring substantially all of the assets of Washington Mutual Bank from the FDIC, JPMorgan Chase Bank, N.A. caused Washington Mutual Bank to default on its bond obligations. JPMorgan Chase and the FDIC moved to dismiss this action and the District Court dismissed the case except as to the plaintiffs' claim that JPMorgan Chase 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. In accordance with the provisions of U.S. GAAP for contingencies, the Firm accrues for a litigation-related liability when it is probable that such a 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 downward, as appropriate, based on management's best judgment after consultation with counsel. During the years ended December 31, 2014, 2013 and 2012, the Firm incurred $2.9 billion, $11.1 billion and $5.0 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.

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 U.S.

As of or for the year ended December 31, (in millions)	Revenue[b]	Expense[c]	Income before income tax expense	Net income	Total assets
2014					
Europe/Middle East and Africa	**$ 16,013**	**$ 10,123**	**$ 5,890**	**$ 3,935**	**$ 481,328** [d]
Asia and Pacific	**6,083**	**4,478**	**1,605**	**1,051**	**147,357**
Latin America and the Caribbean	**2,047**	**1,626**	**421**	**269**	**44,567**
Total international	**24,143**	**16,227**	**7,916**	**5,255**	**673,252**
North America[a]	**70,062**	**48,186**	**21,876**	**16,507**	**1,899,874**
Total	**$ 94,205**	**$ 64,413**	**$ 29,792**	**$ 21,762**	**$ 2,573,126**
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[a]	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[a]	78,576	53,256	25,320	18,274	1,584,055
Total	$ 97,031	$ 68,114	$ 28,917	$ 21,284	$ 2,359,141

(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 $434 billion, $451 billion, and $498 billion at December 31, 2014, 2013 and 2012, respectively.

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 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 77–78. For a further discussion concerning JPMorgan Chase's business segments, see Business Segment Results on pages 79–80.

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

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.

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 multinational clients, including corporations, municipalities, financial institutions and non-profit 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 $2.4 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 for a broad range of clients' investment needs. For Global Wealth Management clients, 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

The Corporate 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, Enterprise 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.

Segment results

The following tables provide a summary of the Firm's segment results as of or for the years ended December 31, 2014, 2013 and 2012 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 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/(benefit).

Business segment capital allocation changes

Effective January 1, 2013, the Firm 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 change in equity levels for the lines of businesses was largely driven by the evolving regulatory requirements and higher capital targets the Firm had established under the Basel III Advanced Approach.

Segment results and reconciliation

As of or the year ended December 31, (in millions, except ratios)	Consumer & Community Banking			Corporate & Investment Bank			Commercial Banking		
	2014	2013	2012	**2014**	2013	2012	**2014**	2013	2012
Noninterest revenue	**$ 15,937**	$ 17,552	$ 20,813	**$ 23,458**	$ 23,810	$ 23,104	**$ 2,349**	$ 2,298	$ 2,283
Net interest income	**28,431**	28,985	29,465	**11,175**	10,976	11,658	**4,533**	4,794	4,629
Total net revenue	**44,368**	46,537	50,278	**34,633**	34,786	34,762	**6,882**	7,092	6,912
Provision for credit losses	**3,520**	335	3,774	**(161)**	(232)	(479)	**(189)**	85	41
Noninterest expense	**25,609**	27,842	28,827	**23,273**	21,744	21,850	**2,695**	2,610	2,389
Income/(loss) before income tax expense/(benefit)	**15,239**	18,360	17,677	**11,521**	13,274	13,391	**4,376**	4,397	4,482
Income tax expense/(benefit)	**6,054**	7,299	6,886	**4,596**	4,387	4,719	**1,741**	1,749	1,783
Net income/(loss)	**$ 9,185**	$ 11,061	$ 10,791	**$ 6,925**	$ 8,887	$ 8,672	**$ 2,635**	$ 2,648	$ 2,699
Average common equity	**$ 51,000**	$ 46,000	$ 43,000	**$ 61,000**	$ 56,500	$ 47,500	**$ 14,000**	$ 13,500	$ 9,500
Total assets	**455,634**	452,929	467,282	**861,819**	843,577	876,107	**195,267**	190,782	181,502
Return on common equity	**18%**	23%	25%	**10%**	15%	18%	**18%**	19%	28%
Overhead ratio	**58**	60	57	**67**	63	63	**39**	37	35

(a) Segment managed results reflect revenue on a FTE basis with the corresponding income tax impact recorded within income tax expense/(benefit). These adjustments are eliminated in reconciling items to arrive at the Firm's reported U.S. GAAP results.

