

CITIGROUP INC
Form 10-K
February 26, 2016

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-K
ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2015
Commission file number 1-9924

Citigroup Inc.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of incorporation or organization) 52-1568099
(I.R.S. Employer Identification No.)

388 Greenwich Street, New York, NY 10013
(Address of principal executive offices) (Zip code)

(212) 559-1000
(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act: See Exhibit 99.01

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

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

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

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

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

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

The aggregate market value of Citigroup Inc. common stock held by non-affiliates of Citigroup Inc. on June 30, 2015 was approximately \$166.1 billion.

Number of shares of Citigroup Inc. common stock outstanding on January 31, 2016: 2,948,120,153

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Documents Incorporated by Reference: Portions of the registrant's proxy statement for the annual meeting of stockholders scheduled to be held on April 26, 2016, are incorporated by reference in this Form 10-K in response to Items 10, 11, 12, 13 and 14 of Part III.

Available on the web at www.citigroup.com

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* For additional information regarding Citigroup’s Directors, see “Corporate Governance,” “Proposal 1: Election of Directors” and “Section 16(a) Beneficial Ownership Reporting Compliance” in the definitive Proxy Statement for Citigroup’s Annual Meeting of Stockholders scheduled to be held on April 26, 2016, to be filed with the SEC (the Proxy Statement), incorporated herein by reference.

** See “Compensation Discussion and Analysis,” “The Personnel and Compensation Committee Report,” and “2015 Summary Compensation Table and Compensation Information” in the Proxy Statement, incorporated herein by reference.

*** See “About the Annual Meeting,” “Stock Ownership” and “Proposal 4: Approval of Additional Authorized Shares under the Citigroup 2014 Stock Incentive Plan” including Annex B, “Equity Compensation Plan Information” in the Proxy Statement, incorporated herein by reference.

**** See “Corporate Governance—Director Independence,” “—Certain Transactions and Relationships, Compensation Committee Interlocks and Insider Participation,” and “—Indebtedness” in the Proxy Statement, incorporated herein by reference.

***** See “Proposal 2: Ratification of Selection of Independent Registered Public Accounting Firm” in the Proxy Statement, incorporated herein by reference.

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OVERVIEW

Citigroup's history dates back to the founding of the City Bank of New York in 1812.

Citigroup is a global diversified financial services holding company, whose businesses provide consumers, corporations, governments and institutions with a broad range of financial products and services, including consumer banking and credit, corporate and investment banking, securities brokerage, trade and securities services and wealth management. Citi has approximately 200 million customer accounts and does business in more than 160 countries and jurisdictions.

At December 31, 2015, Citi had approximately 231,000 full-time employees, compared to approximately 241,000 full-time employees at December 31, 2014.

Citigroup currently operates, for management reporting purposes, via two primary business segments: Citicorp, consisting of Citi's Global Consumer Banking businesses and Institutional Clients Group; and Citi Holdings, consisting of businesses and portfolios of assets that Citigroup has determined are not central to its core Citicorp businesses. For a further description of the business segments and the products and services they provide, see "Citigroup Segments" below, "Management's Discussion and Analysis of Financial Condition and Results of Operations" and Note 3 to the Consolidated Financial Statements.

Throughout this report, "Citigroup," "Citi" and "the Company" refer to Citigroup Inc. and its consolidated subsidiaries. Additional information about Citigroup is available on Citi's website at www.citigroup.com. Citigroup's recent annual reports on Form 10-K, quarterly reports on Form 10-Q, proxy statements, as well as other filings with the U.S. Securities and Exchange Commission (SEC), are available free of charge through Citi's website by clicking on the "Investors" page and selecting "All SEC Filings." The SEC's website also contains current reports, information statements, and other information regarding Citi at www.sec.gov.

Certain reclassifications, including a realignment of certain businesses, have been made to the prior periods' financial statements to conform to the current period's presentation. For information on certain recent such reclassifications, see Note 3 to the Consolidated Financial Statements.

Please see "Risk Factors" below for a discussion of the most significant risks and uncertainties that could impact Citigroup's businesses, financial condition and results of operations.

As described above, Citigroup is managed pursuant to the following segments:
(Chart continues on next page.)

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The following are the four regions in which Citigroup operates. The regional results are fully reflected in the segment results above.

* As previously announced, Citigroup intends to exit its consumer businesses in Brazil, Argentina and Colombia. Effective in the first quarter of 2016, these businesses, which previously have been reported as part of Latin America GCB, will be reported as part of Citi Holdings. For additional information, see "Citicorp" below. Citi intends to release a revised Quarterly Financial Data Supplement reflecting this realignment prior to the release of its first quarter of 2016 earnings information.

(1) For reporting purposes, Asia GCB includes the results of operations of EMEA GCB for all periods presented.

(2) North America includes the U.S., Canada and Puerto Rico, Latin America includes Mexico and Asia includes Japan.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

EXECUTIVE SUMMARY

Citi's full year 2015 results of operations reflected a solid overall performance. As described in more detail throughout this Executive Summary, Citi's full year 2015 net income of \$17.1 billion was its highest since pre-financial crisis, when Citi was a very different company in terms of footprint, mix of businesses and assets. During the year, Citi was able to grow revenues by 3% and make investments in its core Citicorp businesses while reducing its overall expenses, thus improving its overall efficiency ratio. Loan and deposit growth in Citicorp each grew by 5% while Citi's overall balance sheet decreased by 3% (each excluding the impact of foreign currency translation into U.S. dollars for reporting purposes (FX translation)). Citi also ended 2015 with a Common Equity Tier 1 Capital ratio, on a fully implemented basis, of 12.1%.

In addition to these accomplishments, Citi made significant progress on its execution priorities during 2015, including:

Efficient resource allocation and disciplined expense management: As described above, Citi maintained disciplined expense management during 2015, even as it continued to absorb increased regulatory and compliance costs in Citicorp and made ongoing business investments. Citi's expense management during 2015 was further aided by lower legal and related expenses and lower repositioning expenses in Citicorp as compared to the prior year, as discussed further below.

Continued wind down of Citi Holdings, while maintaining profitability: Citi significantly reduced the assets in Citi Holdings during the year. Citi Holdings' assets decreased \$55 billion, or 43%, from 2014, ending the year at \$74 billion. In addition, as of December 31, 2015, Citi had executed agreements to further reduce Citi Holdings GAAP assets by approximately \$7 billion in 2016 (for additional information, see "Citi Holdings" below). As discussed further below, Citi Holdings also maintained profitability in 2015.

Utilization of deferred tax assets (DTAs): Citi utilized approximately \$1.5 billion in DTAs during 2015 (for additional information, see "Significant Accounting Policies and Significant Estimates—Income Taxes" below and Note 9 to the Consolidated Financial Statements).

Citi was able to achieve these results and make ongoing progress on its execution priorities during a year with market volatility and uncertainties, including macroeconomic uncertainties, slower global growth and market volatility resulting from, among other things, lower commodity prices as well as uncertainty regarding the timing and pace of U.S. interest rate changes.

As the year-to-date has shown, Citi expects the operating environment in 2016 to remain challenging, with many of the uncertainties impacting its results of operations during 2015

continuing into 2016. For a more detailed discussion of the risks and uncertainties that could impact Citi's businesses, results of operations and financial condition during 2016, see each respective business' results of operations, "Risk Factors" and "Managing Global Risk" below. While Citi may not be able to control all aspects of its operating environment in 2016, it intends to continue to build on the progress made during 2015 by remaining focused on its execution priorities and target client strategy.

2015 Summary Results

Citigroup

Citigroup reported net income of \$17.2 billion or \$5.40 per share, compared to \$7.3 billion or \$2.20 per share in the prior year. Results in 2015 included \$254 million (\$162 million after-tax) of CVA/DVA, compared to negative \$390 million (negative \$240 million after-tax) in 2014. Citigroup full year 2014 results also included a charge of \$3.8 billion (\$3.7 billion after-tax) to settle RMBS and CDO-related claims recorded in Citi Holdings and a tax charge of

\$210 million related to corporate tax reforms recorded in Corporate/Other.

Excluding the impact of CVA/DVA in both periods as well as the impact of the mortgage settlement and the tax item in 2014, Citigroup reported net income of \$17.1 billion in 2015, or \$5.35 per share, compared to \$11.5 billion, or \$3.55 per share, in the prior year. (Citi's results of operations excluding the impact of CVA/DVA as well as the impact of the mortgage settlement and the tax item in 2014 are non-GAAP financial measures. Citi believes the presentation of its results

of operations excluding these impacts provides a more meaningful depiction for investors of the underlying fundamentals of its businesses.) The 49% increase from the prior year was primarily driven by lower expenses and lower net credit losses, partially offset by lower revenues and a reduced net loan loss reserve release.

Citi's revenues were \$76.4 billion in 2015, a decrease of 1% from the prior year. Excluding CVA/DVA, revenues were \$76.1 billion, down 2% from the prior year, as Citicorp revenues decreased by 2% and Citi Holdings revenues decreased 1%. Excluding CVA/DVA and the impact of FX translation, Citigroup revenues increased 3% from the prior year, driven by an increase of 3% in both Citicorp and Citi Holdings' revenues. (Citi's results of operations excluding the impact of FX translation are non-GAAP financial measures. Citi believes the presentation of its results of operations excluding the impact of FX translation provides a more meaningful depiction for investors of the underlying fundamentals of its businesses.)

Expenses

Citigroup expenses decreased 21% versus the prior year to \$43.6 billion. Excluding the impact of the mortgage settlement in the prior year, Citigroup expenses declined 15% driven by significantly lower legal and related expenses (\$1.5 billion compared to \$5.8 billion in the prior year) and

repositioning costs (\$472 million compared to \$1.6 billion in the prior year), as well as the impact of FX translation (which lowered expenses by approximately \$2.6 billion in 2015 compared to the prior year). Excluding the impact of both the mortgage settlement in the prior year and FX translation, Citigroup's expenses declined 10%, mainly driven by the lower legal and related expenses and repositioning costs.

Excluding the impact of FX translation, which lowered reported expenses by approximately \$2.4 billion in 2015 compared to the prior year, Citicorp expenses decreased 9% also driven by significantly lower legal and related expenses and repositioning costs. Citicorp expenses in 2015 included legal and related expenses of \$1.1 billion, compared to \$4.8 billion in the prior year, and \$278 million of repositioning costs, compared to \$1.5 billion in the prior year.

Citi Holdings' expenses were \$4.6 billion, down 52% from the prior year. Excluding the impact of the mortgage settlement in the prior year, Citi Holdings' expenses decreased 22%, primarily driven by the ongoing decline in Citi Holdings assets as well as lower legal and related expenses.

Credit Costs

Citi's total provisions for credit losses and for benefits and claims of \$7.9 billion increased 6% from the prior year. Excluding the impact of the mortgage settlement in the prior year, Citi's total provisions for credit losses and for benefits and claims increased 7% as a lower net loan loss reserve release was partially offset by lower net credit losses.

Net credit losses of \$7.3 billion declined 19% versus the prior year. Consumer net credit losses declined 19% to \$7.1 billion, mostly reflecting continued improvements in North America Citi-branded cards and Citi retail services in Citicorp as well as the North America mortgage portfolio within Citi Holdings. Corporate net credit losses declined 19% to \$234 million. As previously disclosed, corporate net credit losses in 2014 included approximately \$165 million of net credit losses related to the Pemex supplier program in Mexico (for additional information, see "Institutional Clients Group" below). Excluding these net credit losses in the prior year, net credit losses increased by approximately \$111 million, primarily related to a limited number of energy and energy-related corporate loans, predominantly incurred during the latter part of 2015 (for additional information, see "Institutional Clients Group" and "Credit Risk—Corporate Credit" below).

The net release of allowance for loan losses and unfunded lending commitments was \$120 million in 2015, compared to a \$2.4 billion release in 2014, excluding the impact of the mortgage settlement in the prior year. Citicorp's net reserve build was \$409 million, compared to a net loan loss reserve release of \$1.4 billion in 2014. The build in 2015 was primarily driven by net loan loss reserve builds in Institutional Clients Group (ICG) during the latter part of 2015, including approximately \$530 million for energy and energy-related exposures. Overall, Citi expects its credit costs in Citicorp will likely be higher in 2016 as compared to 2015 given that it believes the vast majority of its net loan loss reserve releases have occurred as credit quality has largely stabilized.

Citi Holdings' net reserve release, excluding the impact of the mortgage settlement in the prior year, decreased \$443 million from the prior year to \$529 million, primarily reflecting lower net releases related to the North America mortgage portfolio.

For additional information on Citi's consumer and corporate credit costs and allowance for loan losses, see "Credit Risk" below.

Capital

Citi continued to grow its regulatory capital during 2015, even as it returned approximately \$5.9 billion of capital to its shareholders in the form of common stock repurchases and dividends. Citigroup's Tier 1 Capital and Common Equity Tier 1 Capital ratios, on a fully implemented basis, were 13.5% and 12.1% as of December 31, 2015, respectively, compared to 11.5% and 10.6% as of December 31, 2014 (all based on the Basel III Advanced Approaches for determining risk-weighted assets). Citigroup's Supplementary Leverage ratio as of December 31, 2015, on a fully implemented basis, was 7.1%, compared to 5.9% as of December 31, 2014. For additional information on Citi's capital ratios and related components, including the impact of Citi's DTAs on its capital ratios, see

“Capital Resources” below.

Citicorp

Citicorp net income increased 50% from the prior year to \$16.2 billion. CVA/DVA, recorded in ICG, was \$269 million (\$172 million after-tax) in 2015, compared to negative \$343 million (negative \$211 million after-tax) in the prior year (for a summary of CVA/DVA by business within ICG, see “Institutional Clients Group” below). Excluding CVA/DVA in both periods and the tax item in 2014, Citicorp’s net income was \$16.0 billion, up 43% from the prior year, primarily driven by the lower expenses and net credit losses, partially offset by lower revenues and the net loan loss reserve builds.

Citicorp revenues decreased 1% from the prior year to \$68.5 billion. Excluding CVA/DVA, Citicorp revenues were \$68.2 billion in 2015, down 2% from the prior year, reflecting largely unchanged revenues in ICG and a 6% decrease in Global Consumer Banking (GCB) revenues. As referenced above, excluding CVA/DVA and the impact of FX translation, Citicorp’s revenues grew 3%.

GCB revenues of \$33.9 billion decreased 6% versus the prior year. Excluding the impact of FX translation, GCB revenues decreased 1%, as decreases in North America GCB and Asia GCB were partially offset by an increase in Latin America GCB. North America GCB revenues decreased 1% to \$19.4 billion, as lower revenues in Citi-branded cards were partially offset by higher retail banking revenues. Citi-branded cards revenues of \$7.8 billion were down 6% versus the prior year, reflecting the continued impact of lower average loans as well as an increase in acquisition and rewards costs related to new account acquisitions, particularly during the second half of 2015. Citi retail services revenues of \$6.4 billion were largely unchanged versus the prior year, as the continued impact of lower fuel prices and higher contractual partner payments was offset by modest growth in average loans. Retail banking revenues increased 6% from the prior

year to \$5.2 billion, reflecting continued loan and deposit growth and improved deposit spreads. North America GCB average deposits of \$172 billion increased 1% year-over-year and average retail loans of \$50 billion grew 7%. Average card loans of \$107 billion decreased 2%, while purchase sales of \$263 billion increased 4% versus the prior year. For additional information on the results of operations of North America GCB for 2015, see “Global Consumer Banking— North America GCB” below.

International GCB revenues (consisting of EMEA GCB, Latin America GCB and Asia GCB) decreased 12% versus the prior year to \$14.4 billion. Excluding the impact of FX translation, international GCB revenues were unchanged versus the prior year. Latin America GCB revenues increased 3% versus the prior year, as increases in loan and deposit balances as well as the impact of business divestitures were partially offset by the continued impact of spread compression in cards. Asia GCB revenues declined 3% versus the prior year, reflecting lower investment sales revenues as well as continued high payment rates and the ongoing impact of regulatory changes in cards, partially offset by growth in lending, deposit and insurance products. For additional information on the results of operations of Latin America GCB and Asia GCB (which includes the results of operations of EMEA GCB for reporting purposes) for 2015, including the impact of FX translation, see “Global Consumer Banking” below. Year-over-year, international GCB average deposits of \$129 billion increased 5%, average retail loans of \$99 billion increased 3%, investment sales of \$78 billion decreased 8%, average card loans of \$26 billion increased 2% and card purchase sales of \$101 billion increased 6%, all excluding the impact of FX translation.

ICG revenues were \$33.7 billion in 2015, up 2% from the prior year. Excluding CVA/DVA, ICG revenues were largely unchanged from the prior year at \$33.5 billion.

Banking revenues of \$16.9 billion, excluding CVA/DVA and the impact of mark-to-market gains on hedges related to accrual loans within corporate lending (see below), were largely unchanged compared to the prior year, as lower equity underwriting activity within investment banking as well as the impact of FX translation was offset by higher advisory revenues and continued growth in the private bank. Investment banking revenues of \$4.5 billion decreased 3% versus the prior year. Advisory revenues increased 16% to \$1.1 billion with sustained wallet share gains for the year. Debt underwriting revenues increased 1% to \$2.5 billion, driven by wallet share gains in investment grade debt and strong performance in investment grade loans in the second half of 2015, while equity underwriting revenues decreased 28% to \$902 million, largely reflecting lower industry-wide underwriting activity during the year.

Private bank revenues, excluding CVA/DVA, increased 8% to \$2.9 billion from the prior year, driven by higher loan and deposit balances as well as growth in managed investments revenue. Corporate lending revenues rose 8% to \$2.0 billion, including \$323 million of mark-to-market gains on hedges related to accrual loans compared to a \$116 million gain in the prior year. Excluding the impact of FX translation and the mark-to-market impact of loan hedges, corporate

lending revenues increased 3% versus the prior year, as growth in average loans was partially offset by the impact of lower spreads. Treasury and trade solutions revenues of \$7.8 billion were relatively unchanged versus the prior year. Excluding the impact of FX translation, treasury and trade solutions revenues increased 6%, as continued growth in deposit balances and spreads was partially offset by lower trade revenues.

Markets and securities services revenues of \$16.3 billion, excluding CVA/DVA, decreased 1% from the prior year. Fixed income markets revenues of \$11.3 billion, excluding CVA/DVA, decreased 7% from the prior year, as growth in rates and currencies was more than offset by a slowdown in spread products, reflecting the volatile trading environment during the year. Equity markets revenues of \$3.1 billion, excluding CVA/DVA, increased 13% versus the prior year driven by growth across all products. Securities services revenues of \$2.1 billion increased 4% versus the prior year, and increased 15% excluding the impact of FX translation, reflecting increased client activity and higher client balances. For additional information on the results of operations of ICG for 2015, see “Institutional Clients Group” below.

Corporate/Other revenues increased to \$907 million from \$301 million in the prior year, driven mainly by gains on debt buybacks during the course of 2015. For additional information on the results of operations of Corporate/Other in 2015, see “Corporate/Other” below.

Citicorp end-of-period loans increased 1% to \$573 billion from the prior year, as a 5% increase in corporate loans was partially offset by a 2% decrease in consumer loans. Excluding the impact of FX translation, Citicorp loans grew 5%, with 8% growth in corporate loans and 2% growth in consumer loans.

Citi Holdings

Citi Holdings' net income was \$1.0 billion in 2015, compared to a net loss of \$3.5 billion in the prior year. CVA/DVA was negative \$15 million (negative \$10 million after-tax) in 2015, compared to negative \$47 million (negative \$29 million after-tax) in the prior year. Excluding the impact of CVA/DVA in both periods and the impact of the mortgage settlement in the prior year, Citi Holdings' net income was \$1.1 billion, compared to \$275 million in the prior year, primarily reflecting lower expenses and lower credit costs.

Citi Holdings' revenues were largely unchanged from the prior year at \$7.8 billion. Excluding CVA/DVA, Citi Holdings' revenues decreased 1% to \$7.9 billion from the prior year, primarily driven by the overall wind-down of the portfolio and the impact of redemptions of high cost debt, mostly offset by the impact of higher gains on asset sales.

For additional information on the results of operations of Citi Holdings in 2015, see "Citi Holdings" below.

At the end of 2015, Citi Holdings' assets were \$74 billion, 43% below the prior year, and represented approximately 4% of Citi's total GAAP assets. Citi Holdings' risk-weighted assets were \$133 billion as of December 31, 2015, a decrease of 30% from the prior year, and represented 11% of Citi's risk-weighted assets under Basel III (based on the Advanced Approaches for determining risk-weighted assets).

RESULTS OF OPERATIONS

SUMMARY OF SELECTED FINANCIAL DATA—PAGE 1

Citigroup Inc. and Consolidated Subsidiaries

In millions of dollars, except per-share amounts and ratios

	2015	2014	2013	2012	2011
Net interest revenue	\$46,630	\$47,993	\$46,793	\$46,686	\$47,649
Non-interest revenue	29,724	29,226	29,931	22,844	29,986
Revenues, net of interest expense	\$76,354	\$77,219	\$76,724	\$69,530	\$77,635
Operating expenses	43,615	55,051	48,408	50,036	50,180
Provisions for credit losses and for benefits and claims	7,913	7,467	8,514	11,329	12,359
Income from continuing operations before income taxes	\$24,826	\$14,701	\$19,802	\$8,165	\$15,096
Income taxes	7,440	7,197	6,186	397	4,020
Income from continuing operations	\$17,386	\$7,504	\$13,616	\$7,768	\$11,076
Income (loss) from discontinued operations, net of taxes ⁽¹⁾	(54)	(2)	270	(58)	68
Net income before attribution of noncontrolling interests	\$17,332	\$7,502	\$13,886	\$7,710	\$11,144
Net income attributable to noncontrolling interests	90	192	227	219	148
Citigroup's net income	\$17,242	\$7,310	\$13,659	\$7,491	\$10,996
Less:					
Preferred dividends—Basic	\$769	\$511	\$194	\$26	\$26
Dividends and undistributed earnings allocated to employee restricted and deferred shares that contain nonforfeitable rights to dividends, applicable to basic EPS	224	111	263	164	184
Income allocated to unrestricted common shareholders for basic EPS	\$16,249	\$6,688	\$13,202	\$7,301	\$10,786
Add: Other adjustments to income	—	1	1	10	16
Income allocated to unrestricted common shareholders for diluted EPS	\$16,249	\$6,689	\$13,203	\$7,311	\$10,802
Earnings per share					
Basic					
Income from continuing operations	\$5.43	\$2.21	\$4.26	\$2.51	\$3.68
Net income	5.41	2.21	4.35	2.49	3.71
Diluted					
Income from continuing operations	\$5.42	\$2.20	\$4.25	\$2.44	\$3.58
Net income	5.40	2.20	4.34	2.42	3.60
Dividends declared per common share	0.16	0.04	0.04	0.04	0.03

Statement continues on the next page, including notes to the table.

SUMMARY OF SELECTED FINANCIAL DATA—PAGE 2

Citigroup Inc. and Consolidated Subsidiaries

In millions of dollars, except per-share amounts, ratios and direct staff	2015	2014	2013	2012	2011	
At December 31:						
Total assets	\$1,731,210	\$1,842,181	\$1,880,035	\$1,864,328	\$1,873,597	
Total deposits	907,887	899,332	968,273	930,560	865,936	
Long-term debt	201,275	223,080	221,116	239,463	323,505	
Citigroup common stockholders' equity	205,139	199,717	197,254	186,155	177,213	
Total Citigroup stockholders' equity	221,857	210,185	203,992	188,717	177,525	
Direct staff (in thousands)	231	241	251	259	266	
Performance metrics						
Return on average assets	0.95	%0.39	%0.73	%0.39	%0.56	%
Return on average common stockholders' equity ⁽²⁾	8.1	3.4	7.0	4.1	6.3	
Return on average total stockholders' equity ⁽²⁾	7.9	3.5	6.9	4.1	6.3	
Efficiency ratio (Total operating expenses/Total revenues)	57	71	63	72	65	
Basel III ratios—full implementation						
Common Equity Tier 1 Capital ⁽³⁾	12.07	%10.57	%10.57	%8.72	%N/A	
Tier 1 Capital ⁽³⁾	13.49	11.45	11.23	9.03	N/A	
Total Capital ⁽³⁾	15.30	12.80	12.64	10.81	N/A	
Supplementary Leverage ratio ⁽⁴⁾	7.08	5.94	5.42	N/A	N/A	
Citigroup common stockholders' equity to assets	11.85	%10.84	%10.49	%9.99	%9.46	%
Total Citigroup stockholders' equity to assets	12.82	11.41	10.85	10.12	9.48	
Dividend payout ratio ⁽⁵⁾	3.0	1.8	0.9	1.7	0.8	
Book value per common share	\$69.46	\$66.05	\$65.12	\$61.46	\$60.61	
Ratio of earnings to fixed charges and preferred stock dividends	2.89x	2.00x	2.18x	1.39x	1.61x	

(1) See Note 2 to the Consolidated Financial Statements for additional information on Citi's discontinued operations.

The return on average common stockholders' equity is calculated using net income less preferred stock dividends (2) divided by average common stockholders' equity. The return on average total Citigroup stockholders' equity is calculated using net income divided by average Citigroup stockholders' equity.

(3) Capital ratios based on the U.S. Basel III rules, with full implementation assumed for capital components; risk-weighted assets based on the Advanced Approaches for determining total risk-weighted assets.

(4) Citi's Supplementary Leverage ratio is based on the U.S. Basel III rules, on a fully implemented basis.

(5) Dividends declared per common share as a percentage of net income per diluted share.

N/A Not applicable

SEGMENT AND BUSINESS—INCOME (LOSS) AND REVENUES

The following tables show the income (loss) and revenues for Citigroup on a segment and business view:

CITIGROUP INCOME

In millions of dollars	2015	2014	2013	% Change 2015 vs. 2014	% Change 2014 vs. 2013	
Income (loss) from continuing operations						
CITICORP						
Global Consumer Banking						
North America	\$4,255	\$4,412	\$3,918	(4	)% 13	%
Latin America	928	1,158	1,251	(20	) (7)
Asia ⁽¹⁾	1,199	1,249	1,407	(4	) (11)
Total	\$6,382	\$6,819	\$6,576	(6	)% 4	%
Institutional Clients Group						
North America	\$3,621	\$4,113	\$3,081	(12	)% 33	%
EMEA	2,288	2,034	2,554	12	(20)
Latin America	1,328	1,345	1,606	(1	) (16)
Asia	2,214	2,042	2,184	8	(7)
Total	\$9,451	\$9,534	\$9,425	(1	)% 1	%
Corporate/Other	\$495	\$(5,375	)\$(514	)NM	NM	
Total Citicorp	\$16,328	\$10,978	\$15,487	49	% (29)%
Citi Holdings	\$1,058	\$(3,474	)\$(1,871	)NM	(86)%
Income from continuing operations	\$17,386	\$7,504	\$13,616	NM	(45)%
Discontinued operations	\$(54	)\$(2	)\$270	NM	NM	
Net income attributable to noncontrolling interests	90	192	227	(53	)% (15)%
Citigroup's net income	\$17,242	\$7,310	\$13,659	NM	(46)%

(1) For reporting purposes, Asia GCB includes the results of operations of EMEA GCB for all periods presented.

NM Not meaningful

CITIGROUP REVENUES

In millions of dollars	2015	2014	2013	% Change 2015 vs. 2014	% Change 2014 vs. 2013	
CITICORP						
Global Consumer Banking						
North America	\$19,448	\$19,669	\$19,798	(1	)%	(1
Latin America	7,323	8,460	8,576	(13	)	(1
Asia ⁽¹⁾	7,091	7,888	7,931	(10	)	(1
Total	\$33,862	\$36,017	\$36,305	(6	)%	(1
Institutional Clients Group						
North America	\$13,105	\$12,940	\$11,434	1	%	13
EMEA	9,799	9,415	10,061	4	(6)
Latin America	3,918	4,098	4,675	(4	)	(12
Asia	6,926	6,599	7,152	5	(8)
Total	\$33,748	\$33,052	\$33,322	2	%	(1
Corporate/Other	\$907	\$301	\$322	NM	(7)%
Total Citicorp	\$68,517	\$69,370	\$69,949	(1	)%	(1
Citi Holdings	\$7,837	\$7,849	\$6,775	—	%	16
Total Citigroup net revenues	\$76,354	\$77,219	\$76,724	(1	)%	1

(1) For reporting purposes, Asia GCB includes the results of operations of EMEA GCB for all periods presented.

NM Not meaningful

SEGMENT BALANCE SHEET⁽¹⁾

In millions of dollars	Global Consumer Banking	Institutional Clients Group	Corporate/Other and consolidating eliminations ⁽²⁾	Subtotal Citicorp	Citi Holdings	Citigroup Parent company- issued long-term debt and stockholders' equity ⁽³⁾	Total Citigroup consolidated
Assets							
Cash and deposits with banks	\$11,389	\$60,557	\$ 60,285	\$132,231	\$866	\$—	\$133,097
Federal funds sold and securities borrowed or purchased under agreements to resell	127	218,336	—	218,463	1,212	—	219,675
Trading account assets	5,290	240,022	1,382	246,694	3,262	—	249,956
Investments	7,273	108,248	220,451	335,972	6,983	—	342,955
Loans, net of unearned income and allowance for loan losses	277,323	284,871	—	562,194	42,797	—	604,991
Other assets	44,047	75,504	45,237	164,788	15,748	—	180,536
Liquidity assets ⁽⁴⁾	48,148	223,811	(275,553)	(3,594)	3,594	—	—
Total assets	\$393,597	\$1,211,349	\$ 51,802	\$1,656,748	\$74,462	\$—	\$1,731,210
Liabilities and equity							
Total deposits	\$301,438	\$587,336	\$ 12,058	\$900,832	\$7,055	\$—	\$907,887
Federal funds purchased and securities loaned or sold under agreements to repurchase	4,235	142,200	—	146,435	61	—	146,496
Trading account liabilities	3	116,633	41	116,677	835	—	117,512
Short-term borrowings	100	20,962	—	21,062	17	—	21,079
Long-term debt	1,891	31,924	21,307	55,122	3,996	142,157	201,275
Other liabilities	16,813	73,211	17,349	107,373	6,496	—	113,869
Net inter-segment funding (lending) ⁽³⁾	69,117	239,083	(188)	308,012	56,002	(364,014)	—
Total liabilities	\$393,597	\$1,211,349	\$ 50,567	\$1,655,513	\$74,462	\$(221,857)	\$1,508,118
Total equity	—	—	1,235	1,235	—	221,857	223,092
Total liabilities and equity	\$393,597	\$1,211,349	\$ 51,802	\$1,656,748	\$74,462	\$—	\$1,731,210

The supplemental information presented in the table above reflects Citigroup's consolidated GAAP balance sheet by reporting segment as of December 31, 2015. The respective segment information depicts the assets and liabilities managed by each segment as of such date. While this presentation is not defined by GAAP, Citi believes that these non-GAAP financial measures enhance investors' understanding of the balance sheet components managed by the underlying business segments, as well as the beneficial inter-relationships of the asset and liability dynamics of the balance sheet components among Citi's business segments.

(1) Consolidating eliminations for total Citigroup and Citigroup parent company assets and liabilities are recorded within the Corporate/Other segment.

(2) The total stockholders' equity and the majority of long-term debt of Citigroup reside in the Citigroup parent company Consolidated Balance Sheet. Citigroup allocates stockholders' equity and long-term debt to its businesses through inter-segment allocations as shown above.

(4) Represents the attribution of Citigroup's liquidity assets (primarily consisting of cash and available-for-sale securities) to the various businesses based on Liquidity Coverage Ratio (LCR) assumptions.

CITICORP

Citicorp is Citigroup's global bank for consumers and businesses and represents Citi's core franchises. Citicorp is focused on providing best-in-class products and services to customers and leveraging Citigroup's unparalleled global network, including many of the world's emerging economies. Citicorp is physically present in approximately 100 countries, many for over 100 years, and offers services in over 160 countries and jurisdictions. Citi believes this global network provides a strong foundation for servicing the broad financial services needs of its large multinational clients and for meeting the needs of retail, private banking, commercial, public sector and institutional clients around the world.

Citicorp consists of the following operating businesses: Global Consumer Banking (which consists of consumer banking businesses in North America, EMEA, Latin America and Asia) and Institutional Clients Group (which includes Banking and Markets and securities services). Citicorp also includes Corporate/Other. At December 31, 2015, Citicorp had approximately \$1.7 trillion of assets and \$901 billion of deposits, representing approximately 96% of Citi's total assets and 99% of Citi's total deposits.

Consistent with its strategy to continue to efficiently allocate its resources and further simplify its Global Consumer Bank, in February 2016, Citi announced that it intends to exit its consumer businesses in Argentina, Brazil and Colombia. These consumer businesses, consisting of approximately \$6 billion of assets, \$5 billion of consumer loans and \$3 billion of deposits as of December 31, 2015, contributed approximately \$1.1 billion of revenues, \$900 million of expenses and a net loss of \$34 million in 2015. These businesses, which previously have been reported as part of Latin America GCB, will be reported as part of Citi Holdings beginning in the first quarter of 2016. See also "Citigroup Segments" above and "Citi Holdings" below. While Citi does not intend to exit its consumer businesses in Venezuela, these businesses are not significant, lending predominantly to support ICG activities, and will be reported as part of ICG beginning in the first quarter of 2016. Similarly, Citi's remaining indirect investment in Banco de Chile will be reported as part of ICG beginning in the first quarter of 2016.

In millions of dollars except as otherwise noted	2015	2014	2013	% Change 2015 vs. 2014	% Change 2014 vs. 2013	
Net interest revenue	\$42,926	\$43,402	\$42,445	(1	)% 2	%
Non-interest revenue	25,591	25,968	27,504	(1	) (6)
Total revenues, net of interest expense	\$68,517	\$69,370	\$69,949	(1	)% (1)%
Provisions for credit losses and for benefits and claims						
Net credit losses	\$6,236	\$7,136	\$7,199	(13	)% (1)%
Credit reserve build (release)	309	(1,238	) (811	) NM	(53)
Provision for loan losses	\$6,545	\$5,898	\$6,388	11	% (8)%
Provision for benefits and claims	107	144	167	(26	) (14)
Provision for unfunded lending commitments	100	(152	) 90	NM	NM	
Total provisions for credit losses and for benefits and claims	\$6,752	\$5,890	\$6,645	15	% (11)%
Total operating expenses	\$39,000	\$45,362	\$40,498	(14	)% 12	%
Income from continuing operations before taxes	\$22,765	\$18,118	\$22,806	26	% (21)%
Income taxes	6,437	7,140	7,319	(10	) (2)
Income from continuing operations	\$16,328	\$10,978	\$15,487	49	% (29)%
Income (loss) from discontinued operations, net of taxes	(54	) (2	) 270	NM	NM	
Noncontrolling interests	79	186	211	(58	) (12)
Net income	\$16,195	\$10,790	\$15,546	50	% (31)%
Balance sheet data (in billions of dollars)						
Total end-of-period (EOP) assets	\$1,657	\$1,713	\$1,726	(3)% (1)%

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Average assets	1,712	1,753	1,711	(2)	2
Return on average assets	0.95	%0.62	%0.91	%		
Efficiency ratio	57	65	58			
Total EOP loans	\$573	\$565	\$565	1	—	
Total EOP deposits	901	883	900	2	(2)
NM Not meaningful						

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GLOBAL CONSUMER BANKING

Global Consumer Banking (GCB) consists of Citigroup's four geographical consumer banking businesses that provide traditional banking services to retail customers through retail banking, including commercial banking, and Citi-branded cards and Citi retail services (for additional information on these businesses, see "Citigroup Segments" above). GCB is a globally diversified business with 2,994 branches in 24 countries around the world as of December 31, 2015. At December 31, 2015, GCB had approximately \$394 billion of assets and \$301 billion of deposits.

GCB's overall strategy is to leverage Citi's global footprint and seek to be the preeminent bank for the emerging affluent and affluent consumers in large urban centers. In credit cards and in certain retail markets, Citi serves customers in a somewhat broader set of segments and geographies. Consistent with its strategy, since 2012, Citi has exited, or is in the process of exiting, 20 consumer markets and has reduced its branch footprint by 25% to focus its global presence.

In millions of dollars except as otherwise noted	2015	2014	2013	% Change 2015 vs. 2014	% Change 2014 vs. 2013	
Net interest revenue	\$26,881	\$27,924	\$27,545	(4)	)%1	%
Non-interest revenue	6,981	8,093	8,760	(14)	) (8))
Total revenues, net of interest expense	\$33,862	\$36,017	\$36,305	(6)	)%(1)%
Total operating expenses	\$18,264	\$19,951	\$19,801	(8)	)%1	%
Net credit losses	\$6,029	\$6,860	\$7,017	(12)	)%(2)%
Credit reserve build (release)	(318)	) (1,148)	) (654)	) 72	(76))
Provision (release) for unfunded lending commitments	5	(23)	) 37	NM	NM	
Provision for benefits and claims	107	144	167	(26)	) (14))
Provisions for credit losses and for benefits and claims	\$5,823	\$5,833	\$6,567	—	% (11))%
Income from continuing operations before taxes	\$9,775	\$10,233	\$9,937	(4)	)%3	%
Income taxes	3,393	3,414	3,361	(1)	) 2	
Income from continuing operations	\$6,382	\$6,819	\$6,576	(6)	)%4	%
Noncontrolling interests	9	25	14	(64)	) 79	
Net income	\$6,373	\$6,794	\$6,562	(6)	)%4	%
Balance Sheet data (in billions of dollars)						
Average assets	\$391	\$408	\$401	(4)	)%2	%
Return on average assets	1.63	%1.67	%1.65	%		
Efficiency ratio	54	55	55			
Total EOP assets	\$394	\$406	\$413	(3)	) (2))
Average deposits	300	305	299	(2)	) 2	
Net credit losses as a percentage of average loans	2.14	%2.36	%2.52	%		
Revenue by business						
Retail banking	\$14,777	\$15,461	\$15,991	(4)	)%(3)%
Cards ⁽¹⁾	19,085	20,556	20,314	(7)	) 1	
Total	\$33,862	\$36,017	\$36,305	(6)	)%(1)%
Income from continuing operations by business						
Retail banking	\$1,989	\$1,787	\$1,897	11	% (6))%
Cards ⁽¹⁾	4,393	5,032	4,679	(13)	) 8	
Total	\$6,382	\$6,819	\$6,576	(6)	)%4	%

(Table continues on next page.)

Foreign currency (FX) translation impact							
Total revenue—as reported	\$33,862	\$36,017	\$36,305	(6	)	% (1)%
Impact of FX translation ⁽²⁾	—	(1,969	) (2,573)			
Total revenues—ex-FX	\$33,862	\$34,048	\$33,732	(1	)	% 1	%
Total operating expenses—as reported	\$18,264	\$19,951	\$19,801	(8	)	% 1	%
Impact of FX translation ⁽²⁾	—	(1,171	) (1,382)			
Total operating expenses—ex-FX	\$18,264	\$18,780	\$18,419	(3	)	% 2	%
Total provisions for LLR & PBC—as reported	\$5,823	\$5,833	\$6,567	—		% (11)%
Impact of FX translation ⁽²⁾	—	(470	) (558)			
Total provisions for LLR & PBC—ex-FX	\$5,823	\$5,363	\$6,009	9		% (11)%
Net income—as reported	\$6,373	\$6,794	\$6,562	(6	)	% 4	%
Impact of FX translation ⁽²⁾	—	(197	) (416)			
Net income—ex-FX	\$6,373	\$6,597	\$6,146	(3	)	% 7	%

(1) Includes both Citi-branded cards and Citi retail services.

(2) Reflects the impact of FX translation into U.S. dollars at the 2015 average exchange rates for all periods presented.

NM Not meaningful

NORTH AMERICA GCB

North America GCB provides traditional retail banking, including commercial banking, and its Citi-branded cards and Citi retail services card products to retail customers and small to mid-size businesses, as applicable, in the U.S. North America GCB's U.S. cards product portfolio includes its proprietary portfolio (including the Citi Double Cash, Thank You and Value cards) and co-branded cards (including, among others, American Airlines and Hilton Worldwide) within Citi-branded cards as well as its co-brand and private label relationships within Citi retail services.

As of December 31, 2015, North America GCB's 780 retail bank branches are concentrated in the six key metropolitan areas of New York, Chicago, Miami, Washington, D.C., Los Angeles and San Francisco. Also as of December 31, 2015, North America GCB had approximately 10.9 million retail banking customer accounts, \$51.8 billion of retail banking loans and \$172.8 billion of deposits. In addition, North America GCB had approximately 113.4 million Citi-branded and Citi retail services credit card accounts, with \$113.3 billion in outstanding card loan balances.

In millions of dollars, except as otherwise noted	2015	2014	2013	% Change 2015 vs. 2014	% Change 2014 vs. 2013	
Net interest revenue	\$17,481	\$17,203	\$16,656	2	% 3	%
Non-interest revenue	1,967	2,466	3,142	(20)	) (22))
Total revenues, net of interest expense	\$19,448	\$19,669	\$19,798	(1)	)%(1)%
Total operating expenses	\$9,186	\$9,706	\$9,853	(5)	)%(1)%
Net credit losses	\$3,753	\$4,206	\$4,636	(11)	)%(9)%
Credit reserve build (release)	(339)	) (1,242)	) (1,036)	) 73	(20))
Provision for unfunded lending commitments	7	(8)	) 6	NM	NM	
Provisions for benefits and claims	38	40	59	(5)	) (32))
Provisions for credit losses and for benefits and claims	\$3,459	\$2,996	\$3,665	15	% (18))%
Income from continuing operations before taxes	\$6,803	\$6,967	\$6,280	(2)	)%11	%
Income taxes	2,548	2,555	2,362	—	8	
Income from continuing operations	\$4,255	\$4,412	\$3,918	(4)	)%13	%
Noncontrolling interests	—	(1)	) —	100	—	
Net income	\$4,255	\$4,413	\$3,918	(4)	)%13	%
Balance Sheet data (in billions of dollars)						
Average assets	\$208	\$211	\$204	(1)	)%3	%
Return on average assets	2.05	%2.09	%1.92	%		
Efficiency ratio	47	49	50			
Average deposits	\$171.8	\$170.7	\$166.0	1	3	
Net credit losses as a percentage of average loans	2.39	%2.70	%3.09	%		
Revenue by business						
Retail banking	\$5,208	\$4,917	\$5,389	6	% (9))%
Citi-branded cards	7,809	8,290	8,220	(6)	) 1	
Citi retail services	6,431	6,462	6,189	—	4	
Total	\$19,448	\$19,669	\$19,798	(1)	)%(1)%
Income from continuing operations by business						
Retail banking	\$659	\$355	\$416	86	% (15))%
Citi-branded cards	2,075	2,391	1,945	(13)	) 23	
Citi retail services	1,521	1,666	1,557	(9)) 7	
Total	\$4,255	\$4,412	\$3,918	(4))%13	%

NM Not meaningful

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2015 vs. 2014

Net income decreased by 4% due to lower loan loss reserve releases and lower revenues, partially offset by lower expenses and lower net credit losses.