On at least an annual basis, the Firm assesses the level of capital required for each line of business as well as the assumptions and methodologies used to allocate capital to its lines of business and updates equity allocations to its lines of business as refinements are implemented.

Preferred stock dividend allocation reporting change
As part of its funds transfer pricing process, the Firm allocates substantially all of the cost of its outstanding preferred stock to its reportable business segments, while retaining the balance of the cost in Corporate. Prior to the fourth quarter of 2014, this cost was allocated to the Firm's reportable business segments as interest expense, with an offset recorded as interest income in Corporate. Effective with the fourth quarter of 2014, this cost is no longer included in interest income and interest expense in the segments, but rather is now included in net income applicable to common equity to be consistent with the presentation of firmwide results. As a result of this reporting change, net interest income and net income in the reportable business segments increases; however, there was no impact to the segments' return on common equity ("ROE"). The Firm's net interest income, net income, Consolidated balance sheets and consolidated results of operations were not impacted by this reporting change, as preferred stock dividends have been and continue to be distributed from retained earnings and, accordingly, were never reported as a component of the Firm's consolidated net interest income or net income. Prior period segment amounts have been revised to conform with the current period presentation.

(table continued from previous page)

Asset Management			Corporate			Reconciling Items[a]			Total		
2014	2013	2012	**2014**	2013	2012	**2014**	2013	2012	**2014**	2013	2012
$ 9,588	$ 9,029	$ 7,847	**$ 1,972**	$ 3,093	$ 190	**$ (2,733)**	$ (2,495)	$ (2,116)	**$ 50,571**	$ 53,287	$ 52,121
2,440	2,376	2,163	**(1,960)**	(3,115)	(2,262)	**(985)**	(697)	(743)	**43,634**	43,319	44,910
12,028	11,405	10,010	**12**	(22)	(2,072)	**(3,718)**	(3,192)	(2,859)	**94,205**	96,606	97,031
4	65	86	**(35)**	(28)	(37)	**—**	—	—	**3,139**	225	3,385
8,538	8,016	7,104	**1,159**	10,255	4,559	**—**	—	—	**61,274**	70,467	64,729
3,486	3,324	2,820	**(1,112)**	(10,249)	(6,594)	**(3,718)**	(3,192)	(2,859)	**29,792**	25,914	28,917
1,333	1,241	1,078	**(1,976)**	(3,493)	(3,974)	**(3,718)**	(3,192)	(2,859)	**8,030**	7,991	7,633
$ 2,153	$ 2,083	$ 1,742	**$ 864**	$ (6,756)	$ (2,620)	**$ —**	$ —	$ —	**$ 21,762**	$ 17,923	$ 21,284
$ 9,000	$ 9,000	$ 7,000	**$ 72,400**	$ 71,409	$ 77,352	**$ —**	$ —	$ —	**$ 207,400**	$ 196,409	$ 184,352
128,701	122,414	108,999	**931,705**	805,987	725,251	**NA**	NA	NA	**2,573,126**	2,415,689	2,359,141
23%	23%	24%	**NM**	NM	NM	**NM**	NM	NM	**10%**	9%	11%
71	70	71	**NM**	NM	NM	**NM**	NM	NM	**65**	73	67