Revenues decreased 1%, reflecting lower revenues in Citi-branded cards, partially offset by higher revenues in retail banking.

Retail banking revenues increased 6%. The increase was primarily driven by 7% growth in average loans, 9% growth in average checking deposits, improved deposit spreads and slightly higher mortgage origination revenues, partially offset by lower net gains on branch sales (approximately \$40 million) and mortgage portfolio sales (approximately \$80 million) as well as a lower mortgage repurchase reserve release (approximately \$50 million) compared to 2014. This growth in retail banking revenues occurred despite the fact that, consistent with GCB's strategy, during 2015, North America GCB closed or sold 69 branches (a 9% decline from the prior year), with announced plans to sell or close an additional 50 branches in the first quarter of 2016. With these actions, over 90% of North America GCB's retail banking footprint will be concentrated in its six key metropolitan areas.

Cards revenues decreased 3% due to a 2% decline in average loans, partially offset by a 4% increase in purchase sales. In Citi-branded cards, revenues decreased 6%, primarily reflecting an increase in acquisition and rewards costs, particularly during the second half of 2015 as North America GCB deployed its investment spending (as discussed below) to grow its new account acquisitions in its core products. North America GCB expects the increased acquisition and rewards costs within Citi-branded cards to continue to negatively impact revenues in 2016. The decrease in Citi-branded cards revenues was also due to the continued impact of lower average loans (down 4%), driven primarily by continued high customer payment rates during the year, partially offset by a 6% increase in purchase sales.

Citi retail services revenues were largely unchanged as the continued impact of lower fuel prices, which negatively impacts purchase sales in the fuel portfolios, and higher contractual partner payments was offset by the impact of higher spreads and volumes (1% increase in average loans). The higher contractual partner payments resulted from the business sharing the benefits of higher yields and lower net credit losses with its retail partners. Purchase sales were unchanged as the continued impact of lower fuel prices was offset by volume growth. North America GCB expects the negative impact of lower fuel prices on Citi retail services revenues to continue in the near term.

Expenses decreased 5%, primarily due to ongoing cost reduction initiatives, including as a result of the branch rationalization strategy, and lower repositioning charges, partially offset by increased investment spending (including marketing, among other areas) in Citi-branded cards, which is expected to continue into 2016.

Provisions increased 15% largely due to lower net loan loss reserve releases (73%), partially offset by lower net credit losses (11%). Net credit losses declined in Citi-branded cards (down 14% to \$1.9 billion) and in Citi retail services (down 8% to \$1.7 billion). The lower loan loss reserve release

reflected overall credit stabilization in the cards portfolios during 2015. As a result of this stabilization, North America GCB expects to experience modest loan loss reserve builds during 2016.

In addition to the trends discussed above expected to impact North America GCB's results of operations in 2016, North America GCB expects to make additional investments in its U.S. cards businesses during 2016, including investments in connection with Citi's planned acquisition of the Costco portfolio, the closing of which is currently expected to occur mid-2016, as well as the expected impact of renewing certain important partnership programs in a competitive environment (see also "Risk Factors—Operational Risks" below). While North America GCB believes these investments are necessary for the growth of its U.S. cards businesses, they will reduce the pretax earnings of the businesses during 2016.

2014 vs. 2013

Net income increased by 13% due to lower net credit losses, higher loan loss reserve releases and lower expenses, partially offset by lower revenues.

Revenues decreased 1%, with lower revenues in retail banking, partially offset by higher revenues in Citi-branded cards and Citi retail services. Retail banking revenues of \$4.9 billion decreased 9% due to lower mortgage origination

revenues and spread compression in the deposit portfolios, partially offset by continued volume-related growth (average loans increased 9% and average deposits increased 3%) and gains from branch sales.

Cards revenues increased 2% as average loans increased 3% versus 2013. In Citi-branded cards, revenues increased 1% as a 4% increase in purchase sales and higher net interest spreads, driven by the continued reduction of promotional balances in the portfolio, mostly offset lower average loans. The decline in average loans was driven primarily by the reduction in promotional balances, and to a lesser extent, increased customer payment rates during the year.

Citi retail services revenues increased 4%, primarily due to a 12% increase in average loans driven by the Best Buy acquisition in September 2013, partially offset by continued declines in fee revenues primarily reflecting higher yields and improving credit and the resulting increase in contractual partner payments. Citi retail services revenues also benefited from lower funding costs, partially offset by a decline in net interest spreads due to a higher percentage of promotional balances within the portfolio.

Expenses decreased 1% as ongoing cost reduction initiatives were partially offset by higher repositioning charges, increased investment spending and an increase in Citi retail services expenses due to the impact of the Best Buy portfolio acquisition.

Provisions decreased 18% due to lower net credit losses (9%) and higher loan loss reserve releases (21%). Net credit losses declined in Citi-branded cards (down 14% to \$2.2 billion) and in Citi retail services (down 2% to \$1.9 billion). The loan loss reserve release increased due to the continued improvement in Citi-branded cards, partially offset by a lower loan loss reserve release in Citi retail services due to reserve builds for new loans originated in the Best Buy portfolio.

LATIN AMERICA GCB

Latin America GCB provides traditional retail banking, including commercial banking, and its Citi-branded card products to retail customers and small to mid-size businesses, as applicable, with the largest presence in Mexico. As of December 31, 2015, Latin America GCB includes branch networks in Brazil, Argentina, Colombia and Venezuela as well as Banco Nacional de Mexico, or Banamex, Mexico's second-largest bank.

At December 31, 2015, Latin America GCB had 1,694 retail branches (1,492 through Banamex in Mexico), with approximately 31.9 million retail banking customer accounts, \$24.0 billion in retail banking loans and \$40.8 billion in deposits. In addition, the business had approximately 7.8 million Citi-branded card accounts with \$7.5 billion in outstanding loan balances. As announced in February 2016, Citi intends to exit its consumer businesses in Argentina, Brazil and Colombia. For additional information, see "Citigroup Segments" and "Citicorp" above.

In millions of dollars, except as otherwise noted	2015	2014	2013	% Change 2015 vs. 2014	% Change 2014 vs. 2013	
Net interest revenue	\$4,843	\$5,672	\$5,726	(15)	) (1)%
Non-interest revenue	2,480	2,788	2,850	(11)	) (2)
Total revenues, net of interest expense	\$7,323	\$8,460	\$8,576	(13)	) (1)%
Total operating expenses	\$4,444	\$4,974	\$4,931	(11)	) 1	%
Net credit losses	\$1,549	\$1,861	\$1,610	(17)	) 16	%
Credit reserve build (release)	94	120	363	(22)	) (67)
Provision (release) for unfunded lending commitments	1	(1	) —	NM	—	
Provision for benefits and claims	69	104	108	(34)	) (4)
Provisions for credit losses and for benefits and claims (LLR & PBC)	\$1,713	\$2,084	\$2,081	(18)) —	%
Income from continuing operations before taxes	\$1,166	\$1,402	\$1,564	(17)	) (10)%
Income taxes	238	244	313	(2)	) (22)
Income from continuing operations	\$928	\$1,158	\$1,251	(20)	) (7)%
Noncontrolling interests	3	6	3	(50)	) 100	
Net income	\$925	\$1,152	\$1,248	(20)	) (8)%
Balance Sheet data (in billions of dollars)						
Average assets	\$64	\$76	\$79	(16)	) (4)%
Return on average assets	1.45	% 1.52	% 1.66	%		
Efficiency ratio	61	59	57			
Average deposits	\$40.8	\$44.5	\$43.6	(8)	) 2	
Net credit losses as a percentage of average loans	4.67	% 4.86	% 4.42	%		
Revenue by business						
Retail banking	\$5,078	\$5,678	\$5,831	(11)	) (3)%
Citi-branded cards	2,245	2,782	2,745	(19)	) 1	
Total	\$7,323	\$8,460	\$8,576	(13)	) (1)%
Income from continuing operations by business						
Retail banking	\$590	\$740	\$762	(20)	) (3)%
Citi-branded cards	338	418	489	(19)	) (15)
Total	\$928	\$1,158	\$1,251	(20)	) (7)%
FX translation impact						
Total revenues—as reported	\$7,323	\$8,460	\$8,576	(13)	) (1)%
Impact of FX translation ⁽¹⁾	—	(1,382	) (1,784)		
Total revenues—ex-FX	\$7,323	\$7,078	\$6,792	3	% 4	%
Total operating expenses—as reported	\$4,444	\$4,974	\$4,931	(11)) 1	%

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Impact of FX translation ⁽¹⁾	—	(737) (904)		
Total operating expenses—ex-FX	\$4,444	\$4,237	\$4,027	5	% 5	%
Provisions for LLR & PBC—as reported	\$1,713	\$2,084	\$2,081	(18)%—	%
Impact of FX translation ⁽¹⁾	—	(373	) (456)		
Provisions for LLR & PBC—ex-FX	\$1,713	\$1,711	\$1,625	—	% 5	%
Net income—as reported	\$925	\$1,152	\$1,248	(20)% (8)%
Impact of FX translation ⁽¹⁾	—	(180) (338)		
Net income—ex-FX	\$925	\$972	\$910	(5)% 7	%

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(1) Reflects the impact of FX translation into U.S. dollars at the 2015 average exchange rates for all periods presented.
NM Not Meaningful

The discussion of the results of operations for Latin America GCB below excludes the impact of FX translation for all periods presented. Presentations of the results of operations, excluding the impact of FX translation, are non-GAAP financial measures. For a reconciliation of certain of these metrics to the reported results, see the table above.

2015 vs. 2014

Net income decreased 5% as higher expenses were partially offset by higher revenues.

Revenues increased 3%, primarily due to the approximately \$180 million gain on sale in the third quarter of 2015 related to the Mexico merchant acquiring business. Excluding this gain, revenues increased 1% as the impact of modest volume growth was mostly offset by the absence of gains and revenues from businesses divested in 2014, including as a result of the sale of the Honduras consumer business in the second quarter and the partial sale of Citi's indirect investment in Banco de Chile in the first quarter, as well as continued spread compression in cards. Revenues were also impacted by continued slow economic growth in the region during 2015.

Retail banking revenues increased 6%, excluding the gain on sale related to the merchant acquiring business and the business divestitures in 2014. This increase in retail banking revenues reflected volume growth, including an increase in average loans (4%) and average deposits (5%), partially offset by a decline in investment sales (15%). Cards revenues decreased 2%, primarily due to higher payment rates in Mexico resulting from the business' focus on higher credit quality customers, consistent with GCB's strategy, as well as muted volumes (low purchase sales growth and unchanged average loans). Cards revenues were also negatively impacted by ongoing shifts in consumer behavior, including due to the previously-disclosed regulatory reforms enacted in 2013 in Mexico. Latin America GCB expects the cards payment rate in Mexico to remain elevated in 2016.

Expenses increased 5%, primarily due to higher regulatory and compliance costs, higher technology spending and mandatory salary increases in certain countries, partially offset by lower repositioning charges, lower legal and related costs and ongoing efficiency savings.

Provisions were unchanged as higher net credit losses were partially offset by a lower net loan loss reserve build. Net credit losses increased 1%, largely reflecting portfolio growth as well as net credit losses incurred in the commercial banking portfolio in the fourth quarter of 2015 associated with a wind-down portfolio in Brazil, most of which was offset by the release of previously-established loan loss reserves. The higher net credit losses were partially offset by the absence of a \$71 million charge-off in the fourth quarter of 2014 related to Citi's homebuilder exposure in Mexico. The net loan loss reserve build declined 13%, primarily due to lower builds related to Mexico cards, partially offset by higher builds related to Brazil in the second half of 2015, as well as the absence of the releases related to the Mexico homebuilder exposure in 2014.

Argentina/Venezuela

For additional information on Citi's exposures and risks in Argentina and Venezuela, see "Managing Global Risk—Country Risk" below.

2014 vs. 2013

Net income increased 7% as higher revenues were partially offset by higher expenses and credit costs.

Revenues increased 4%, primarily due to volume growth and spread and fee growth in Mexico, partially offset by continued spread compression in the region and slower overall economic growth in certain Latin America markets, including Mexico and Brazil during 2014. Retail banking revenues increased 3% as average loans increased 6%, investment sales increased 25% and average deposits increased 6%, partially offset by lower spreads in Brazil and Colombia. Cards revenues increased 8% as average loans increased 5% and purchase sales increased 1%, excluding the impact of Credicard's results in the prior-year period (for additional information, see Note 2 to the Consolidated

Financial Statements). The increase in cards revenues was partially offset by lower economic growth and slowing cards purchase sales in Mexico due to the regulatory reforms enacted during 2013, as referenced above.

Expenses increased 5%, primarily due to mandatory salary increases in certain countries, higher legal and related costs, increased repositioning charges and higher technology spending, partially offset by productivity and repositioning savings.

Provisions increased 5%, primarily due to higher net credit losses, which were partially offset by a lower loan loss reserve build. Net credit losses increased 22%, driven by portfolio growth and continued seasoning in the Mexico cards portfolio. Net credit losses were also impacted by both the slower economic growth and regulatory reforms in Mexico as well as the \$71 million charge-off related to Citi's homebuilder exposure in Mexico.

ASIA GCB

Asia GCB provides traditional retail banking, including commercial banking, and its Citi-branded card products to retail customers and small to mid-size businesses, as applicable. As of December 31, 2015, Citi's most significant revenues in the region were from Korea, Singapore, Hong Kong, Australia, India, Taiwan, Malaysia, Thailand, Indonesia and the Philippines. In addition, for reporting purposes, Asia GCB includes the results of operations of EMEA GCB, which provides traditional retail banking, including commercial banking, and Citi-branded card products to retail customers and small to mid-size businesses, primarily in Poland, Russia and the United Arab Emirates.

At December 31, 2015, on a combined basis, the businesses had 520 retail branches, approximately 17.5 million retail banking customer accounts, \$71.0 billion in retail banking loans and \$87.8 billion in deposits. In addition, the business had approximately 16.9 million Citi-branded card accounts with \$17.7 billion in outstanding loan balances.

In millions of dollars, except as otherwise noted ⁽¹⁾	2015	2014	2013	% Change 2015 vs. 2014	% Change 2014 vs. 2013	
Net interest revenue	\$4,557	\$5,049	\$5,163	(10)	)%(2)%
Non-interest revenue	2,534	2,839	2,768	(11)	) 3	
Total revenues, net of interest expense	\$7,091	\$7,888	\$7,931	(10)	)%(1)%
Total operating expenses	\$4,634	\$5,271	\$5,017	(12)	)%5	%
Net credit losses	\$727	\$793	\$771	(8)	)%3	%
Credit reserve build (release)	(73)	) (26)	) 19	NM	NM	
Provision (release) for unfunded lending commitments	(3)	) (14)	) 31	79	NM	
Provisions for credit losses	\$651	\$753	\$821	(14)	)%(8)%
Income from continuing operations before taxes	\$1,806	\$1,864	\$2,093	(3)	)%(11)%
Income taxes	607	615	686	(1)	) (10))
Income from continuing operations	\$1,199	\$1,249	\$1,407	(4)	)%(11)%
Noncontrolling interests	6	20	11	(70)	) 82	
Net income	\$1,193	\$1,229	\$1,396	(3)	)%(12)%
Balance Sheet data (in billions of dollars)						
Average assets	\$120	\$122	\$119	(2)	)%3	%
Return on average assets	0.99	%1.01	%1.17	%		
Efficiency ratio	65	67	63			
Average deposits	\$87.9	\$89.7	\$89.4	(2)) —	
Net credit losses as a percentage of average loans	0.80	%0.82	%0.84	%		
Revenue by business						
Retail banking	\$4,491	\$4,866	\$4,771	(8)	)%2	%
Citi-branded cards	2,600	3,022	3,160	(14)	) (4))
Total	\$7,091	\$7,888	\$7,931	(10)	)%(1)%
Income from continuing operations by business						
Retail banking	\$740	\$692	\$719	7	% (4))%
Citi-branded cards	459	557	688	(18)	) (19))
Total	\$1,199	\$1,249	\$1,407	(4)	)%(11)%

FX translation impact							
Total revenues—as reported	\$7,091	\$7,888	\$7,931	(10	)%	(1))%
Impact of FX translation ⁽²⁾	—	(587	)(789)			
Total revenues—ex-FX	\$7,091	\$7,301	\$7,142	(3	)%	2	%
Total operating expenses—as reported	\$4,634	\$5,271	\$5,017	(12	)%	5	%
Impact of FX translation ⁽²⁾	—	(434	)(478)			
Total operating expenses—ex-FX	\$4,634	\$4,837	\$4,539	(4	)%	7	%
Provisions for loan losses—as reported	\$651	\$753	\$821	(14	)%	(8)%
Impact of FX translation ⁽²⁾	—	(97	)(102)			
Provisions for loan losses—ex-FX	\$651	\$656	\$719	(1	)%	(9)%
Net income—as reported	\$1,193	\$1,229	\$1,396	(3	)%	(12)%
Impact of FX translation ⁽²⁾	—	(17	)(78)			
Net income—ex-FX	\$1,193	\$1,212	\$1,318	(2	)%	(8)%

(1)For reporting purposes, Asia GCB includes the results of operations of EMEA GCB for all periods presented.

(2)Reflects the impact of FX translation into U.S. dollars at the 2015 average exchange rates for all periods presented.

NMNot meaningful

The discussion of the results of operations for Asia GCB below excludes the impact of FX translation for all periods presented. Presentations of the results of operations, excluding the impact of FX translation, are non-GAAP financial measures. For a reconciliation of certain of these metrics to the reported results, see the table above.

2015 vs. 2014

Net income decreased 2%, primarily due to lower revenues, partially offset by lower expenses.

Revenues decreased 3%, primarily due to an industry-wide slowdown in investment sales, particularly in the second half of 2015, as well as spread compression and higher payment rates and the ongoing impact of regulatory changes in cards, partially offset by volume growth.

Retail banking revenues decreased 2%, mainly due to a decline in investment sales revenue, particularly in Taiwan, Singapore, India, Korea and Indonesia, reflecting weaker customer confidence due to slowing economic growth and volatility in the capital markets, as well as spread compression, particularly in Poland. This decline in revenues was partially offset by higher volumes, driven by lending (2% increase in average loans), deposit products (5% increase in average deposits) and higher insurance fee revenues. Citi expects investment sales revenues could continue to be challenged in 2016, depending upon overall consumer sentiment, economic growth and the capital markets environment in the region.

Cards revenues decreased 5%, primarily due to spread compression, including continued high payment rates, and the ongoing impact of regulatory changes, particularly in Singapore, Taiwan, Australia, Malaysia and Poland, partially offset by modest volume growth (a 3% increase in average loans and a 5% increase in purchase sales). Cards revenues were also impacted by the weaker customer confidence, primarily in the second half of 2015. Spread compression and regulatory changes will likely continue to have a negative impact on cards revenues in the near term.

Expenses decreased 4%, primarily due to the absence of repositioning charges in Korea in 2014 and efficiency savings, partially offset by higher regulatory and compliance costs,

investment spending, volume-related growth and compensation expense.

Provisions decreased 1%, primarily due to higher loan loss reserve releases, largely offset by an increase in net credit losses related to the consumer business in Russia due to a deterioration in the economic environment. Overall credit quality remained stable across the region during 2015.

2014 vs. 2013

Net income decreased 8%, primarily due to higher expenses, partially offset by lower credit costs and higher revenues. Revenues increased 2%, reflecting higher retail banking revenues, partially offset by lower cards revenues. Retail banking revenues increased 4%, due to higher insurance fee revenues and volume growth (average retail loans increased 8% and average retail deposits increased 2%), partially offset by the ongoing impact of regulatory changes and continued spread compression.

Cards revenues decreased 1%, due to the impact of regulatory changes, particularly in Korea, Indonesia and Singapore, spread compression and customer deleveraging, largely offset by a 2% increase in average loans and a 3% increase in purchase sales driven by growth in China, India, Singapore and Hong Kong.

Expenses increased 7%, primarily due to higher repositioning charges in Korea, investment spending and volume-related growth, partially offset by higher efficiency savings.

Provisions decreased 9%, primarily due to higher overall loan loss reserve releases, partially offset by a loan loss reserve build related to the consumer business in Russia.

INSTITUTIONAL CLIENTS GROUP

Institutional Clients Group (ICG) provides corporate, institutional, public sector and high-net-worth clients around the world with a full range of wholesale banking products and services, including fixed income and equity sales and trading, foreign exchange, prime brokerage, derivative services, equity and fixed income research, corporate lending, investment banking and advisory services, private banking, cash management, trade finance and securities services. ICG transacts with clients in both cash instruments and derivatives, including fixed income, foreign currency, equity and commodity products.

ICG revenue is generated primarily from fees and spreads associated with these activities. ICG earns fee income for assisting clients in clearing transactions, providing brokerage and investment banking services and other such activities. Revenue generated from these activities is recorded in Commissions and fees and Investment banking. In addition, as a market maker, ICG facilitates transactions, including holding product inventory to meet client demand, and earns the differential between the price at which it buys and sells the products. These price differentials and the unrealized gains and losses on the inventory are recorded in Principal transactions. Other primarily includes mark-to-market gains and losses on credit derivatives, gains and losses on available-for-sale (AFS) securities and other non-recurring gains and losses. Interest income earned on inventory and loans held less interest paid to customers on deposits is recorded as Net interest revenue. Revenue is also generated from transaction processing and assets under custody and administration.