Note 34 – Parent company

Parent company – Statements of income and comprehensive income

Year ended December 31, (in millions)	2014	2013	2012
Income			
Dividends from subsidiaries and affiliates:			
Bank and bank holding company	$ –	$ 1,175	$ 4,828
Nonbank[(a)]	14,716	876	1,972
Interest income from subsidiaries	378	757	1,041
Other interest income	284	303	293
Other income from subsidiaries, primarily fees:			
Bank and bank holding company	779	318	939
Nonbank	52	2,065	1,207
Other income/(loss)	508	(1,380)	579
Total income	16,717	4,114	10,859
Expense			
Interest expense to subsidiaries and affiliates[(a)]	169	309	836
Other interest expense	3,645	4,031	4,679
Other noninterest expense	827	9,597	2,399
Total expense	4,641	13,937	7,914
Income (loss) before income tax benefit and undistributed net income of subsidiaries	12,076	(9,823)	2,945
Income tax benefit	1,430	4,301	1,665
Equity in undistributed net income of subsidiaries	8,256	23,445	16,674
Net income	$ 21,762	$ 17,923	$ 21,284
Other comprehensive income, net	990	(2,903)	3,158
Comprehensive income	$ 22,752	$ 15,020	$ 24,442

Parent company – Balance sheets

December 31, (in millions)	2014	2013
Assets		
Cash and due from banks	$ 211	$ 264
Deposits with banking subsidiaries	95,884	64,843
Trading assets	18,222	13,727
Available-for-sale securities	3,321	15,228
Loans	2,260	2,829
Advances to, and receivables from, subsidiaries:		
Bank and bank holding company	33,810	21,693
Nonbank	52,626	68,788
Investments (at equity) in subsidiaries and affiliates:		
Bank and bank holding company	216,070	196,950
Nonbank[(a)]	41,173	50,996
Other assets	18,645	18,877
Total assets	$ 482,222	$ 454,195
Liabilities and stockholders' equity		
Borrowings from, and payables to, subsidiaries and affiliates[(a)]	$ 17,442	$ 14,328
Other borrowed funds, primarily commercial paper	49,586	55,454
Other liabilities	11,918	11,367
Long-term debt[(b)(c)]	171,211	161,868
Total liabilities[(c)]	250,157	243,017
Total stockholders' equity	232,065	211,178
Total liabilities and stockholders' equity	$ 482,222	$ 454,195

Parent company – Statements of cash flows

Year ended December 31, (in millions)	2014	2013	2012
Operating activities			
Net income	$ 21,762	$ 17,923	$ 21,284
Less: Net income of subsidiaries and affiliates[(a)]	22,972	25,496	23,474
Parent company net loss	(1,210)	(7,573)	(2,190)
Cash dividends from subsidiaries and affiliates[(a)]	14,714	1,917	6,798
Other operating adjustments	(1,698)	3,180	2,376
Net cash provided by/(used in) operating activities	11,806	(2,476)	6,984
Investing activities			
Net change in:			
Deposits with banking subsidiaries	(31,040)	10,679	16,100
Available-for-sale securities:			
Proceeds from paydowns and maturities	12,076	61	621
Purchases	–	(12,009)	(364)
Other changes in loans, net	(319)	(713)	(350)
Advances to and investments in subsidiaries and affiliates, net	3,306	14,469	9,497
All other investing activities, net	32	22	25
Net cash provided by/(used in) investing activities	(15,945)	12,509	25,529
Financing activities			
Net change in:			
Borrowings from subsidiaries and affiliates[(a)]	4,454	(2,715)	(14,038)
Other borrowed funds	(5,778)	(7,297)	3,736
Proceeds from the issuance of long-term debt	40,284	31,303	28,172
Payments of long-term debt	(31,050)	(21,510)	(44,240)
Excess tax benefits related to stock-based compensation	407	137	255
Proceeds from issuance of preferred stock	8,847	3,873	1,234
Redemption of preferred stock	–	(1,800)	–
Treasury stock and warrants repurchased	(4,760)	(4,789)	(1,653)
Dividends paid	(6,990)	(6,056)	(5,194)
All other financing activities, net	(1,328)	(1,131)	(701)
Net cash provided by/(used in) financing activities	4,086	(9,985)	(32,429)
Net increase/(decrease) in cash and due from banks	(53)	48	84
Cash and due from banks at the beginning of the year, primarily with bank subsidiaries	264	216	132
Cash and due from banks at the end of the year, primarily with bank subsidiaries	$ 211	$ 264	$ 216
Cash interest paid	$ 3,921	$ 4,409	$ 5,690
Cash income taxes paid, net	200	2,390	3,080

(a) Affiliates include trusts that issued guaranteed capital debt securities ("issuer trusts"). The Parent received dividends of $2 million, $5 million and $12 million from the issuer trusts in 2014, 2013 and 2012, respectively. For further discussion on these issuer trusts, see Note 21.

(b) At December 31, 2014, long-term debt that contractually matures in 2015 through 2019 totaled $24.4 billion, $25.5 billion, $23.0 billion, $19.3 billion and $11.3 billion, respectively.

(c) For information regarding the Firm's guarantees of its subsidiaries' obligations, see Note 21 and Note 29.

Selected quarterly financial data (unaudited)

(Table continued on next page)

As of or for the period ended	2014				2013			
(in millions, except per share, ratio, headcount data and where otherwise noted)	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Selected income statement data								
Total net revenue	**$ 22,512**	**$ 24,246**	**$ 24,454**	**$ 22,993**	$ 23,156	$ 23,117	$ 25,211	$ 25,122
Total noninterest expense	**15,409**	**15,798**	**15,431**	**14,636**	15,552	23,626	15,866	15,423
Pre-provision profit/(loss)	**7,103**	**8,448**	**9,023**	**8,357**	7,604	(509)	9,345	9,699
Provision for credit losses	**840**	**757**	**692**	**850**	104	(543)	47	617
Income before income tax expense	**6,263**	**7,691**	**8,331**	**7,507**	7,500	34	9,298	9,082
Income tax expense	**1,332**	**2,119**	**2,346**	**2,233**	2,222	414	2,802	2,553
Net income/(loss)	**$ 4,931**	**$ 5,572**	**$ 5,985**	**$ 5,274**	$ 5,278	$ (380)	$ 6,496	$ 6,529
Per common share data								
Net income/(loss): Basic	**$ 1.20**	**$ 1.37**	**$ 1.47**	**$ 1.29**	$ 1.31	$ (0.17)	$ 1.61	$ 1.61
Diluted	**1.19**	**1.36**	**1.46**	**1.28**	1.30	(0.17)	1.60	1.59
Average shares: Basic	**3,730.9**	**3,755.4**	**3,780.6**	**3,787.2**	3,762.1	3,767.0	3,782.4	3,818.2
Diluted	**3,765.2**	**3,788.7**	**3,812.5**	**3,823.6**	3,797.1	3,767.0	3,814.3	3,847.0
Market and per common share data								
Market capitalization	**$ 232,472**	**$ 225,188**	**$ 216,725**	**$ 229,770**	$ 219,657	$ 194,312	$ 198,966	$ 179,863
Common shares at period-end	**3,714.8**	**3,738.2**	**3,761.3**	**3,784.7**	3,756.1	3,759.2	3,769.0	3,789.8
Share price[(a)]:								
High	**$ 63.49**	**$ 61.85**	**$ 61.29**	**$ 61.48**	$ 58.55	$ 56.93	$ 55.90	$ 51.00
Low	**54.26**	**54.96**	**52.97**	**54.20**	50.25	50.06	46.05	44.20
Close	**62.58**	**60.24**	**57.62**	**60.71**	58.48	51.69	52.79	47.46
Book value per share	**57.07**	**56.50**	**55.53**	**54.05**	53.25	52.01	52.48	52.02
Tangible book value per share ("TBVPS")[(b)]	**44.69**	**44.13**	**43.17**	**41.73**	40.81	39.51	39.97	39.54
Cash dividends declared per share	**0.40**	**0.40**	**0.40**	**0.38**	0.38	0.38	0.38	0.30
Selected ratios and metrics								
Return on common equity ("ROE")	**9%**	**10%**	**11%**	**10%**	10%	(1)%	13%	13%
Return on tangible common equity ("ROTCE")[(b)]	**11**	**13**	**14**	**13**	14	(2)	17	17
Return on assets ("ROA")	**0.78**	**0.90**	**0.99**	**0.89**	0.87	(0.06)	1.09	1.14
Overhead ratio	**68**	**65**	**63**	**64**	67	102	63	61
Loans-to-deposits ratio	**56**	**56**	**57**	**57**	57	57	60	61
High quality liquid assets ("HQLA")(in billions)[(c)]	**$ 600**	**$ 572**	**$ 576**	**$ 538**	$ 522	$ 538	$ 454	$ 413
Common equity tier 1 ("CET1") capital ratio[(d)]	**10.2%**	**10.2%**	**9.8%**	**10.9%**	10.7%	10.5 %	10.4%	10.2%
Tier 1 capital ratio[(d)]	**11.6**	**11.5**	**11.1**	**12.1**	11.9	11.7	11.6	11.6
Total capital ratio[(d)]	**13.1**	**12.8**	**12.5**	**14.5**	14.3	14.3	14.1	14.1
Tier 1 leverage ratio	**7.6**	**7.6**	**7.6**	**7.4**	7.1	6.9	7.0	7.3
Selected balance sheet data (period-end)								
Trading assets	$ 398,988	$ 410,657	$ 392,543	$ 375,204	$ 374,664	$ 383,348	$ 401,470	$ 430,991
Securities[(e)]	348,004	366,358	361,918	351,850	354,003	356,556	354,725	365,744
Loans	757,336	743,257	746,983	730,971	738,418	728,679	725,586	728,886
Total assets	2,573,126	2,527,005	2,520,336	2,476,986	2,415,689	2,463,309	2,439,494	2,389,349
Deposits	1,363,427	1,334,534	1,319,751	1,282,705	1,287,765	1,281,102	1,202,950	1,202,507
Long-term debt[(f)]	276,836	268,721	269,929	274,512	267,889	263,372	266,212	268,361
Common stockholders' equity	212,002	211,214	208,851	204,572	200,020	195,512	197,781	197,128
Total stockholders' equity	232,065	231,277	227,314	219,655	211,178	206,670	209,239	207,086
Headcount	241,359	242,388	245,192	246,994	251,196	255,041	254,063	255,898