ICG's international presence is supported by trading floors in approximately 80 countries and a proprietary network in over 95 countries and jurisdictions. At December 31, 2015, ICG had approximately \$1.2 trillion of assets and \$587 billion of deposits, while two of its businesses, securities services and issuer services, managed approximately \$15.1 trillion of assets under custody compared to \$16.1 trillion at the end of 2014. The decline in assets under custody from 2014 was primarily due to the impact of FX translation and a decline in market volumes.

In millions of dollars, except as otherwise noted	2015	2014	2013	% Change 2015 vs. 2014	% Change 2014 vs. 2013	
Commissions and fees	\$3,855	\$3,995	\$3,980	(4))	%—
Administration and other fiduciary fees	2,424	2,520	2,576	(4)	)	(2)
Investment banking	4,110	4,269	3,862	(4)	)	11
Principal transactions	5,823	5,905	6,489	(1)	)	(9)
Other ⁽¹⁾	1,337	661	905	NM		(27)
Total non-interest revenue	\$17,549	\$17,350	\$17,812	1	%	(3)
Net interest revenue (including dividends)	16,199	15,702	15,510	3		1
Total revenues, net of interest expense	\$33,748	\$33,052	\$33,322	2	%	(1)
Total operating expenses	\$18,985	\$19,391	\$19,645	(2)	)	(1)
Net credit losses	\$207	\$276	\$182	(25)	)	%52
Credit reserve build (release)	627	(90)	(157)	)	NM	43
Provision (release) for unfunded lending commitments	95	(129)	53	)	NM	NM
Provisions for credit losses	\$929	\$57	\$78	NM		(27)
Income from continuing operations before taxes	\$13,834	\$13,604	\$13,599	2	%	—
Income taxes	4,383	4,070	4,174	8		(2)
Income from continuing operations	\$9,451	\$9,534	\$9,425	(1)	)	%1
Noncontrolling interests	52	118	110	(56)	)	7
Net income	\$9,399	\$9,416	\$9,315	—	%	1
Average assets (in billions of dollars)	\$1,266	\$1,287	\$1,258	(2)	)	%2
Return on average assets	0.74	%0.73	%0.74	%		
Efficiency ratio	56	59	59			
Revenues by region						
North America	\$13,105	\$12,940	\$11,434	1	%	13

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EMEA	9,799	9,415	10,061	4	(6)
Latin America	3,918	4,098	4,675	(4)	(12)
Asia	6,926	6,599	7,152	5	(8)
Total	\$33,748	\$33,052	\$33,322	2	%	(1)%

(1) Increase in 2015 primarily reflects mark-to-market gains on credit derivatives.

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Income from continuing operations by region						
North America	\$3,621	\$4,113	\$3,081	(12)%33	%
EMEA	2,288	2,034	2,554	12	(20)
Latin America	1,328	1,345	1,606	(1	) (16)
Asia	2,214	2,042	2,184	8	(7)
Total	\$9,451	\$9,534	\$9,425	(1	)%1	%
Average loans by region (in billions of dollars)						
North America	\$125	\$111	\$98	13	%13	%
EMEA	59	58	55	2	5	
Latin America	39	40	38	(3	) 5	
Asia	62	68	65	(9	) 5	
Total	\$285	\$277	\$256	3	%8	%
EOP deposits by business (in billions of dollars)						
Treasury and trade solutions	\$392	\$380	\$380	3	%—	%
All other ICG businesses	195	175	189	11	(7)
Total	\$587	\$555	\$569	6	% (2)%

ICG Revenue Details—Excluding CVA/DVA and Gain/(Loss) on Loan Hedges

In millions of dollars	2015	2014	2013	% Change 2015 vs. 2014	% Change 2014 vs. 2013	
Investment banking revenue details						
Advisory	\$1,102	\$949	\$851	16	%12	%
Equity underwriting	902	1,246	1,059	(28	) 18	
Debt underwriting	2,539	2,512	2,504	1	—	
Total investment banking	\$4,543	\$4,707	\$4,414	(3	)%7	%
Treasury and trade solutions	7,767	7,767	7,720	—	1	
Corporate lending—excluding gain (loss) on loan hedges ⁽¹⁾	1,694	1,749	1,518	(3	) 15	
Private bank	2,860	2,660	2,494	8	7	
Total banking revenues (ex-CVA/DVA and gain (loss) on loan hedges)	\$16,864	\$16,883	\$16,146	—	%5	%
Corporate lending—gain/(loss) on loan hedges	\$323	\$116	\$(287)	)NM	NM	
Total banking revenues (ex-CVA/DVA and including gain (loss) on loan hedges)	\$17,187	\$16,999	\$15,859	1	%7	%
Fixed income markets	\$11,346	\$12,148	\$13,625	(7	)%(11)%
Equity markets	3,128	2,774	2,815	13	(1)
Securities services	2,130	2,048	1,974	4	4	
Other	(312)	(574)	(606)	)46	5	
Total Markets and securities services (ex-CVA/DVA)	\$16,292	\$16,396	\$17,808	(1	)%(8)%
Total ICG (ex-CVA/DVA)	\$33,479	\$33,395	\$33,667	—	% (1)%
CVA/DVA (excluded as applicable in lines above) ⁽²⁾	269	(343)	(345)	)NM	1	
Fixed income markets	215	(359)	(300))NM	(20)
Equity markets	52	24	(39))NM	NM	
Private bank	2	(8)	(6))NM	(33)

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Total revenues, net of interest expense	\$33,748	\$33,052	\$33,322	2	% (1)%
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Hedges on accrual loans reflect the mark-to-market on credit derivatives used to economically hedge the corporate (1) loan accrual portfolio. The fixed premium costs of these hedges are netted against the corporate lending revenues to reflect the cost of credit protection.

(2) Funding valuation adjustments (FVA) is included within CVA for presentation purposes. For additional information, see Note 25 to the Consolidated Financial Statements.

NM Not meaningful

The discussion of the results of operations for ICG below excludes the impact of CVA/DVA for all periods presented. Presentations of the results of operations, excluding the impact of CVA/DVA and the impact of gains/(losses) on hedges on accrual loans, are non-GAAP financial measures. For a reconciliation of these metrics to the reported results, see the table above.

2015 vs. 2014

Net income decreased 4%, primarily driven by higher credit costs, partially offset by lower expenses.

Revenues were largely unchanged, reflecting lower revenues in Markets and securities services (decrease of 1%) and a modest increase in revenues in Banking (increase of 1%, but unchanged excluding the gains/(losses) on hedges on accrual loans). Citi expects revenues in ICG, particularly in its Markets and securities services businesses, will likely continue to reflect the overall market environment.

Within Banking:

Investment banking revenues decreased 3%, largely reflecting an industry-wide activity decline in underwriting activity. Advisory revenues increased 16%, reflecting increased target client activity and strength in the overall M&A market. Equity underwriting revenues decreased 28% driven by the lower market activity and a decline in wallet share resulting from continued share fragmentation. Debt underwriting revenues increased 1%, driven by increased wallet share in investment grade debt and strong performance in investment grade loans in the second half of 2015, partially offset by the lower market activity and decreased wallet share in high-yield and leveraged loans. Treasury and trade solutions revenues were largely unchanged. Excluding the impact of FX translation, revenues increased 6%, as continued growth in deposit balances across regions and improved spreads, particularly in North America, were partially offset by continued declines in trade balances and spreads. End-of-period deposit balances increased 3% (7% excluding the impact of FX translation), largely driven by Asia and Latin America. Average trade loans decreased 12% (9% excluding the impact of FX translation), as the business maintained origination volumes while reducing lower spread assets and increasing asset sales to optimize returns (see “Managing Global Risk—Liquidity Risk” below).

Corporate lending revenues increased 8%. Excluding the impact of gains/(losses) on hedges on accrual loans, revenues decreased 3%. Excluding the impact of FX translation and gains/(losses) on hedges on accrual loans, revenues increased 3% as continued growth in average loan balances, lower hedge premium costs and an improvement in mark-to-market adjustments were partially offset by lower spreads, particularly in EMEA.

Private bank revenues increased 8%, reflecting strength in North America, Asia and EMEA, primarily due to growth in loan volumes and deposit balances, improved spreads in banking and higher managed investments revenues, partially offset by continued spread compression in lending.

Within Markets and securities services:

Fixed income markets revenues decreased 7%, driven by North America, primarily due to a volatile trading environment during 2015 due to macroeconomic uncertainty. The decrease in fixed income markets revenues resulted from a decline in spread products revenues (credit markets, securitized markets and municipals), partially offset by strength in rates and currencies. Rates and currencies revenues increased 4% due to higher revenues in local markets and overall G10 products, partially offset by G10 foreign exchange.

Equity markets revenues increased 13%, primarily reflecting improved performance across products, including derivatives and prime finance, with strength in Asia and EMEA.

Securities services revenues increased 4%. Excluding the impact of FX translation, revenues increased 15%, reflecting increased client activity and higher client balances.

Expenses decreased 2% as efficiency savings, the impact of FX translation and lower repositioning charges were partially offset by increased regulatory and compliance costs and compensation expense. Provisions increased \$872 million to \$929 million, primarily reflecting a net loan loss reserve build (\$722 million), compared to a net loan loss reserve release (\$219 million) in 2014. The net loan loss reserve build included approximately \$530 million for energy and energy-related exposures, including \$250 million in the fourth quarter of 2015, due to the significant decline in commodity prices during the second half of 2015. (For additional information on Citi's energy and energy-related exposures, see "Managing Global Risk—Credit Risk—Corporate Credit" below.) The remainder of the build during 2015 was primarily due to volume growth and overall macroeconomic conditions. The higher net loan loss reserve build during 2015 was partially offset by lower net credit losses. Net credit losses decreased 25%, primarily due to the absence of net credit losses of approximately \$165 million related to the Petróleos Mexicanos (Pemex) supplier program, which were incurred during 2014 (for additional information, see Citi's Form 8-K filed with the SEC on February 28, 2014), partially offset by increased net credit losses related to a limited number of energy and energy-related exposures, including approximately \$75 million in the fourth quarter of 2015. Looking to 2016, cost of credit in ICG will largely depend on the price of oil and other commodity prices as well as macroeconomic conditions. To the extent commodity prices remain at year-end 2015 levels, or deteriorate further, ICG expects to incur additional loan loss reserve builds in its energy and energy-related portfolios, which could be significant, and Citi's corporate non-accrual loans could be negatively impacted. Such events as well as macroeconomic conditions could also negatively impact Citi's other corporate credit portfolios.

2014 vs. 2013

Net income increased 1%, primarily driven by lower expenses, largely offset by lower revenues. Excluding the impact of the net fraud loss of \$360 million in Mexico in the fourth quarter of 2013, net income decreased 1%, primarily driven by the lower revenues and higher expenses, largely offset by lower credit costs.

Revenues decreased 1%, reflecting lower revenues in Markets and securities services (decrease of 8%), partially offset by higher revenues in Banking (increase of 7%, or 5% excluding the gains/(losses) on hedges on accrual loans).

Within Banking:

Investment banking revenues increased 7%, reflecting a stronger overall market environment and improved wallet share with ICG's target clients, partially offset by a modest decline in overall wallet share. The decline in overall wallet share was primarily driven by equity and debt underwriting and reflected market fragmentation. Advisory revenues increased 12%, reflecting the increased target client activity and an expansion of the overall M&A market. Equity underwriting revenues increased 18% largely in line with overall growth in market fees. Debt underwriting revenues were largely unchanged.

Treasury and trade solutions revenues increased 1%. Excluding the impact of FX translation, revenues increased 3% as continued higher deposit balances, fee growth and trade activity were partially offset by the impact of spread compression globally. End-of-period deposit balances were unchanged, but increased 3% excluding the impact of FX translation, largely driven by North America. Average trade loans decreased 9% (7% excluding the impact of FX translation).

Corporate lending revenues increased 52%. Excluding the impact of gains/(losses) on hedges on accrual loans, revenues increased 15%, primarily due to continued growth in average loan balances and lower funding costs. Private bank revenues increased 7% due to growth in client business volumes and improved spreads in banking, higher capital markets activity and an increase in assets under management in managed investments, partially offset by continued spread compression in lending.

Within Markets and securities services:

Fixed income markets revenues decreased 11%, driven by a decrease in rates and currencies revenues, partially offset by increased securitized products and commodities revenues. Rates and currencies revenues declined due to historically muted levels of volatility, uncertainties around Russia and Greece and lower client activity in the first half of 2014. In addition, the first half of 2013 included a strong performance in rates and currencies, driven in part by the impact of quantitative easing globally. Municipals and credit markets revenues declined due to challenging trading conditions resulting from macroeconomic uncertainties, particularly in the fourth quarter of 2014. These declines were partially offset by increased

securitized products and commodities revenues, largely in North America.

Equity markets revenues decreased 1%, primarily reflecting weakness in EMEA, particularly cash equities, driven by volatility in Europe, largely offset by improved performance in prime finance due to increased customer flows.

Securities services revenues increased 4%. Excluding the impact of FX translation, revenues increased 5% due to increased volumes, assets under custody and overall client activity.

Expenses decreased 1% as efficiency savings, the absence of the net fraud loss and lower performance-based compensation were partially offset by higher repositioning charges and legal and related expenses as well as increased regulatory and compliance costs. Excluding the impact of the net fraud loss, expenses increased 1%, as higher repositioning charges and legal and related expenses as well as increased regulatory and compliance costs were partially offset by efficiency savings and lower performance-based compensation.

Provisions decreased 27%, primarily reflecting a release for unfunded lending commitments in the corporate loan portfolio, compared to a build in 2013, partially offset by higher net credit losses and a lower loan loss reserve release

driven by the overall economic environment. Net credit losses increased 52%, largely related to the Pemex supplier program during 2014 as well as write-offs related to a specific counterparty.

CORPORATE/OTHER

Corporate/Other includes certain unallocated costs of global staff functions (including finance, risk, human resources, legal and compliance), other corporate expenses and unallocated global operations and technology expenses, Corporate Treasury and discontinued operations. At December 31, 2015, Corporate/Other had \$52 billion of assets, or 3% of Citigroup's total assets. For additional information, see "Managing Global Risk—Liquidity Risk" below.

In millions of dollars	2015	2014	2013	% Change 2015 vs. 2014	% Change 2014 vs. 2013	%
Net interest revenue	\$(154)	\$(224)	\$(610)	)31	%63	%
Non-interest revenue	1,061	525	932	NM	(44))
Total revenues, net of interest expense	\$907	\$301	\$322	NM	(7))%
Total operating expenses	\$1,751	\$6,020	\$1,052	(71)	)%NM	
Provisions for loan losses and for benefits and claims	—	—	—	—	—	
Loss from continuing operations before taxes	\$(844)	\$(5,719)	\$(730)	)85	%NM	
Income taxes (benefits)	(1,339)	(344)	(216)	)NM	(59))
Income (loss) from continuing operations	\$495	\$(5,375)	\$(514)	)NM	NM	
Income (loss) from discontinued operations, net of taxes	(54)	(2)	)270	NM	NM	
Net income (loss) before attribution of noncontrolling interests	\$441	\$(5,377)	\$(244)	)NM	NM	
Noncontrolling interests	18	43	87	(58)	)%(51))
Net income (loss)	\$423	\$(5,420)	\$(331)	)NM	NM	

NM Not meaningful

2015 vs. 2014

Net income was \$423 million, compared to a net loss of \$5.4 billion in 2014, largely reflecting significantly lower expenses, an increased tax benefit due to legal entity restructurings and resolution of certain state and local audits in the second quarter of 2015, as well as higher revenues.

Revenues increased \$606 million to \$907 million, primarily due to gains on debt buybacks during the course of 2015 and real estate sales in the second quarter of 2015 as well as higher revenues from sales of AFS securities, partially offset by hedging activities.

Expenses decreased \$4.3 billion to \$1.8 billion, largely driven by lower legal and related expenses (\$796 million compared to \$4.4 billion in 2014), a benefit from FX translation and lower repositioning charges.

During the fourth quarter of 2015, a change was enacted to the dividend rate Citi is entitled to receive on the shares of capital stock it is required to hold in the Federal Reserve System. Pursuant to current requirements, Citibank, N.A. (Citibank) is required to purchase stock equal to 3% of its capital stock and surplus (with an additional 3% subject to call by the Federal Reserve Board). As a result of the recent change, effective January 1, 2016, the statutory dividend Citi is to receive on these shares will decrease from a fixed 6% to the lesser of (i) the high-yield rate paid on the 10-year U.S. Treasury note based on the auction immediately preceding the dividend payment, and (ii) 6%. While the actual impact to Corporate/Other revenues (where Citi records this dividend) will be based on the number of shares of Federal Reserve System capital stock it holds at any given time as well as the quarter-to-quarter operational activities impacting the result of operations of Corporate/Other, based on year-end amounts, Citi estimates this change could negatively impact revenues in

Corporate/Other by approximately \$160 million annually going forward.

2014 vs. 2013

The net loss increased \$5.1 billion to \$5.4 billion, primarily due to higher legal and related expenses.

Revenues decreased 7%, primarily driven by lower revenues from sales of AFS securities as well as hedging activities.

Expenses increased \$5.0 billion to \$6.0 billion, largely driven by the higher legal and related expenses (\$4.4 billion compared to \$172 million in 2013) as well as increased regulatory and compliance costs and higher repositioning charges.

CITI HOLDINGS

Citi Holdings contains the remaining businesses and portfolios of assets that Citigroup has determined are not central to its core Citicorp businesses. Consistent with this determination, beginning in the first quarter of 2016, Citi's consumer businesses in Argentina, Brazil and Colombia will be reported as part of Citi Holdings (for additional information, see "Citigroup Segments" and "Citicorp" above).

As of December 31, 2015, Citi Holdings assets were approximately \$74 billion, a decrease of 43% year-over-year and 33% from September 30, 2015. The decline in assets of \$36 billion from September 30, 2015 primarily consisted of divestitures and run-off, including, among others, completion of the sales of Citi's retail banking and credit cards businesses in Japan and OneMain Financial. As of December 31, 2015, Citi had signed agreements to reduce Citi Holdings GAAP assets by an additional \$7 billion in 2016, subject to regulatory approvals and other closing conditions.

Also as of December 31, 2015, consumer assets in Citi Holdings were approximately \$64 billion, or approximately 86% of Citi Holdings assets. Of the consumer assets, approximately \$38 billion, or 59%, consisted of North America mortgages (residential first mortgages and home equity loans). As of December 31, 2015, Citi Holdings represented approximately 4% of Citi's GAAP assets and 11% of its risk-weighted assets under Basel III (based on the Advanced Approaches for determining risk-weighted assets).

In millions of dollars, except as otherwise noted	2015	2014	2013	% Change 2015 vs. 2014	% Change 2014 vs. 2013	
Net interest revenue	\$3,704	\$4,591	\$4,348	(19)	)%6	%
Non-interest revenue	4,133	3,258	2,427	27	34	
Total revenues, net of interest expense	\$7,837	\$7,849	\$6,775	—	%16	%
Provisions for credit losses and for benefits and claims						
Net credit losses	\$1,066	\$1,837	\$3,264	(42)	)%(44)%
Credit reserve release	(503)	) (907)	) (2,048)	45	56	
Provision for loan losses	\$563	\$930	\$1,216	(39)	)%(24)%
Provision for benefits and claims	624	657	663	(5)	) (1))
Release for unfunded lending commitments	(26)	) (10)	) (10)	NM	—	
Total provisions for credit losses and for benefits and claims	\$1,161	\$1,577	\$1,869	(26)	)%(16)%
Total operating expenses	\$4,615	\$9,689	\$7,910	(52)	)%22	%
Income (loss) from continuing operations before taxes	\$2,061	\$(3,417)	\$(3,004)	NM	(14))%
Income taxes (benefits)	1,003	57	(1,133)	NM	NM	
Income (loss) from continuing operations	\$1,058	\$(3,474)	\$(1,871)	NM	(86))%
Noncontrolling interests	\$11	\$6	\$16	83	%(63)%
Net income (loss)	\$1,047	\$(3,480)	\$(1,887)	NM	(84))%
Total revenues, net of interest expense (excluding CVA/DVA)						
Total revenues—as reported	\$7,837	\$7,849	\$6,775	—	%16	%
CVA/DVA ⁽¹⁾	(15)	) (47)	) 3	68	NM	
Total revenues-excluding CVA/DVA	\$7,852	\$7,896	\$6,772	(1)	)%17	%
Balance sheet data (in billions of dollars)						
Average assets	\$112	\$144	\$173	(22)	)%(17)%
Return on average assets	0.93	%(2.42	)%(1.09)%		
Efficiency ratio	59	123	117			
Total EOP assets	\$74	\$129	\$154	(43)) (16))
Total EOP loans	45	79	100	(43)) (21))

Total EOP deposits	7	17	69	(59)	(75)
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(1) FVA is included within CVA for presentation purposes. For additional information, see Note 25 to the Consolidated Financial Statements.

NM Not meaningful

The discussion of the results of operations for Citi Holdings below excludes the impact of CVA/DVA for all periods presented. Presentations of the results of operations, excluding the impact of CVA/DVA, are non-GAAP financial measures. Citi believes the presentation of Citi Holdings' results excluding the impact of CVA/DVA is a more meaningful depiction of the underlying fundamentals of the business. For a reconciliation of these metrics to the reported results, see the table above.

2015 vs. 2014

Net income was \$1.1 billion, an improvement from a net loss of \$3.5 billion in 2014, largely due to the impact of the mortgage settlement in 2014 (see "Executive Summary" above). Excluding the mortgage settlement, net income increased \$782 million, primarily due to lower expenses and lower net credit losses, partially offset by a lower net loan loss reserve release. While Citi Holdings expects to have positive net income during 2016, given the significant asset sales and declines in overall Citi Holdings' assets during 2015, it does not expect to generate the same level of net income in 2016 as in 2015.

Revenues decreased 1%, primarily driven by the overall wind-down of the portfolio, the impact of redemptions of high cost debt and the impact of recording OneMain Financial net credit losses as a reduction of revenue beginning in the second quarter of 2015, mostly offset by higher gains on asset sales, including in the fourth quarter of 2015 due to the sales of OneMain Financial and the retail banking and credit cards businesses in Japan.

Expenses declined 52%. Excluding the impact of the mortgage settlement, expenses declined 22%, primarily due to the ongoing decline in assets and lower legal and related costs (\$420 million compared to \$986 million in 2014).

Provisions decreased 26%. Excluding the impact of the mortgage settlement, provisions decreased 24%, driven by lower net credit losses, partially offset by a lower net loss reserve release. Net credit losses declined 42%, primarily due to the impact of the recording of OneMain Financial net credit losses as a reduction in revenue, continued improvements in North America mortgages and overall lower asset levels. The net reserve release decreased 42%. Excluding the impact of the mortgage settlement, the net reserve release decreased 46% to \$529 million, primarily due to lower releases related to the North America mortgage portfolio as the portfolio has been reduced and credit has improved.

2014 vs. 2013

The net loss increased by \$1.6 billion to \$3.5 billion, largely due to the impact of the mortgage settlement, partially offset by higher revenues and lower cost of credit. Excluding the mortgage settlement, net income increased by \$2.2 billion to \$275 million, primarily due to lower expenses, lower net credit losses and higher revenues, partially offset by a lower net loan loss reserve release.

Revenues increased 17%, primarily driven by gains on asset sales, including the sales of the consumer operations in Greece and Spain in the third quarter of 2014, lower funding costs and the absence of residential mortgage repurchase reserve builds for representation and warranty claims as compared to 2013, partially offset by losses on the redemption of debt associated with funding Citi Holdings assets.

Expenses increased 22%. Excluding the impact of the mortgage settlement, expenses declined 25%, primarily driven

by lower legal and related costs (\$986 million compared to \$2.6 billion in 2013) as well as the ongoing decline in assets.

Provisions decreased 16%. Excluding the impact of the mortgage settlement, provisions declined 19%, driven by a 44% decline in net credit losses primarily due to continued improvements in North America mortgages and overall lower

asset levels. The net reserve release decreased 55%. Excluding the impact of the mortgage settlement, the net reserve release decreased 53%, primarily due to lower net releases related to the North America mortgage portfolio, partially offset by lower losses on asset sales.

Payment Protection Insurance (PPI)

The selling of PPI by financial institutions in the U.K. has been the subject of intense review and focus by U.K. regulators and, more recently, the U.K. Supreme Court. For additional information on PPI, see “Citi Holdings” in Citi’s Annual Report on Form 10-K for the year ended December 31, 2013 filed with the SEC on March 3, 2014.

PPI is designed to cover a customer’s loan repayments if certain events occur, such as long-term illness or unemployment. The U.K. Financial Conduct Authority (FCA) found certain problems across the industry with how these products were sold, including customers not realizing that the cost of PPI premiums was being added to their loan or PPI being unsuitable for the customer. Redress generally involves the repayment of premiums and the refund of all applicable contractual interest together with compensatory interest of 8%. In addition, during the fourth quarter of 2014, the U.K. Supreme Court issued a ruling in a case (Plevin) involving PPI pursuant to which the court ruled, independent of the sale of the PPI contract, the PPI contract at issue in the case was “unfair” due to the high sales commissions earned and the lack of disclosure to the customer thereof.

During the fourth quarter of 2015, the FCA issued a consultation paper that proposed (1) a deadline for PPI complaints (both non-Plevin and Plevin complaints) of two years after the effective date of the final rules; (2) an FCA-led customer communications campaign in advance of the deadline, with bank funding of the campaign; and (3) a failure to disclose a sales commission of 50% or more would be deemed unfair when assessing a new PPI complaint and require a customer refund of the difference between the commission paid and 50%, plus interest. Final rules are expected from the FCA in spring 2016.

During 2015, Citi increased its PPI reserves by approximately \$153 million (\$65 million of which was recorded in Citi Holdings and \$88 million of which was recorded in discontinued operations), including a \$106 million reserve increase in the fourth quarter of 2015 (\$39 million of which was recorded in Citi Holdings and \$67 million of which was recorded in discontinued operations). The increase for full year 2015 compared to an increase of \$118 million during 2014. While the overall level of claims generally remained

unchanged in 2015, the increase in the reserves during 2015, including in the fourth quarter of 2015, was due in part to the Plevin case and the guidelines set forth in the FCA's consultation paper, including the proposed customer communications campaign.

Citi's year-end 2015 PPI reserve was \$262 million (compared to \$225 million as of December 31, 2014).

Additional reserving actions, if any, in 2016 will largely depend on the timing of and response to the FCA's final rules, including the level of customer response to any communications campaign.

OFF-BALANCE SHEET ARRANGEMENTS

Citigroup enters into various types of off-balance sheet arrangements in the ordinary course of business. Citi's involvement in these arrangements can take many different forms, including without limitation:

- purchasing or retaining residual and other interests in unconsolidated special purpose entities, such as credit card receivables and mortgage-backed and other asset-backed securitization entities;
- holding senior and subordinated debt, interests in limited and general partnerships and equity interests in other unconsolidated special purpose entities;
- providing guarantees, indemnifications, loan commitments, letters of credit and representations and warranties; and
- entering into operating leases for property and equipment.

Citi enters into these arrangements for a variety of business purposes. For example, securitization arrangements offer investors access to specific cash flows and risks created through the securitization process. Securitization arrangements also assist Citi and Citi's customers in monetizing their financial assets and securing financing at more favorable rates than Citi or the customers could otherwise obtain.

The table below shows where a discussion of Citi's various off-balance sheet arrangements may be found in this Form 10-K. In addition, see Notes 1, 22 and 27 to the Consolidated Financial Statements.

Types of Off-Balance Sheet Arrangements Disclosures in this Form 10-K

Variable interests and other obligations, including contingent obligations, arising from variable interests in nonconsolidated VIEs	See Note 22 to the Consolidated Financial Statements.
Letters of credit, and lending and other commitments	See Note 27 to the Consolidated Financial Statements.
Guarantees	See Note 27 to the Consolidated Financial Statements.
Leases	See Note 27 to the Consolidated Financial Statements.

CONTRACTUAL OBLIGATIONS

The following table includes information on Citigroup's contractual obligations, as specified and aggregated pursuant to SEC requirements.

In millions of dollars	Contractual obligations by year						Total
	2016	2017	2018	2019	2020	Thereafter	
Long-term debt obligations—principal ⁽¹⁾	\$43,537	\$34,345	\$31,416	\$19,153	\$9,377	\$63,447	\$201,275
Long-term debt obligations—interest payments ⁽²⁾	5,960	4,667	3,575	2,736	2,262	29,332	48,532
Operating and capital lease obligations	1,238	1,002	778	698	567	4,483	8,766
Purchase obligations ⁽³⁾	612	547	258	246	240	500	2,403
Other liabilities ⁽⁴⁾	29,015	732	772	192	276	3,462	34,449
Total	\$80,362	\$41,293	\$36,799	\$23,025	\$12,722	\$101,224	\$295,425

(1) For additional information about long-term debt obligations, see “Managing Global Risk—Liquidity Risk” below and Note 18 to the Consolidated Financial Statements.

Contractual obligations related to interest payments on long-term debt for 2016–2020 are calculated by applying the December 31, 2015 weighted-average interest rate (3.32%) on average outstanding long-term debt to the average remaining contractual obligations on long-term debt for each of those years. The “Thereafter” interest payments on long-term debt for the remaining years to maturity (2021–2098) are calculated by applying current interest rates on the remaining contractual obligations on long-term debt for each of those years.

Purchase obligations consist of obligations to purchase goods or services that are enforceable and legally binding on Citi. For presentation purposes, purchase obligations are included in the table above through the termination date of the respective agreements, even if the contract is renewable. Many of the purchase agreements for goods or services include clauses that would allow Citi to cancel the agreement with specified notice; however, that impact is not included in the table above (unless Citi has already notified the counterparty of its intention to terminate the agreement).

Other liabilities reflected on Citigroup's Consolidated Balance Sheet includes accounts payable, accrued expenses, uncertain tax positions and other liabilities that have been incurred and will ultimately be paid in cash; legal reserve accruals are not included in the table above. Also includes discretionary contributions in 2016 for Citi's employee-defined benefit obligations for the pension, postretirement and postemployment plans and defined contribution plans.

CAPITAL RESOURCES

Overview

Capital is used principally to support assets in Citi's businesses and to absorb credit, market, and operational losses. Citi primarily generates capital through earnings from its operating businesses. Citi may augment its capital through issuances of common stock, noncumulative perpetual preferred stock and equity issued through awards under employee benefit plans, among other issuances. During 2015, Citi continued to raise capital through noncumulative perpetual preferred stock issuances amounting to approximately \$6.3 billion, resulting in a total of approximately \$16.7 billion outstanding as of December 31, 2015. In addition, during 2015, Citi returned a total of approximately \$5.9 billion of capital to common shareholders in the form of share repurchases (approximately 101 million common shares) and dividends.

Further, Citi's capital levels may also be affected by changes in accounting and regulatory standards as well as the impact of future events on Citi's business results, such as corporate and asset dispositions.

Capital Management

Citigroup's capital management framework is designed to ensure that Citigroup and its principal subsidiaries maintain sufficient capital consistent with each entity's respective risk profile, management targets, and all applicable regulatory standards and guidelines. Citi assesses its capital adequacy against a series of internal quantitative capital goals, designed to evaluate the Company's capital levels in expected and stressed economic environments. Underlying these internal quantitative capital goals are strategic capital considerations, centered on preserving and building financial strength. The Citigroup Capital Committee, with oversight from the Risk Management Committee of Citigroup's Board of Directors, has responsibility for Citi's aggregate capital structure, including the capital assessment and planning process, which is integrated into Citi's capital plan. Balance sheet management, including oversight of capital adequacy, for Citigroup's subsidiaries is governed by each entity's Asset and Liability Committee. For additional information regarding Citi's capital planning and stress testing exercises, see "Capital Planning and Stress Testing" below.

Current Regulatory Capital Standards

Citi is subject to regulatory capital standards issued by the Federal Reserve Board which, commencing with 2014, constitute the U.S. Basel III rules. These rules establish an integrated capital adequacy framework, encompassing both risk-based capital ratios and leverage ratios.

Risk-Based Capital Ratios

The U.S. Basel III rules set forth the composition of regulatory capital (including the application of regulatory capital adjustments and deductions), as well as two comprehensive methodologies (a Standardized Approach and Advanced Approaches) for measuring total risk-weighted assets. Total risk-weighted assets under the Advanced Approaches, which are primarily models based, include credit, market, and operational risk-weighted assets. Conversely, the Standardized Approach excludes operational risk-weighted assets and generally applies prescribed supervisory risk weights to broad categories of credit risk exposures. As a result, credit risk-weighted assets calculated under the Advanced Approaches are more risk sensitive than those calculated under the Standardized Approach. Market risk-weighted assets are derived on a generally consistent basis under both approaches.

The U.S. Basel III rules establish stated minimum Common Equity Tier 1 Capital, Tier 1 Capital and Total Capital ratios for substantially all U.S. banking organizations, including Citi and Citibank, N.A. (Citibank). Moreover, these rules provide for both a fixed Capital Conservation Buffer and a discretionary Countercyclical Capital Buffer, which

would be available to absorb losses in advance of any potential impairment of regulatory capital below the stated minimum risk-based capital ratio requirements. In December 2015, the Federal Reserve Board voted to affirm the Countercyclical Capital Buffer amount at the current level of 0%, and issued a proposed framework for implementing the Countercyclical Capital Buffer in the future. For additional information regarding the Federal Reserve Board's proposed policy statement on the Countercyclical Capital Buffer, see "Regulatory Capital Standards Developments" below.

Further, the U.S. Basel III rules implement the "capital floor provision" of the so-called "Collins Amendment" of the Dodd-Frank Act, which requires Advanced Approaches banking organizations, such as Citi and Citibank, to calculate each of the three risk-based capital ratios (Common Equity Tier 1 Capital, Tier 1 Capital, and Total Capital) under both the Standardized Approach starting on January 1, 2015 (or, for 2014, prior to the effective date of the Standardized Approach, the Basel I credit risk and Basel II.5 market risk capital rules) and the Advanced Approaches and publicly report (as well as measure compliance against) the lower of each of the resulting risk-based capital ratios.

GSIB Surcharge

In August 2015, the Federal Reserve Board issued a final rule which imposes a risk-based capital surcharge upon U.S. bank holding companies that are identified as global systemically important bank holding companies (GSIBs), including Citi. The GSIB surcharge augments the Capital Conservation Buffer and, if invoked, any Countercyclical Capital Buffer, and would result in restrictions on earnings distributions (e.g., dividends, equity repurchases, and discretionary executive bonuses) should the expanded buffer be breached to absorb losses during periods of financial or economic stress, with the degree of such restrictions based upon the extent to which the expanded buffer is breached.

Under the Federal Reserve Board's final rule, identification of a GSIB would be based primarily on quantitative measurement indicators underlying five equally weighted broad categories of systemic importance: (i) size, (ii) interconnectedness, (iii) cross-jurisdictional activity, (iv) substitutability, and (v) complexity. With the exception of size, each of the other categories are comprised of multiple indicators also of equal weight, and amounting to 12 indicators in total.

A U.S. bank holding company that is designated a GSIB under the established methodology will be required, on an annual basis, to calculate a surcharge using two methods and will be subject to the higher of the resulting two surcharges. The first method ("method 1") is based on the same five broad categories of systemic importance used to identify a GSIB. Under the second method ("method 2"), the substitutability category is replaced with a quantitative measure intended to assess the extent of a GSIB's reliance on short-term wholesale funding. Moreover, method 1 incorporates relative measures of systemic importance across certain global banking organizations and a year-end spot foreign exchange rate, whereas method 2 uses fixed measures of systemic importance and application of an average foreign exchange rate over a three-year period. Generally, the surcharge derived under method 2 will result in a higher surcharge than derived under method 1.

Should a GSIB's systemic importance change year-over-year such that it becomes subject to a higher surcharge, the higher surcharge would not become effective for a full year (e.g., a higher surcharge calculated by December 31, 2016 would not become effective until January 1, 2018). However, if a GSIB's systemic importance changes such that the GSIB would be subject to a lower surcharge, the GSIB would be subject to the lower surcharge beginning with the next calendar year (e.g., a lower surcharge calculated by December 31, 2016 would become effective January 1, 2017).

GSIB surcharges under the final rule, which are required to be composed entirely of Common Equity Tier 1 Capital, initially range from 1.0% to 4.5% of total risk-weighted assets. Citi's initial GSIB surcharge effective January 1, 2016, which is based primarily on 2014 quantitative measures of systemic importance (other than the short-term wholesale funding measure under method 2, based on 2015 data), is 3.5%. However, Citi's ongoing efforts during 2015 in managing balance sheet efficiency has resulted in lower scores for substantially all of the quantitative measures of systemic importance, and consequently has reduced Citi's estimated GSIB surcharge to 3%, also derived under method 2, which would become effective January 1, 2017.

Transition Provisions

The U.S. Basel III rules contain several differing, largely multi-year transition provisions (i.e., "phase-ins" and "phase-outs") with respect to the stated minimum Common Equity Tier 1 Capital and Tier 1 Capital ratio requirements, substantially all regulatory capital adjustments and deductions, and non-qualifying Tier 1 and Tier 2 Capital instruments (such as non-grandfathered trust preferred securities and certain subordinated debt issuances). Moreover, the GSIB surcharge will be introduced in parallel with the Capital Conservation Buffer and, if applicable, any Countercyclical Capital Buffer, commencing phase-in on January 1, 2016 and becoming fully effective on January 1, 2019. With the exception of the non-grandfathered trust preferred securities which do not fully phase-out until January 1, 2022 and the capital buffers and GSIB surcharge which do not fully phase-in until January 1, 2019, all other transition provisions will be entirely reflected in Citi's regulatory capital ratios by January 1, 2018. Citi considers all of these transition provisions as being fully implemented on January 1, 2019 (full implementation), with the inclusion of the capital buffers and GSIB surcharge.

The following chart sets forth the transitional progression to full implementation by January 1, 2019 of the regulatory capital components (i.e., inclusive of the mandatory 2.5% Capital Conservation Buffer and the Countercyclical Capital Buffer at its current level of 0%, as well as an estimated 3% GSIB surcharge) comprising the effective minimum risk-based capital ratios.

Basel III Transition Arrangements: Minimum Risk-Based Capital Ratios

The following chart presents the transition arrangements (phase-in and phase-out) under the U.S. Basel III rules for significant regulatory capital adjustments and deductions relative to Citi.

Basel III Transition Arrangements: Significant Regulatory Capital Adjustments and Deductions

	January 1					
	2014	2015	2016	2017	2018	
Phase-in of Significant Regulatory Capital Adjustments and Deductions						
Common Equity Tier 1 Capital ⁽¹⁾	20	% 40	% 60	% 80	% 100	%
Common Equity Tier 1 Capital ⁽²⁾	20	% 40	% 60	% 80	% 100	%
Additional Tier 1 Capital ⁽²⁾⁽³⁾	80	% 60	% 40	% 20	% 0	%
	100	% 100	% 100	% 100	% 100	%

Phase-out of Significant AOCI Regulatory Capital Adjustments

Common Equity Tier 1 Capital ⁽⁴⁾	80	% 60	% 40	% 20	% 0	%
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Includes the phase-in of Common Equity Tier 1 Capital deductions for all intangible assets other than goodwill and mortgage servicing rights (MSRs); and excess over 10%/15% limitations for deferred tax assets (DTAs) arising from temporary differences, significant common stock investments in unconsolidated financial institutions and MSRs. Goodwill (including goodwill “embedded” in the valuation of significant common stock investments in unconsolidated financial institutions) is fully deducted in arriving at Common Equity Tier 1 Capital commencing

(1) January 1, 2014. The amount of other intangible assets, aside from MSRs, not deducted in arriving at Common Equity Tier 1 Capital are risk-weighted at 100%, as are the excess over the 10%/15% limitations for DTAs arising from temporary differences, significant common stock investments in unconsolidated financial institutions and MSRs prior to full implementation of the U.S. Basel III rules. Upon full implementation, the amount of temporary difference DTAs, significant common stock investments in unconsolidated financial institutions and MSRs not deducted in arriving at Common Equity Tier 1 Capital are risk-weighted at 250%.

(2) Includes the phase-in of Common Equity Tier 1 Capital deductions related to DTAs arising from net operating loss, foreign tax credit and general business credit carry-forwards and defined benefit pension plan net assets; and the phase-in of the Common Equity Tier 1 Capital adjustment for cumulative unrealized net gains (losses) related to changes in fair value of financial liabilities attributable to Citi’s own creditworthiness.

(3) To the extent Additional Tier 1 Capital is not sufficient to absorb regulatory capital adjustments and deductions, such excess is to be applied against Common Equity Tier 1 Capital.

(4) Includes the phase-out from Common Equity Tier 1 Capital of adjustments related to unrealized gains (losses) on available-for-sale (AFS) debt securities; unrealized gains on AFS equity securities; unrealized gains (losses) on held-to-maturity (HTM) securities included in Accumulated other comprehensive income (loss) (AOCI); and defined benefit plans liability adjustment.

Tier 1 Leverage Ratio

Under the U.S. Basel III rules, Citi, as with principally all U.S. banking organizations, is also required to maintain a minimum Tier 1 Leverage ratio of 4%. The Tier 1 Leverage ratio, a non-risk-based measure of capital adequacy, is defined as Tier 1 Capital as a percentage of quarterly adjusted average total assets less amounts deducted from Tier 1 Capital.

Supplementary Leverage Ratio

Advanced Approaches banking organizations are additionally required to calculate a Supplementary Leverage ratio, which significantly differs from the Tier 1 Leverage ratio by also including certain off-balance sheet exposures within the denominator of the ratio (Total Leverage Exposure). The Supplementary Leverage ratio represents end of period Tier 1 Capital to Total Leverage Exposure, with the latter defined as the sum of the daily average of on-balance sheet assets for the quarter and the average of certain off-balance sheet exposures calculated as of the last day of each month in the quarter, less applicable Tier 1 Capital deductions. Advanced Approaches banking organizations will be required to maintain a stated minimum Supplementary Leverage ratio of 3% commencing on January 1, 2018, but commenced publicly disclosing this ratio on January 1, 2015.