(Table continued from previous page)

As of or for the period ended	2014				2013			
(in millions, except ratio data)	4th quarter	3rd quarter	2nd quarter	1st quarter	4th quarter	3rd quarter	2nd quarter	1st quarter
Credit quality metrics								
Allowance for credit losses	**$ 14,807**	**$ 15,526**	**$ 15,974**	**$ 16,485**	$ 16,969	$ 18,248	$ 20,137	$ 21,496
Allowance for loan losses to total retained loans	**1.90%**	**2.02%**	**2.08%**	**2.20%**	2.25%	2.43%	2.69%	2.88%
Allowance for loan losses to retained loans excluding purchased credit-impaired loans[(g)]	**1.55**	**1.63**	**1.69**	**1.75**	1.80	1.89	2.06	2.27
Nonperforming assets	**$ 7,967**	**$ 8,390**	**$ 9,017**	**$ 9,473**	$ 9,706	$ 10,380	$ 11,041	$ 11,739
Net charge-offs	**1,218**	**1,114**	**1,158**	**1,269**	1,328	1,346	1,403	1,725
Net charge-off rate	**0.65%**	**0.60%**	**0.64%**	**0.71%**	0.73%	0.74%	0.78%	0.97%

(a) 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.

(b) TBVPS and ROTCE are non-GAAP financial measures. TBVPS represents the Firm's tangible common equity divided by common shares at period-end. 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 77–78.

(c) HQLA represents the Firm's estimate of the amount of assets that qualify for inclusion in the liquidity coverage ratio under the final U.S. rule ("U.S. LCR") as of December 31, 2014, and under the Basel III liquidity coverage ratio ("Basel III LCR") for prior periods. For additional information, see HQLA on page 157.