Further, U.S. GSIBs, and their subsidiary insured depository institutions, including Citi and Citibank, are subject to enhanced Supplementary Leverage ratio standards. The enhanced Supplementary Leverage ratio standards establish a 2% leverage buffer for U.S. GSIBs in addition to the stated 3% minimum Supplementary Leverage ratio requirement in the U.S. Basel III rules. If a U.S. GSIB fails to exceed the 2% leverage buffer, it will be subject to increasingly onerous restrictions (depending upon the extent of the shortfall) regarding capital distributions and discretionary executive bonus payments. Accordingly, U.S. GSIBs are effectively subject to a 5% minimum Supplementary Leverage ratio requirement. Additionally, insured depository institution subsidiaries of U.S. GSIBs, such as Citibank, are required to maintain a Supplementary Leverage ratio of 6% to be considered “well capitalized” under the revised Prompt Corrective Action (PCA) framework established by the U.S. Basel III rules. Citi and Citibank are required to be compliant with these higher effective minimum ratio requirements on January 1, 2018.

Prompt Corrective Action Framework

The U.S. Basel III rules revised the PCA regulations applicable to insured depository institutions in certain respects. In general, the PCA regulations direct the U.S. banking agencies to enforce increasingly strict limitations on the activities of insured depository institutions that fail to meet certain regulatory capital thresholds. The PCA framework contains five categories of capital adequacy as measured by risk-based capital and leverage ratios: (i) “well capitalized”; (ii) “adequately capitalized”; (iii) “undercapitalized”;

(iv) “significantly undercapitalized”; and (v) “critically undercapitalized.”

Accordingly, beginning January 1, 2015, an insured depository institution, such as Citibank, must maintain minimum Common Equity Tier 1 Capital, Tier 1 Capital, Total Capital, and Tier 1 Leverage ratios of 6.5%, 8%, 10% and 5%, respectively, to be considered “well capitalized.” Additionally, Advanced Approaches insured depository institutions, such as Citibank, must maintain a minimum Supplementary Leverage ratio of 6%, effective January 1, 2018, to be considered “well capitalized.”

Capital Planning and Stress Testing

Citi is subject to an annual assessment by the Federal Reserve Board as to whether Citi has effective capital planning processes as well as sufficient regulatory capital to absorb losses during stressful economic and financial conditions, while also meeting obligations to creditors and counterparties and continuing to serve as a credit intermediary. This annual assessment includes two related programs:

• The Comprehensive Capital Analysis and Review (CCAR) evaluates Citi’s capital adequacy, capital adequacy process, and its planned capital distributions, such as dividend payments and common stock repurchases. As part of CCAR, the Federal Reserve Board assesses whether Citi has sufficient capital to continue operations throughout times of

economic and financial market stress and whether Citi has robust, forward-looking capital planning processes that account for its unique risks. The Federal Reserve Board may object to Citi's annual capital plan based on either quantitative or qualitative grounds. If the Federal Reserve Board objects to Citi's annual capital plan, Citi may not undertake any capital distribution unless the Federal Reserve Board indicates in writing that it does not object to the distribution.

Dodd-Frank Act Stress Testing (DFAST) is a forward-looking quantitative evaluation of the impact of stressful economic and financial market conditions on Citi's regulatory capital. This program serves to inform the Federal Reserve Board, the financial companies, and the general public, how Citi's regulatory capital ratios might change using a hypothetical set of adverse economic conditions as designed by the Federal Reserve Board. In addition to the annual supervisory stress test conducted by the Federal Reserve Board, Citi is required to conduct annual company-run stress tests under the same three supervisory scenarios as well as conduct a mid-cycle stress test under company-developed scenarios.

Both CCAR and DFAST include an estimate of projected revenues, losses, reserves, certain pro forma regulatory capital ratios (i.e., Common Equity Tier 1 Capital, Tier 1 Capital, Total Capital, and Tier 1 Leverage ratios), and any other additional capital measures deemed

relevant by Citi. Projections are required over a nine-quarter planning horizon under baseline conditions and under a range of stressed scenarios. All risk-based capital ratios reflect application of the Standardized Approach framework only and the transition arrangements under the U.S. Basel III rules.

In November 2015, the Federal Reserve Board released a final rule, which for purposes of CCAR, adopted targeted amendments to its capital plan and stress test rules. Effective January 1, 2016, the final rule removed all requirements related to the Tier 1 Common Capital ratio (originally defined in conjunction with the 2009 Supervisory Capital Assessment Program), as it has effectively been replaced by the Common Equity Tier 1 Capital ratio requirement subsequent to the implementation of the U.S. Basel III rules. Moreover, the final rule delayed the use of the Supplementary Leverage ratio until the 2017 capital planning cycle, and deferred the use of the Advanced Approaches framework indefinitely. For additional information regarding CCAR, see “Risk Factors—Regulatory Risks” below.

Citigroup’s Capital Resources Under Current Regulatory Standards

During 2015 and thereafter, Citi is required to maintain stated minimum Common Equity Tier 1 Capital, Tier 1 Capital and Total Capital ratios of 4.5%, 6% and 8%, respectively. The stated minimum Common Equity Tier 1 Capital and Tier 1 Capital ratio requirements in 2014 were 4% and 5.5%, respectively, while the stated minimum Total Capital ratio requirement of 8% remained unchanged.

Furthermore, to be “well capitalized” under current federal bank regulatory agency definitions, a bank holding company must have a Tier 1 Capital ratio of at least 6%, a Total Capital ratio of at least 10%, and not be subject to a Federal Reserve Board directive to maintain higher capital levels.

The following tables set forth the capital tiers, total risk-weighted assets, risk-based capital ratios, quarterly adjusted average total assets, Total Leverage Exposure and leverage ratios under current regulatory standards (reflecting Basel III Transition Arrangements) for Citi as of December 31, 2015 and December 31, 2014.

Citigroup Capital Components and Ratios Under Current Regulatory Standards (Basel III Transition Arrangements)

In millions of dollars, except ratios	December 31, 2015		December 31, 2014 ⁽¹⁾	
	Advanced Approaches	Standardized Approach	Advanced Approaches	Standardized Approach ⁽²⁾
Common Equity Tier 1 Capital	\$173,862	\$173,862	\$166,663	\$166,663
Tier 1 Capital	176,420	176,420	166,663	166,663
Total Capital (Tier 1 Capital + Tier 2 Capital) ⁽³⁾	198,746	211,115	184,959	197,707
Total Risk-Weighted Assets	1,190,853	1,138,711	1,274,672	1,211,358
Common Equity Tier 1 Capital ratio ⁽⁴⁾	14.60	% 15.27	% 13.07	% 13.76
Tier 1 Capital ratio ⁽⁴⁾	14.81	15.49	13.07	13.76
Total Capital ratio ⁽⁴⁾	16.69	18.54	14.51	16.32

In millions of dollars, except ratios	December 31, 2015		December 31, 2014 ⁽¹⁾	
Quarterly Adjusted Average Total Assets ⁽⁵⁾	\$1,732,933		\$1,849,325	
Total Leverage Exposure ⁽⁶⁾	2,326,072		2,518,115	
Tier 1 Leverage ratio	10.18	%	9.01	%
Supplementary Leverage ratio	7.58		6.62	

(1) Restated to reflect the retrospective adoption of ASU 2014-01 for Low Income Housing Tax Credit (LIHTC) investments, consistent with current period presentation.

(2) Pro forma presentation to reflect the application of the Basel III 2015 Standardized Approach, consistent with current period presentation.

(3) Under the Advanced Approaches framework eligible credit reserves that exceed expected credit losses are eligible for inclusion in Tier 2 Capital to the extent the excess reserves do not exceed 0.6% of credit risk-weighted assets,

which differs from the Standardized Approach in which the allowance for credit losses is eligible for inclusion in Tier 2 Capital up to 1.25% of credit risk-weighted assets, with any excess allowance for credit losses being deducted in arriving at credit risk-weighted assets.

- (4) As of December 31, 2015 and December 31, 2014, Citi's reportable Common Equity Tier 1 Capital, Tier 1 Capital, and Total Capital ratios were the lower derived under the Basel III Advanced Approaches framework.
- (5) Tier 1 Leverage ratio denominator.
- (6) Supplementary Leverage ratio denominator.

As indicated in the table above, Citigroup's capital ratios at December 31, 2015 were in excess of the stated minimum requirements under the U.S. Basel III rules. In addition, Citi was also "well capitalized" under current

federal bank regulatory agency definitions as of December 31, 2015.

Components of Citigroup Capital Under Current Regulatory Standards
(Basel III Advanced Approaches with Transition Arrangements)

In millions of dollars	December 31, 2015	December 31, 2014 ⁽¹⁾
Common Equity Tier 1 Capital		
Citigroup common stockholders' equity ⁽²⁾	\$205,286	\$199,841
Add: Qualifying noncontrolling interests	369	539
Regulatory Capital Adjustments and Deductions:		
Less: Net unrealized gains (losses) on securities AFS, net of tax ⁽³⁾⁽⁴⁾	(544)	)46
Less: Defined benefit plans liability adjustment, net of tax ⁽⁴⁾	(3,070)	)(4,127)
Less: Accumulated net unrealized losses on cash flow hedges, net of tax ⁽⁵⁾	(617)	)(909)
Less: Cumulative unrealized net gain related to changes in fair value of financial liabilities attributable to own creditworthiness, net of tax ⁽⁴⁾⁽⁶⁾	176	56
Less: Intangible assets:		
Goodwill, net of related deferred tax liabilities (DTLs) ⁽⁷⁾	21,980	22,805
Identifiable intangible assets other than mortgage servicing rights (MSRs), net of related DTLs ⁽⁴⁾	1,434	875
Less: Defined benefit pension plan net assets ⁽⁴⁾	318	187
Less: Deferred tax assets (DTAs) arising from net operating loss, foreign tax credit and general business credit carry-forwards ⁽⁴⁾⁽⁸⁾	9,464	4,725
Less: Excess over 10%/15% limitations for other DTAs, certain common stock investments, and MSRs ⁽⁴⁾⁽⁸⁾⁽⁹⁾	2,652	1,977
Less: Deductions applied to Common Equity Tier 1 Capital due to insufficient amount of Additional Tier 1 Capital to cover deductions ⁽⁴⁾	—	8,082
Total Common Equity Tier 1 Capital	\$173,862	\$166,663
Additional Tier 1 Capital		
Qualifying perpetual preferred stock ⁽²⁾	\$16,571	\$10,344
Qualifying trust preferred securities ⁽¹⁰⁾	1,707	1,719
Qualifying noncontrolling interests	12	7
Regulatory Capital Adjustment and Deductions:		
Less: Cumulative unrealized net gain related to changes in fair value of financial liabilities attributable to own creditworthiness, net of tax ⁽⁴⁾⁽⁶⁾	265	223
Less: Minimum regulatory capital requirements of insurance underwriting subsidiaries ⁽¹¹⁾	229	279
Less: Defined benefit pension plan net assets ⁽⁴⁾	476	749
Less: DTAs arising from net operating loss, foreign tax credit and general business credit carry-forwards ⁽⁴⁾⁽⁸⁾	14,195	18,901
Less: Permitted ownership interests in covered funds ⁽¹²⁾	567	—
Less: Deductions applied to Common Equity Tier 1 Capital due to insufficient amount of Additional Tier 1 Capital to cover deductions ⁽⁴⁾	—	(8,082)
Total Additional Tier 1 Capital	\$2,558	\$—
Total Tier 1 Capital (Common Equity Tier 1 Capital + Additional Tier 1 Capital)	\$176,420	\$166,663

Tier 2 Capital		
Qualifying subordinated debt ⁽¹³⁾	\$21,370	\$17,386
Qualifying noncontrolling interests	17	12
Excess of eligible credit reserves over expected credit losses ⁽¹⁴⁾	1,163	1,177
Regulatory Capital Adjustment and Deduction:		
Add: Unrealized gains on AFS equity exposures includable in Tier 2 Capital	5	—
Less: Minimum regulatory capital requirements of insurance underwriting subsidiaries ⁽¹¹⁾	229	279
Total Tier 2 Capital	\$22,326	\$18,296
Total Capital (Tier 1 Capital + Tier 2 Capital)	\$198,746	\$184,959

Citigroup Risk-Weighted Assets Under Current Regulatory Standards
(Basel III Advanced Approaches with Transition Arrangements)

In millions of dollars	December 31, 2015	December 31, 2014 ⁽¹⁾
Credit Risk ⁽¹⁵⁾	\$791,036	\$861,691
Market Risk	74,817	100,481
Operational Risk	325,000	312,500
Total Risk-Weighted Assets	\$1,190,853	\$1,274,672

(1) Restated to reflect the retrospective adoption of ASU 2014-01 for LIHTC investments, consistent with current period presentation.

(2) Issuance costs of \$147 million and \$124 million related to preferred stock outstanding at December 31, 2015 and December 31, 2014, respectively, are excluded from common stockholders' equity and netted against preferred stock in accordance with Federal Reserve Board regulatory reporting requirements, which differ from those under U.S. GAAP.

(3) In addition, includes the net amount of unamortized loss on HTM securities. This amount relates to securities that were previously transferred from AFS to HTM, and non-credit related factors such as changes in interest rates and liquidity spreads for HTM securities with other-than-temporary impairment.

(4) The transition arrangements for significant regulatory capital adjustments and deductions impacting Common Equity Tier 1 Capital and/or Additional Tier 1 Capital are set forth above in the chart entitled "Basel III Transition Arrangements: Significant Regulatory Capital Adjustments and Deductions."

(5) Common Equity Tier 1 Capital is adjusted for accumulated net unrealized gains (losses) on cash flow hedges included in AOCI that relate to the hedging of items not recognized at fair value on the balance sheet.

(6) The cumulative impact of changes in Citigroup's own creditworthiness in valuing liabilities for which the fair value option has been elected and own-credit valuation adjustments on derivatives are excluded from Common Equity Tier 1 Capital, in accordance with the U.S. Basel III rules.

(7) Includes goodwill "embedded" in the valuation of significant common stock investments in unconsolidated financial institutions.

(8) Of Citi's approximately \$47.8 billion of net DTAs at December 31, 2015, approximately \$22.9 billion of such assets were includable in regulatory capital pursuant to the U.S. Basel III rules, while approximately \$24.9 billion of such assets were excluded in arriving at regulatory capital. Comprising the excluded net DTAs was an aggregate of approximately \$26.3 billion of net DTAs arising from net operating loss, foreign tax credit and general business credit carry-forwards as well as temporary differences, of which \$12.1 billion were deducted from Common Equity Tier 1 Capital and \$14.2 billion were deducted from Additional Tier 1 Capital. In addition, approximately \$1.4 billion of net DTLs, primarily consisting of DTLs associated with goodwill and certain other intangible assets, partially offset by DTAs related to cash flow hedges, are permitted to be excluded prior to deriving the amount of net DTAs subject to deduction under these rules. Separately, under the U.S. Basel III rules, goodwill and these other intangible assets are deducted net of associated DTLs in arriving at Common Equity Tier 1 Capital, while Citi's current cash flow hedges and the related deferred tax effects are not required to be reflected in regulatory capital.

(9) Assets subject to 10%/15% limitations include MSRs, DTAs arising from temporary differences and significant common stock investments in unconsolidated financial institutions. At December 31, 2015 and December 31, 2014, the deduction related only to DTAs arising from temporary differences that exceeded the 10% limitation.

(10) Represents Citigroup Capital XIII trust preferred securities, which are permanently grandfathered as Tier 1 Capital under the U.S. Basel III rules, as well as non-grandfathered trust preferred securities which are eligible for inclusion in an amount up to 25% and 50%, respectively, during 2015 and 2014, of the aggregate outstanding principal amounts of such issuances as of January 1, 2014. The remaining 75% and 50% of non-grandfathered trust preferred securities are eligible for inclusion in Tier 2 Capital during 2015 and 2014, respectively, in accordance with the transition arrangements for non-qualifying capital instruments under the U.S. Basel III rules.

As of December 31, 2015 and December 31, 2014, however, the entire amount of non-grandfathered trust preferred securities was included within Tier 1 Capital, as the amounts outstanding did not exceed the respective threshold for exclusion from Tier 1 Capital.

- (11) 50% of the minimum regulatory capital requirements of insurance underwriting subsidiaries must be deducted from each of Tier 1 Capital and Tier 2 Capital.

- (12) Effective July 2015, banking entities are required to be in compliance with the so-called “Volcker Rule” of the Dodd-Frank Act that prohibits conducting certain proprietary investment activities and limits their ownership of, and relationships with, covered funds. Accordingly, Citi is required by the “Volcker Rule” to deduct from Tier 1 Capital all permitted ownership interests in covered funds that were acquired after December 31, 2013.

- (13) Under the transition arrangements of the U.S. Basel III rules, non-qualifying subordinated debt issuances which consist of those with a fixed-to-floating rate step-up feature where the call/step-up date has not passed are eligible for inclusion in Tier 2 Capital during 2015 and 2014 up to 25% and 50%, respectively, of the aggregate outstanding principal amounts of such issuances as of January 1, 2014.

- (14) Advanced Approaches banking organizations are permitted to include in Tier 2 Capital eligible credit reserves that exceed expected credit losses to the extent that the excess reserves do not exceed 0.6% of credit risk-weighted assets.

- (15) Under the U.S. Basel III rules, credit risk-weighted assets during the transition period reflect the effects of transitional arrangements related to regulatory capital adjustments and deductions and, as a result, will differ from credit risk-weighted assets derived under full implementation of the rules.

Citigroup Capital Rollforward Under Current Regulatory Standards
(Basel III Advanced Approaches with Transition Arrangements)

In millions of dollars	Three Months Ended December 31, 2015	Twelve Months Ended December 31, 2015 ⁽¹⁾	
Common Equity Tier 1 Capital			
Balance, beginning of period	\$ 173,345	\$ 166,663	
Net income	3,335	17,242	
Dividends declared	(415)	(1,253))
Treasury stock acquired	(1,650)	(5,452))
Net increase in additional paid-in capital ⁽²⁾	331	1,036	
Net increase in foreign currency translation adjustment net of hedges, net of tax	(796)	(5,499))
Net increase in unrealized losses on securities AFS, net of tax ⁽³⁾	(453)	(374))
Net increase in defined benefit plans liability adjustment, net of tax ⁽³⁾	(34)	(1,014))
Net change in cumulative unrealized net gain related to changes in fair value of	111	(120))
financial liabilities attributable to own creditworthiness, net of tax			
Net change in goodwill, net of related deferred tax liabilities (DTLs)	(248)	) 825	
Net change in identifiable intangible assets other than mortgage servicing rights (MSRs),	130	(559))
net of related DTLs			
Net change in defined benefit pension plan net assets	44	(131))
Net increase in deferred tax assets (DTAs) arising from net operating loss, foreign	(146)	(4,739))
tax credit and general business credit carry-forwards			
Net change in excess over 10%/15% limitations for other DTAs, certain common stock	312	(675))
investments and MSRs			
Net decrease in regulatory capital deduction applied to Common Equity Tier 1 Capital	—	8,082	
due to insufficient Additional Tier 1 Capital to cover deductions			
Other	(4)	(170))
Net increase in Common Equity Tier 1 Capital	\$ 517	\$ 7,199	
Common Equity Tier 1 Capital Balance, end of period	\$ 173,862	\$ 173,862	
Additional Tier 1 Capital			
Balance, beginning of period	\$ 931	\$ —	
Net increase in qualifying perpetual preferred stock ⁽⁴⁾	1,495	6,227	
Net decrease in qualifying trust preferred securities	(9)	(12))
Net change in cumulative unrealized net gain related to changes in fair value of	165	(42))
financial liabilities attributable to own creditworthiness, net of tax			
Net decrease in defined benefit pension plan net assets	66	273	
Net change in DTAs arising from net operating loss, foreign tax credit and general	(218)	) 4,706	
business credit carry-forwards			
Net change in permitted ownership interests in covered funds	111	(567))
	—	(8,082))

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Net decrease in regulatory capital deduction applied to Common Equity Tier 1 Capital			
due to insufficient Additional Tier 1 Capital to cover deductions			
Other	17	55	
Net increase in Additional Tier 1 Capital	\$1,627	\$2,558	
Tier 1 Capital Balance, end of period	\$176,420	\$176,420	
Tier 2 Capital			
Balance, beginning of period	\$21,353	\$18,296	
Net increase in qualifying subordinated debt	349	3,984	
Net change in excess of eligible credit reserves over expected credit losses	606	(14)
Other	18	60	
Net increase in Tier 2 Capital	\$973	\$4,030	
Tier 2 Capital Balance, end of period	\$22,326	\$22,326	
Total Capital (Tier 1 Capital + Tier 2 Capital)	\$198,746	\$198,746	

The beginning balance of Common Equity Tier 1 Capital for the twelve months ended December 31, 2015 has (1) been restated to reflect the retrospective adoption of ASU 2014-01 for LIHTC investments, consistent with current period presentation.

(2) Primarily represents an increase in additional paid-in capital related to employee benefit plans.

(3) Presented net of impact of transition arrangements related to unrealized gains (losses) on securities AFS and defined benefit plans liability adjustment under the U.S. Basel III rules.

Citi issued approximately \$1.5 billion and approximately \$6.3 billion of qualifying perpetual preferred stock during (4) the three and twelve months ended December 31, 2015, respectively, which were partially offset by the netting of issuance costs of \$4 million and \$23 million during those respective periods.

Citigroup Risk-Weighted Assets Rollforward Under Current Regulatory Standards
(Basel III Advanced Approaches with Transition Arrangements)

In millions of dollars	Three Months Ended December 31, 2015	Twelve Months Ended December 31, 2015 ⁽¹⁾
Total Risk-Weighted Assets, beginning of period	\$1,229,667	\$1,274,672
Changes in Credit Risk-Weighted Assets		
Net decrease in retail exposures ⁽²⁾	(13,856	)(26,399)
Net increase in wholesale exposures ⁽³⁾	1,668	1,682
Net decrease in repo-style transactions	(935	)(2,015)
Net decrease in securitization exposures	(1,843	)(2,563)
Net increase in equity exposures	1,129	1,603
Net decrease in over-the-counter (OTC) derivatives ⁽⁴⁾	(3,119	)(7,002)
Net decrease in derivatives CVA ⁽⁵⁾	(789	)(4,418)
Net decrease in other exposures ⁽⁶⁾	(9,464	)(27,793)
Net decrease in supervisory 6% multiplier ⁽⁷⁾	(1,585	)(3,750)
Net decrease in Credit Risk-Weighted Assets	\$(28,794	)\$(70,655)
Changes in Market Risk-Weighted Assets		
Net decrease in risk levels ⁽⁸⁾	\$(7,662	)\$(21,041)
Net decrease due to model and methodology updates ⁽⁹⁾	(2,358	)(4,623)
Net decrease in Market Risk-Weighted Assets	\$(10,020	)\$(25,664)
Increase in Operational Risk-Weighted Assets ⁽¹⁰⁾	\$—	\$12,500
Total Risk-Weighted Assets, end of period	\$1,190,853	\$1,190,853

The beginning balance of Total Risk-Weighted Assets for the twelve months ended December 31, 2015 has been (1) restated to reflect the retrospective adoption of ASU 2014-01 for LIHTC investments, consistent with current period presentation.

Retail exposures decreased during the three months ended December 31, 2015 primarily due to reductions in loans, divestitures within the Citi Holdings portfolio, and the impact of FX translation. Retail exposures decreased during (2) the twelve months ended December 31, 2015 primarily due to reductions in loans and commitments, divestitures within the Citi Holdings portfolio and the impact of FX translation, partially offset by the reclassification from other exposures of certain non-material portfolios.

Wholesale exposures increased during the three months ended December 31, 2015 primarily due to an increase in commitments, partially offset by the impact of FX translation. Wholesale exposures increased during the twelve (3) months ended December 31, 2015 primarily due to an increase in investments and commitments and the reclassification from other exposures of certain non-material portfolios, largely offset by the impact of FX translation.

(4)

OTC derivatives decreased during the three months and twelve months ended December 31, 2015 primarily driven by exposure reduction and model updates. Further, parameter updates also contributed to the decrease in OTC derivatives during the three months ended December 31, 2015.

Derivatives CVA decreased during the three months ended December 31, 2015 primarily driven by exposure (5) reduction and parameter and model updates. Derivatives CVA decreased during the twelve months ended December 31, 2015 driven by exposure reduction, credit spread changes and model updates.

Other exposures include cleared transactions, unsettled transactions, assets other than those reportable in specific exposure categories and non-material portfolios. Other exposures decreased during the three months ended (6) December 31, 2015 primarily due to decreased cleared transaction exposures, reduction of retail non-material exposures and decreases in other assets. Other exposures decreased during the twelve months ended December 31, 2015 as a result of the reclassification to retail exposures and wholesale exposures of certain non-material portfolios, reduction in retail non-material exposures, and decreases in other assets.

(7) Supervisory 6% multiplier does not apply to derivatives CVA.

Risk levels decreased during the three and twelve months ended December 31, 2015 primarily due to a reduction in positions subject to securitization charges, the ongoing assessment regarding the applicability of the market risk (8) capital rules to certain securitization positions, and a decrease in assets subject to standard specific risk charges. In addition, further contributing to the decline in risk levels during the twelve months ended December 31, 2015 were reductions in exposure levels subject to comprehensive risk, Value at Risk, and Stressed Value at Risk.

Risk-weighted assets declined during the three months ended December 31, 2015 due to model volatility (9) inputs. Risk-weighted assets declined during the twelve months ended December 31, 2015 due to the implementation of the "Volcker Rule."

Operational risk-weighted assets increased by \$12.5 billion during the first quarter of 2015, reflecting an (10) evaluation of ongoing events in the banking industry as well as continued enhancements to Citi's operational risk model.

Capital Resources of Citigroup's Subsidiary U.S. Depository Institutions Under Current Regulatory Standards
Citigroup's subsidiary U.S. depository institutions are also subject to regulatory capital standards issued by their respective primary federal bank regulatory agencies, which are similar to the standards of the Federal Reserve Board. The following tables set forth the capital tiers, total risk-weighted assets, risk-based capital ratios, quarterly adjusted average total assets, Total Leverage Exposure and leverage ratios under current regulatory standards (reflecting Basel III Transition Arrangements) for Citibank, Citi's primary subsidiary U.S. depository institution, as of December 31, 2015 and December 31, 2014.

Citibank Capital Components and Ratios Under Current Regulatory Standards (Basel III Transition Arrangements)

In millions of dollars, except ratios	December 31, 2015		December 31, 2014 ⁽¹⁾		
	Advanced Approaches	Standardized Approach	Advanced Approaches	Standardized Approach ⁽²⁾	
Common Equity Tier 1 Capital	\$126,496	\$126,496	\$128,262	\$128,262	
Tier 1 Capital	126,496	126,496	128,262	128,262	
Total Capital (Tier 1 Capital + Tier 2 Capital) ⁽³⁾	137,935	148,916	139,246	151,124	
Total Risk-Weighted Assets	897,892	998,181	945,407	1,044,768	
Common Equity Tier 1 Capital ratio ⁽⁴⁾	14.09	% 12.67	% 13.57	% 12.28	%
Tier 1 Capital ratio ⁽⁴⁾	14.09	12.67	13.57	12.28	
Total Capital ratio ⁽⁴⁾	15.36	14.92	14.73	14.46	

In millions of dollars, except ratios	December 31, 2015		December 31, 2014 ⁽¹⁾		
Quarterly Adjusted Average Total Assets ⁽⁵⁾		\$1,297,733		\$1,366,910	
Total Leverage Exposure ⁽⁶⁾		1,838,114		1,954,833	
Tier 1 Leverage ratio		9.75	%	9.38	%
Supplementary Leverage ratio		6.88		6.56	

(1) Restated to reflect the retrospective adoption of ASU 2014-01 for LIHTC investments, consistent with current period presentation.

(2) Pro forma presentation to reflect the application of the Basel III 2015 Standardized Approach, consistent with current period presentation.

Under the Advanced Approaches framework eligible credit reserves that exceed expected credit losses are eligible for inclusion in Tier 2 Capital to the extent the excess reserves do not exceed 0.6% of credit risk-weighted assets, (3) which differs from the Standardized Approach in which the allowance for credit losses is eligible for inclusion in Tier 2 Capital up to 1.25% of credit risk-weighted assets, with any excess allowance for credit losses being deducted in arriving at credit risk-weighted assets.

(4) As of December 31, 2015 and December 31, 2014, Citibank's reportable Common Equity Tier 1 Capital, Tier 1 Capital, and Total Capital ratios were the lower derived under the Basel III Standardized Approach framework.

(5) Tier 1 Leverage ratio denominator.

(6) Supplementary Leverage ratio denominator.

As indicated in the table above, Citibank's capital ratios at December 31, 2015 were in excess of the stated minimum requirements under the U.S. Basel III rules. In addition, Citibank was also "well capitalized" as of December 31, 2015 under the revised PCA regulations which became effective January 1, 2015.

Further, Citibank is required to conduct the annual Dodd-Frank Act Stress Test. The annual stress test consists of a forward looking quantitative evaluation of the impact of stressful economic and financial market conditions under several scenarios on Citibank's regulatory capital. This

program serves to inform the Office of the Comptroller of the Currency (OCC) how Citibank's regulatory capital ratios might change during a hypothetical set of adverse economic conditions and to ultimately evaluate the reliability of Citibank's capital planning process.

Impact of Changes on Citigroup and Citibank Capital Ratios Under Current Regulatory Capital Standards

The following tables present the estimated sensitivity of Citigroup's and Citibank's capital ratios to changes of \$100 million in Common Equity Tier 1 Capital, Tier 1 Capital and Total Capital (numerator), and changes of \$1 billion in Advanced Approaches and Standardized Approach risk-weighted assets, quarterly adjusted average total assets, as well as Total Leverage Exposure (denominator), under current regulatory capital standards (reflecting Basel III Transition Arrangements), as of December 31, 2015. This

information is provided for the purpose of analyzing the impact that a change in Citigroup's or Citibank's financial position or results of operations could have on these ratios. These sensitivities only consider a single change to either a component of capital, risk-weighted assets, quarterly adjusted average total assets, or Total Leverage Exposure. Accordingly, an event that affects more than one factor may have a larger basis point impact than is reflected in these tables.

Impact of Changes on Citigroup and Citibank Risk-Based Capital Ratios (Basel III Transition Arrangements)

In basis points	Common Equity Tier 1 Capital ratio		Tier 1 Capital ratio		Total Capital ratio	
	Impact of \$100 million change in Common Equity Tier 1 Capital	Impact of \$1 billion change in risk-weighted assets	Impact of \$100 million change in Tier 1 Capital	Impact of \$1 billion change in risk-weighted assets	Impact of \$100 million change in Total Capital	Impact of \$1 billion change in risk-weighted assets
Citigroup						
Advanced Approaches	0.8	1.2	0.8	1.2	0.8	1.4
Standardized Approach	0.9	1.3	0.9	1.4	0.9	1.6
Citibank						
Advanced Approaches	1.1	1.6	1.1	1.6	1.1	1.7
Standardized Approach	1.0	1.3	1.0	1.3	1.0	1.5

Impact of Changes on Citigroup and Citibank Leverage Ratios (Basel III Transition Arrangements)

In basis points	Tier 1 Leverage ratio		Supplementary Leverage ratio	
	Impact of \$100 million change in Tier 1 Capital	Impact of \$1 billion change in quarterly adjusted average total assets	Impact of \$100 million change in Tier 1 Capital	Impact of \$1 billion change in Total Leverage Exposure
Citigroup	0.6	0.6	0.4	0.3
Citibank	0.8	0.8	0.5	0.4

Citigroup Broker-Dealer Subsidiaries

At December 31, 2015, Citigroup Global Markets Inc., a U.S. broker-dealer registered with the SEC that is an indirect wholly owned subsidiary of Citigroup, had net capital, computed in accordance with the SEC's net capital rule, of approximately \$7.5 billion, which exceeded the minimum requirement by approximately \$6.1 billion.

Moreover, Citigroup Global Markets Limited, a broker-dealer registered with the United Kingdom's Prudential Regulation Authority (PRA) that is also an indirect wholly owned subsidiary of Citigroup, had total capital of \$17.4

billion at December 31, 2015, which exceeded the PRA's minimum regulatory capital requirements. In addition, certain of Citi's other broker-dealer subsidiaries are subject to regulation in the countries in which they do business, including requirements to maintain specified levels of net capital or its equivalent. Citigroup's other broker-dealer subsidiaries were in compliance with their capital requirements at December 31, 2015.

Basel III (Full Implementation)

Citigroup's Capital Resources Under Basel III
(Full Implementation)

Citi currently estimates that its effective minimum Common Equity Tier 1 Capital, Tier 1 Capital and Total Capital ratio requirements under the U.S. Basel III rules, on a fully implemented basis and assuming a 3% GSIB surcharge, may be 10%, 11.5% and 13.5%, respectively.

Further, under the U.S. Basel III rules, Citi must also comply with a 4% minimum Tier 1 Leverage ratio requirement and an effective 5% minimum Supplementary Leverage ratio requirement.

The following tables set forth the capital tiers, total risk-weighted assets, risk-based capital ratios, quarterly adjusted average total assets, Total Leverage Exposure and leverage ratios, assuming full implementation under the U.S. Basel III rules, for Citi as of December 31, 2015 and December 31, 2014.

Citigroup Capital Components and Ratios Under Basel III (Full Implementation)

In millions of dollars, except ratios	December 31, 2015		December 31, 2014 ⁽¹⁾		
	Advanced Approaches	Standardized Approach	Advanced Approaches	Standardized Approach	
Common Equity Tier 1 Capital	\$146,865	\$146,865	\$136,597	\$136,597	
Tier 1 Capital	164,036	164,036	148,066	148,066	
Total Capital (Tier 1 Capital + Tier 2 Capital) ⁽²⁾	186,097	198,655	165,454	178,413	
Total Risk-Weighted Assets	1,216,277	1,162,884	1,292,605	1,228,488	
Common Equity Tier 1 Capital ratio ⁽³⁾⁽⁴⁾	12.07	% 12.63	% 10.57	% 11.12	%
Tier 1 Capital ratio ⁽³⁾⁽⁴⁾	13.49	14.11	11.45	12.05	
Total Capital ratio ⁽³⁾⁽⁴⁾	15.30	17.08	12.80	14.52	

In millions of dollars, except ratios	December 31, 2015		December 31, 2014 ⁽¹⁾		
Quarterly Adjusted Average Total Assets ⁽⁵⁾	\$1,724,710		\$1,835,637		
Total Leverage Exposure ⁽⁶⁾	2,317,849		2,492,636		
Tier 1 Leverage ratio ⁽⁴⁾	9.51	%	8.07	%	%
Supplementary Leverage ratio ⁽⁴⁾	7.08		5.94		

(1) Restated to reflect the retrospective adoption of ASU 2014-01 for LIHTC investments, consistent with current period presentation.

Under the Advanced Approaches framework eligible credit reserves that exceed expected credit losses are eligible for inclusion in Tier 2 Capital to the extent the excess reserves do not exceed 0.6% of credit risk-weighted assets, which differs from the Standardized Approach in which the allowance for credit losses is eligible for inclusion in Tier 2 Capital up to 1.25% of credit risk-weighted assets, with any excess allowance for credit losses being deducted in arriving at credit risk-weighted assets.

(2) As of December 31, 2015 and December 31, 2014, Citi's Common Equity Tier 1 Capital, Tier 1 Capital, and Total Capital ratios were the lower derived under the Basel III Advanced Approaches framework.

Citi's Basel III capital ratios and related components, on a fully implemented basis, are non-GAAP financial measures. Citi believes these ratios and the related components provide useful information to investors and others by measuring Citi's progress against future regulatory capital standards.

(3) Tier 1 Leverage ratio denominator.

(4) Supplementary Leverage ratio denominator.

Common Equity Tier 1 Capital Ratio

Citi's Common Equity Tier 1 Capital ratio was 12.07% at December 31, 2015, compared to 11.67% at September 30, 2015 and 10.57% at December 31, 2014 (all based on application of the Advanced Approaches for determining total risk-weighted assets). The quarter-over-quarter increase in the ratio was largely attributable to quarterly net income of \$3.3 billion and a reduction in risk-weighted assets, partially offset by movements in AOCI as well as a \$1.8 billion return of capital to common shareholders in the form of share repurchases and dividends. The increase in Citi's Common Equity Tier 1 Capital ratio from year-end 2014 reflected continued growth in Common Equity Tier 1 Capital resulting from net income of \$17.2 billion and the favorable effects attributable to DTA utilization of approximately \$1.5 billion, offset in part by the return of \$5.9 billion of capital to common shareholders and movements in AOCI.

Components of Citigroup Capital Under Basel III (Advanced Approaches with Full Implementation)

In millions of dollars	December 31, 2015	December 31, 2014 ⁽¹⁾
Common Equity Tier 1 Capital		
Citigroup common stockholders' equity ⁽²⁾	\$205,286	\$199,841
Add: Qualifying noncontrolling interests	145	165
Regulatory Capital Adjustments and Deductions:		
Less: Accumulated net unrealized losses on cash flow hedges, net of tax ⁽³⁾	(617	)(909
Less: Cumulative unrealized net gain related to changes in fair value of financial liabilities attributable to own creditworthiness, net of tax ⁽⁴⁾	441	279
Less: Intangible assets:		
Goodwill, net of related deferred tax liabilities (DTLs) ⁽⁵⁾	21,980	22,805
Identifiable intangible assets other than mortgage servicing rights (MSRs), net of related DTLs	3,586	4,373
Less: Defined benefit pension plan net assets	794	936
Less: Deferred tax assets (DTAs) arising from net operating loss, foreign tax credit and general business credit carry-forwards ⁽⁶⁾	23,659	23,626
Less: Excess over 10%/15% limitations for other DTAs, certain common stock investments, and MSRs ⁽⁶⁾⁽⁷⁾	8,723	12,299
Total Common Equity Tier 1 Capital	\$146,865	\$136,597
Additional Tier 1 Capital		
Qualifying perpetual preferred stock ⁽²⁾	\$16,571	\$10,344
Qualifying trust preferred securities ⁽⁸⁾	1,365	1,369
Qualifying noncontrolling interests	31	35
Regulatory Capital Deductions:		
Less: Minimum regulatory capital requirements of insurance underwriting subsidiaries ⁽⁹⁾	229	279
Less: Permitted ownership interests in covered funds ⁽¹⁰⁾	567	—
Total Additional Tier 1 Capital	\$17,171	\$11,469
Total Tier 1 Capital (Common Equity Tier 1 Capital + Additional Tier 1 Capital)	\$164,036	\$148,066
Tier 2 Capital		
Qualifying subordinated debt ⁽¹¹⁾	\$20,744	\$16,094
Qualifying trust preferred securities ⁽¹²⁾	342	350
Qualifying noncontrolling interests	41	46
Excess of eligible credit reserves over expected credit losses ⁽¹³⁾	1,163	1,177
Regulatory Capital Deduction:		
Less: Minimum regulatory capital requirements of insurance underwriting subsidiaries ⁽⁹⁾	229	279
Total Tier 2 Capital	\$22,061	\$17,388
Total Capital (Tier 1 Capital + Tier 2 Capital) ⁽¹⁴⁾	\$186,097	\$165,454

(1) Restated to reflect the retrospective adoption of ASU 2014-01 for LIHTC investments, consistent with current period presentation.

(2) Issuance costs of \$147 million and \$124 million related to preferred stock outstanding at December 31, 2015 and December 31, 2014, respectively, are excluded from common stockholders' equity and netted against preferred stock in accordance with Federal Reserve Board regulatory reporting requirements, which differ from those under

U.S. GAAP.

- (3) Common Equity Tier 1 Capital is adjusted for accumulated net unrealized gains (losses) on cash flow hedges included in AOCI that relate to the hedging of items not recognized at fair value on the balance sheet.
- The cumulative impact of changes in Citigroup's own creditworthiness in valuing liabilities for which the fair value option has been elected and own-credit valuation adjustments on derivatives are excluded from Common Equity Tier 1 Capital, in accordance with the U.S. Basel III rules.
- (4) Includes goodwill "embedded" in the valuation of significant common stock investments in unconsolidated financial institutions.
- (5) Of Citi's approximately \$47.8 billion of net DTAs at December 31, 2015, approximately \$16.8 billion of such assets were includable in regulatory capital pursuant to the U.S. Basel III rules, while approximately \$31.0 billion of such assets were excluded in arriving at Common Equity Tier 1 Capital. Comprising the excluded net DTAs was an aggregate of approximately \$32.4 billion of net DTAs arising from net operating loss, foreign tax credit and general business credit carry-forwards as well as temporary differences that were deducted from Common Equity
- (6) Tier 1 Capital. In addition, approximately \$1.4 billion of net DTLs, primarily consisting of DTLs associated with goodwill and certain other intangible assets, partially offset by DTAs related to cash flow hedges, are permitted to be excluded prior to deriving the amount of net DTAs subject to deduction under these rules. Separately, under the U.S. Basel III rules, goodwill and these other intangible assets are deducted net of associated DTLs in arriving at Common Equity Tier 1 Capital, while Citi's current cash flow hedges and the related deferred tax effects are not required to be reflected in regulatory capital.

- Assets subject to 10%/15% limitations include MSRs, DTAs arising from temporary differences and significant common stock investments in unconsolidated financial institutions. At December 31, 2015, the deduction related only to DTAs arising from temporary differences that exceeded the 10% limitation, while at December 31, 2014, the deduction related to all three assets which exceeded both the 10% and 15% limitations.
- (7)
- (8) Represents Citigroup Capital XIII trust preferred securities, which are permanently grandfathered as Tier 1 Capital under the U.S. Basel III rules.
- (9) 50% of the minimum regulatory capital requirements of insurance underwriting subsidiaries must be deducted from each of Tier 1 Capital and Tier 2 Capital.
- Effective July 2015, banking entities are required to be in compliance with the “Volcker Rule” of the Dodd-Frank Act that prohibits conducting certain proprietary investment activities and limits their ownership of, and relationships with, covered funds. Accordingly, Citi is required by the “Volcker Rule” to deduct from Tier 1 Capital all permitted ownership interests in covered funds that were acquired after December 31, 2013.
- (10)
- (11) Non-qualifying subordinated debt issuances which consist of those with a fixed-to-floating rate step-up feature where the call/step-up date has not passed are excluded from Tier 2 Capital.
- (12) Represents the amount of non-grandfathered trust preferred securities eligible for inclusion in Tier 2 Capital under the U.S. Basel III rules, which will be fully phased-out of Tier 2 Capital by January 1, 2022.
- Advanced Approaches banking organizations are permitted to include in Tier 2 Capital eligible credit reserves that exceed expected credit losses to the extent that the excess reserves do not exceed 0.6% of credit risk-weighted assets.
- (13)
- (14) Total Capital as calculated under Advanced Approaches, which differs from the Standardized Approach in the treatment of the amount of eligible credit reserves includable in Tier 2 Capital.