(d) Basel III Transitional rules became effective on January 1, 2014; December 31, 2013 data is based on Basel I rules. As of December 31, 2014, September 30, 2014, and June 30, 2014, the ratios presented are calculated under the Basel III Advanced Transitional Approach. As of March 31, 2014, the ratios presented are calculated under the Basel III Standardized Transitional Approach. CET1 capital under Basel III replaced Tier 1 common capital under Basel I. Prior to Basel III becoming effective on January 1, 2014, Tier 1 common capital under Basel I was a non-GAAP financial measure. See Regulatory capital on pages 146–153 for additional information on Basel III and non-GAAP financial measures of regulatory capital.

(e) Included held-to-maturity securities of $49.3 billion, $48.8 billion, $47.8 billion, $47.3 billion, $24.0 billion and $4.5 billion at December 31, 2014, September 30, 2014, June 30, 2014, March 31, 2014, December 31, 2013 and September 30, 2013, respectively. Held-to-maturity balances for the other periods were not material.

(f) Included unsecured long-term debt of $207.5 billion, $204.7 billion, $205.6 billion, $206.1 billion, $199.4 billion, $199.2 billion, $199.1 billion and $206.1 billion, respectively, for the periods presented.

(g) Excludes the impact of residential real estate PCI loans. For further discussion, see Allowance for credit losses on pages 128–130.

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.

Alternative assets - The following types of assets constitute alternative investments - hedge funds, currency, real estate, private equity and other investment funds designed to focus on nontraditional strategies.

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.

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.

Central counterparty ("CCP"): A CCP is a clearing house that interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the future performance of open contracts. A CCP becomes counterparty to trades with market participants through novation, an open offer system, or another legally binding arrangement.

Chase Liquid℠ 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 deposits and other third party liabilities: 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.

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.

Credit derivatives: Financial instruments whose value is derived from the credit risk associated with the debt of a third party issuer (the reference entity) which allow one party (the protection purchaser) to transfer that risk to another party (the protection seller). Upon the occurrence of a credit event by the reference entity, which may include, among other events, the bankruptcy or failure to pay its obligations, or certain restructurings of the debt of the reference entity, neither party 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 at the time of settling the credit derivative contract. The determination as to whether a credit event has occurred is generally made by the relevant International Swaps and Derivatives Association ("ISDA") Determinations Committee.

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.

Distributed denial-of-service attack: The use of a large number of remote computer systems to electronically send a high volume of traffic to a target website to create a service outage at the target. This is a form of cyberattack.

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 U.K. and the U.S.

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 JPMorgan Chase holds the first security interest on the property.

Home equity - junior lien: Represents loans and commitments where JPMorgan Chase holds a security interest that is subordinate in rank to other liens.

Impaired loan: Impaired loans are loans measured at amortized cost, for which it is probable that the Firm will be unable to collect all amounts due, including principal and interest, according to the contractual terms of the agreement. Impaired loans include the following:

- All wholesale nonaccrual loans
- All TDRs (both wholesale and consumer), including ones that have returned to accrual status

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.

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 available lien positions, as well as unused lines, 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 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 origination channels:

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.

Correspondent - Banks, thrifts, other mortgage banks and other financial institutions that sell closed loans to the Firm.

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.

Multi-asset: Any fund or account that allocates assets under management to more than one asset class.

N/A: 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 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:

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.

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.

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.

Nonaccrual loans: Loans for which interest income is not recognized on an accrual basis. Loans (other than credit card loans and certain consumer loans insured by U.S. government agencies) are placed on nonaccrual status when full payment of principal and interest is not expected or when principal and interest has been in default for a period of 90 days or more unless the loan is both well-secured and in the process of collection. Collateral-dependent loans are typically maintained on nonaccrual status.

Nonperforming assets: Nonperforming assets include nonaccrual loans, nonperforming derivatives and certain assets acquired in loan satisfaction, predominantly real estate owned and other commercial and personal property.

Over-the-counter ("OTC") derivatives: 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 ("OTC-cleared") derivatives: 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.

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.

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).

Revenue 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.

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 perceived 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.

Structured notes: Structured notes are predominantly financial instruments containing embedded derivatives. Where present, the embedded derivative is the primary driver of risk.

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 146–155, 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 U.S.

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.

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.