Citigroup Capital Rollforward Under Basel III (Advanced Approaches with Full Implementation)

In millions of dollars	Three Months Ended December 31, 2015	Twelve Months Ended December 31, 2015 ⁽¹⁾	
Common Equity Tier 1 Capital			
Balance, beginning of period	\$146,451	\$136,597	
Net income	3,335	17,242	
Dividends declared	(415)	(1,253))
Treasury stock acquired	(1,650)	(5,452))
Net increase in additional paid-in capital ⁽²⁾	331	1,036	
Net increase in foreign currency translation adjustment net of hedges, net of tax	(796)	(5,499))
Net increase in unrealized losses on securities AFS, net of tax	(1,131)	(964))
Net change in defined benefit plans liability adjustment, net of tax	(85)	)43	
Net change in cumulative unrealized net gain related to changes in fair value of	276	(162))
financial liabilities attributable to own creditworthiness, net of tax			
Net change in goodwill, net of related deferred tax liabilities (DTLs)	(248)	)825	
Net decrease in identifiable intangible assets other than mortgage servicing rights (MSRs), net of related DTLs	325	787	
Net decrease in defined benefit pension plan net assets	110	142	
Net increase in deferred tax assets (DTAs) arising from net operating loss, foreign	(364)	(33))
tax credit and general business credit carry-forwards			
Net decrease in excess over 10%/15% limitations for other DTAs, certain common stock	728	3,576	
investments and MSRs			
Other	(2)	(20))
Net increase in Common Equity Tier 1 Capital	\$414	\$10,268	
Common Equity Tier 1 Capital Balance, end of period	\$146,865	\$146,865	
Additional Tier 1 Capital			
Balance, beginning of period	\$15,548	\$11,469	
Net increase in qualifying perpetual preferred stock ⁽³⁾	1,495	6,227	
Net decrease in qualifying trust preferred securities	—	(4))
Net change in permitted ownership interests in covered funds	111	(567))
Other	17	46	
Net increase in Additional Tier 1 Capital	\$1,623	\$5,702	
Tier 1 Capital Balance, end of period	\$164,036	\$164,036	
Tier 2 Capital			
Balance, beginning of period	\$21,097	\$17,388	
Net increase in qualifying subordinated debt	349	4,650	
Net change in excess of eligible credit reserves over expected credit losses	606	(14))
Other	9	37	
Net increase in Tier 2 Capital	\$964	\$4,673	
Tier 2 Capital Balance, end of period	\$22,061	\$22,061	
Total Capital (Tier 1 Capital + Tier 2 Capital)	\$186,097	\$186,097	

(1)

The beginning balance of Common Equity Tier 1 Capital for the twelve months ended December 31, 2015 has been restated to reflect the retrospective adoption of ASU 2014-01 for LIHTC investments, consistent with current period presentation.

(2) Primarily represents an increase in additional paid-in capital related to employee benefit plans.

Citi issued approximately \$1.5 billion and approximately \$6.3 billion of qualifying perpetual preferred stock during

(3) the three and twelve months ended December 31, 2015, respectively, which were partially offset by the netting of issuance costs of \$4 million and \$23 million during those respective periods.

Citigroup Risk-Weighted Assets Under Basel III (Full Implementation) at December 31, 2015

In millions of dollars	Advanced Approaches			Standardized Approach		
	Citicorp	Citi Holdings	Total	Citicorp	Citi Holdings	Total
Credit Risk	\$736,641	\$79,819	\$816,460	\$1,015,070	\$72,629	\$1,087,699
Market Risk	70,715	4,102	74,817	71,029	4,156	75,185
Operational Risk	275,921	49,079	325,000	—	—	—
Total Risk-Weighted Assets	\$1,083,277	\$133,000	\$1,216,277	\$1,086,099	\$76,785	\$1,162,884

Citigroup Risk-Weighted Assets Under Basel III (Full Implementation) at December 31, 2014⁽¹⁾

In millions of dollars	Advanced Approaches			Standardized Approach		
	Citicorp	Citi Holdings	Total	Citicorp	Citi Holdings	Total
Credit Risk	\$752,247	\$127,377	\$879,624	\$1,023,961	\$104,046	\$1,128,007
Market Risk	95,824	4,657	100,481	95,824	4,657	100,481
Operational Risk	255,155	57,345	312,500	—	—	—
Total Risk-Weighted Assets	\$1,103,226	\$189,379	\$1,292,605	\$1,119,785	\$108,703	\$1,228,488

⁽¹⁾ Restated to reflect the retrospective adoption of ASU 2014-01 for LIHTC investments, consistent with current period presentation.

Total risk-weighted assets under both the Basel III Advanced Approaches and the Standardized Approach declined from year-end 2014 primarily due to a decrease in credit risk-weighted assets resulting from the impact of FX translation and the ongoing decline in Citi Holdings assets, as well as a decline in market risk-weighted assets. In addition, partially offsetting the decrease in total risk-weighted assets under the Advanced Approaches was an increase in operational risk-weighted assets reflecting an evaluation of ongoing events in the banking industry, as well as continued enhancements to Citi's operational risk model.

Citigroup Risk-Weighted Assets Rollforward (Basel III Advanced Approaches with Full Implementation)

In millions of dollars	Three Months Ended December 31, 2015	Twelve Months Ended December 31, 2015 ⁽¹⁾
Total Risk-Weighted Assets, beginning of period	\$1,254,473	\$1,292,605
Changes in Credit Risk-Weighted Assets		
Net decrease in retail exposures ⁽²⁾	(13,856	)(26,399
Net increase in wholesale exposures ⁽³⁾	1,668	1,682
Net decrease in repo-style transactions	(935	)(2,015
Net decrease in securitization exposures	(1,843	)(2,563
Net increase in equity exposures	1,123	1,722
Net decrease in over-the-counter (OTC) derivatives ⁽⁴⁾	(3,119	)(7,002
Net decrease in derivatives CVA ⁽⁵⁾	(789	)(4,418
Net decrease in other exposures ⁽⁶⁾	(8,875	)(20,845
Net decrease in supervisory 6% multiplier ⁽⁷⁾	(1,550	)(3,326
Net decrease in Credit Risk-Weighted Assets	\$(28,176	)\$(63,164
Changes in Market Risk-Weighted Assets		
Net decrease in risk levels ⁽⁸⁾	\$(7,662	)\$(21,041
Net decrease due to model and methodology updates ⁽⁹⁾	(2,358	)(4,623
Net decrease in Market Risk-Weighted Assets	\$(10,020	)\$(25,664
Increase in Operational Risk-Weighted Assets ⁽¹⁰⁾	\$—	\$12,500
Total Risk-Weighted Assets, end of period	\$1,216,277	\$1,216,277

The beginning balance of Total Risk-Weighted Assets for the twelve months ended December 31, 2015 has been (1) restated to reflect the retrospective adoption of ASU 2014-01 for LIHTC investments, consistent with current period presentation.

Retail exposures decreased during the three months ended December 31, 2015 primarily due to reductions in loans, divestitures within the Citi Holdings portfolio, and the impact of FX translation. Retail exposures decreased during (2) the twelve months ended December 31, 2015 primarily due to reductions in loans and commitments, divestitures within the Citi Holdings portfolio and the impact of FX translation, partially offset by the reclassification from other exposures of certain non-material portfolios.

Wholesale exposures increased during the three months ended December 31, 2015 primarily due to an increase in commitments, partially offset by the impact of FX translation. Wholesale exposures increased during the twelve (3) months ended December 31, 2015 primarily due to an increase in investments and commitments and the reclassification from other exposures of certain non-material portfolios, largely offset by the impact of FX translation.

OTC derivatives decreased during the three months and twelve months ended December 31, 2015 primarily driven (4) by exposure reduction and model updates. Further, parameter updates also contributed to the decrease in OTC derivatives during the three months ended December 31, 2015.

Derivatives CVA decreased during the three months ended December 31, 2015 primarily driven by exposure (5) reduction and parameter and model updates. Derivatives CVA decreased during the twelve months ended December 31, 2015 driven by exposure reduction, credit spread changes and model updates.

Other exposures include cleared transactions, unsettled transactions, assets other than those reportable in specific exposure categories and non-material portfolios. Other exposures decreased during the three months ended (6) December 31, 2015 primarily due to decreased cleared transaction exposures, reduction of retail non-material exposures and decreases in other assets. Other exposures decreased during the twelve months ended December 31, 2015 as a result of the reclassification to retail exposures and wholesale exposures of certain non-material portfolios, reduction in retail non-material exposures, and decreases in other assets.

(7) Supervisory 6% multiplier does not apply to derivatives CVA.

Risk levels decreased during the three and twelve months ended December 31, 2015 primarily due to a reduction in positions subject to securitization charges, the ongoing assessment regarding the applicability of the market risk (8) capital rules to certain securitization positions, and a decrease in assets subject to standard specific risk charges. In addition, further contributing to the decline in risk levels during the twelve months ended December 31, 2015 were reductions in exposure levels subject to comprehensive risk, Value at Risk, and Stressed Value at Risk.

Risk-weighted assets declined during the three months ended December 31, 2015 due to model volatility (9) inputs. Risk-weighted assets declined during the twelve months ended December 31, 2015 due to the implementation of the “Volcker Rule.”

Operational risk-weighted assets increased by \$12.5 billion during the first quarter of 2015, reflecting an (10) evaluation of ongoing events in the banking industry as well as continued enhancements to Citi’s operational risk model.

Supplementary Leverage Ratio

Citigroup's Supplementary Leverage ratio was 7.08% for the fourth quarter of 2015, compared to 6.85% for the third quarter of 2015 and 5.94% for the fourth quarter of 2014. The growth in the ratio quarter-over-quarter was principally driven by an increase in Tier 1 Capital attributable largely to net income of \$3.3 billion and a \$1.5 billion noncumulative perpetual preferred stock issuance, as well as an overall reduction in Total Leverage Exposure resulting from reduced on-balance sheet assets and derivative exposures, partially offset by a \$1.8 billion return of capital to common shareholders in the form of share repurchases and dividends. The growth in the ratio from the fourth quarter of 2014 was also principally driven by an

increase in Tier 1 Capital attributable largely to net income of \$17.2 billion and approximately \$6.2 billion (net of issuance costs) of noncumulative perpetual preferred stock issuances, offset in part by the return of capital to common shareholders. Further, a decrease in Total Leverage Exposure also contributed to the growth in the ratio from the fourth quarter of 2014.

The following table sets forth Citi's Supplementary Leverage ratio and related components, assuming full implementation under the U.S. Basel III rules, for the three months ended December 31, 2015 and December 31, 2014.

Citigroup Basel III Supplementary Leverage Ratio and Related Components (Full Implementation)

In millions of dollars, except ratios	December 31, 2015	December 31, 2014 ⁽¹⁾	
Tier 1 Capital	\$164,036	\$148,066	
Total Leverage Exposure (TLE)			
On-balance sheet assets ⁽²⁾	\$1,784,248	\$1,899,955	
Certain off-balance sheet exposures: ⁽³⁾			
Potential future exposure (PFE) on derivative contracts	206,128	240,712	
Effective notional of sold credit derivatives, net ⁽⁴⁾	76,923	96,869	
Counterparty credit risk for repo-style transactions ⁽⁵⁾	25,939	28,073	
Unconditionally cancellable commitments	58,699	61,673	
Other off-balance sheet exposures	225,450	229,672	
Total of certain off-balance sheet exposures	\$593,139	\$656,999	
Less: Tier 1 Capital deductions	59,538	64,318	
Total Leverage Exposure	\$2,317,849	\$2,492,636	
Supplementary Leverage ratio	7.08	%5.94	%

(1) Restated to reflect the retrospective adoption of ASU 2014-01 for LIHTC investments, consistent with current period presentation.

(2) Represents the daily average of on-balance sheet assets for the quarter.

(3) Represents the average of certain off-balance sheet exposures calculated as of the last day of each month in the quarter.

(4) Under the U.S. Basel III rules, banking organizations are required to include in TLE the effective notional amount of sold credit derivatives, with netting of exposures permitted if certain conditions are met.

(5) Repo-style transactions include repurchase or reverse repurchase transactions and securities borrowing or securities lending transactions.

Citibank's Supplementary Leverage ratio, assuming full implementation under the U.S. Basel III rules, was 6.65% for the fourth quarter of 2015, compared to 6.67% for the third quarter of 2015 and 6.20% for the fourth quarter of 2014. The ratio remained substantially unchanged from the third quarter of 2015 as the growth in Tier 1 Capital resulting primarily from quarterly net income and a \$2.1 billion noncumulative perpetual preferred stock issuance was offset by

cash dividends paid by Citibank to its parent, Citicorp, and which were subsequently remitted to Citigroup. The increase in the ratio from the fourth quarter of 2014 was principally driven by net income and DTA utilization, as well as an overall reduction in Total Leverage Exposure, partially offset by cash dividends paid by Citibank to its parent, Citicorp, and which were subsequently remitted to Citigroup.

Regulatory Capital Standards Developments

Countercyclical Capital Buffer

In December 2015, the Federal Reserve Board released a proposed policy statement on the framework that would be followed in setting the amount of the U.S. Countercyclical Capital Buffer for Advanced Approaches banking organizations. In accordance with the U.S. Basel III rules, the amount of the applicable Countercyclical Capital Buffer is equal to the weighted average of Countercyclical Capital Buffer amounts established by the Federal Reserve Board for the national jurisdictions where the Advanced Approaches banking organization has private sector credit exposures. As a result, the Countercyclical Capital Buffer may differ for each Advanced Approaches banking organization.

The Federal Reserve Board's proposed framework for setting the U.S. Countercyclical Capital Buffer encompasses a number of financial-system vulnerabilities, as well as a wide range of financial and macroeconomic quantitative indicators. However, given that no single indicator or fixed set of indicators can adequately capture all the key vulnerabilities in the U.S. economy and financial system, the types of indicators and models considered in assessments of the appropriate level of the Countercyclical Capital Buffer are likely to change over time.

The Federal Reserve Board expects to consider the applicable level of the U.S. Countercyclical Capital Buffer at least once per year. An increase in the amount of the Countercyclical Capital Buffer for U.S.-based credit exposures would generally have an effective date 12 months after such determination, while a decrease in the amount of the Countercyclical Capital Buffer would generally become effective the day after such determination.

Revisions to the Standardized Approach for Credit Risk

In December 2015, the Basel Committee on Banking Supervision (Basel Committee) issued a second consultative document which proposes various revisions to the Standardized Approach in deriving credit risk-weighted assets. As proposed, the revised Standardized Approach seeks to balance risk sensitivity and complexity, and to promote comparability of credit risk-weighted assets across banking organizations and jurisdictions.

The proposal would, in part, revise the Standardized Approach in measuring credit risk-weighted assets with respect to certain on-balance sheet assets, such as in relation to the risk-weighting methodologies employed with respect to bank, corporate, and real estate (both residential and commercial) exposures; the treatment of off-balance sheet commitments; and aspects of the credit risk mitigation framework. Moreover, the proposal would permit the use of external credit ratings combined with due diligence requirements in the calculation of credit risk-weighted assets for exposures to banks and corporates, while also providing alternative approaches for jurisdictions that do not allow the use of external credit ratings for risk-based capital purposes, such as the U.S. Prior to finalizing the

proposal, the Basel Committee will be conducting a comprehensive quantitative impact study so as to assist with assessing the risk-weighting calibration for each of the affected exposure classes, as well as will evaluate the appropriate implementation and transitional arrangements. The U.S. banking agencies have indicated that any changes to the U.S. Basel III rules as a result of the Basel Committee's proposed revisions to the Standardized Approach would apply primarily to large, internationally active banking organizations.

Revised Minimum Capital Requirements for Market Risk

In January 2016, the Basel Committee issued a final rule which sets forth a revised market risk capital framework, resulting from the so-called "fundamental review of the trading book" and four quantitative impact studies over several years.

The final rule establishes a revised boundary between the trading book and banking book which, in part, provides more prescriptive guidance as to qualifying trading book positions as well as imposes heightened restrictions and, in certain instances, additional capital charges, on the transfer of positions between the trading book and banking book. Moreover, the final rule also revises both the internal models approach and the standardized approach in certain respects. With regard to the internal models approach, the final rule introduces a more comprehensive model to measure market risk, provides for a more granular model approval process, and reduces the regulatory capital benefits

of hedging activities and portfolio diversification. The final rule revises the standardized approach, in part, by calibrating it more closely to the internal models approach by increasing reliance on risk sensitivity inputs in the calculation of market risk capital requirements. The deadline for national jurisdictions to implement the revised market risk capital framework is January 1, 2019, with the effective date for banking organizations to begin reporting under the revised framework, subject to any required supervisory approvals, being December 31, 2019.

If the U.S. banking agencies were to adopt the Basel Committee's final rule unchanged, Citi believes its market risk-weighted assets could increase significantly. However, as set forth in the tables above, as of December 31, 2015, Citi's market risk-weighted assets constituted approximately 6% of its total risk-weighted assets. Accordingly, Citi currently believes that the overall impact to its total risk-weighted assets and thus its risk-based capital ratios would not be material. Nevertheless, the ultimate impact to Citi's market risk-weighted assets and potentially its risk-based capital ratios is uncertain and is subject to several factors including, but not limited to, the U.S. banking agencies' implementation of a final rule, potential changes in the scale and scope of future market risk model approvals as well as potential risk mitigation actions.

Tangible Common Equity, Tangible Book Value Per Share and Book Value Per Share

Tangible common equity (TCE), as currently defined by Citi, represents common equity less goodwill and other intangible assets (other than MSR's). Other companies may calculate TCE in a different manner. TCE and tangible book value per share are non-GAAP financial measures. Citi believes these capital metrics provide useful information, as they are used by investors and industry analysts.

In millions of dollars or shares, except per share amounts	December 31, 2015	December 31, 2014 ⁽¹⁾
Total Citigroup stockholders' equity	\$221,857	\$210,185
Less: Preferred stock	16,718	10,468
Common equity	\$205,139	\$199,717
Less:		
Goodwill	22,349	23,592
Intangible assets (other than MSR's)	3,721	4,566
Goodwill and intangible assets (other than MSR's) related to assets held-for-sale	68	71
Tangible common equity (TCE)	\$179,001	\$171,488
Common shares outstanding (CSO)	2,953.3	3,023.9
Tangible book value per share (TCE/CSO)	\$60.61	\$56.71
Book value per share (common equity/CSO)	\$69.46	\$66.05

(1) Restated to reflect the retrospective adoption of ASU 2014-01 for LIHTC investments, consistent with current period presentation.

RISK FACTORS

The following discussion sets forth what management currently believes could be the most significant risks and uncertainties that could impact Citi's businesses, results of operations and financial condition. Other risks and uncertainties, including those not currently known to Citi or its management, could also negatively impact Citi's businesses, results of operations and financial condition. Thus, the following should not be considered a complete discussion of all of the risks and uncertainties Citi may face.

REGULATORY RISKS

Citi's Inability to Enhance Its 2015 Resolution Plan Submission Could Subject It to More Stringent Capital, Leverage or Liquidity Requirements, or Restrictions on Its Growth, Activities or Operations, and Could Eventually Require Citi to Divest Assets or Operations.

Title I of the Dodd-Frank Act requires Citi to annually prepare and submit a plan to the Federal Reserve Board and the FDIC for the orderly resolution of Citigroup (the bank holding company), and its significant legal entities, under the U.S. Bankruptcy Code or other applicable insolvency law in the event of future material financial distress or failure (Title I Resolution Plan). The Title I Resolution Plan requires significant effort, time and cost across all of Citi's businesses and geographies, and is subject to review by the Federal Reserve Board and the FDIC.

Under Title I, if the Federal Reserve Board and the FDIC jointly determine that Citi's 2015 Title I Resolution Plan is not "credible" (which, although not defined, is generally believed to mean the regulators do not believe the plan is feasible or would otherwise allow the regulators to resolve Citi in a way that protects systemically important functions without severe systemic disruption), or would not facilitate an orderly resolution of Citi under the U.S. Bankruptcy Code, and Citi fails to resubmit a resolution plan that remedies any identified deficiencies, Citi could be subjected to more stringent capital, leverage or liquidity requirements, or restrictions on its growth, activities or operations. If within two years from the imposition of any requirements or restrictions Citi has still not remediated any identified deficiencies, then Citi could eventually be required to divest certain assets or operations. Any such restrictions or actions would negatively impact Citi's reputation, market and investor perception, operations and strategy.

In August 2014, the Federal Reserve Board and the FDIC announced the completion of reviews of the 2013 Title I Resolution Plans submitted by Citi and 10 other financial institutions. The agencies identified shortcomings with the firms' 2013 Title I Resolution Plans, including Citi's. These shortcomings generally included (i) assumptions that the agencies regarded as unrealistic or inadequately supported, such as assumptions about the likely behavior of customers, counterparties, investors, central clearing facilities and regulators; and (ii) the failure to make, or identify, the kinds of changes in firm structure and practices that would be necessary to enhance the prospects for orderly resolution.

Significantly, the FDIC determined that the 2013 Title I Resolution Plans submitted by the 11 institutions, including Citi, were "not credible" and did not facilitate an orderly resolution under the U.S. Bankruptcy Code. The Federal Reserve Board determined that the plans of the 11 institutions were required to take immediate action to improve their resolvability and reflect those improvements in their 2015 plans. At the same time, the Federal Reserve Board and FDIC indicated that if the identified shortcomings were not addressed in the 2015 Title I Resolution Plan submissions, the agencies expected to use their authority under Title I, as discussed above. Like other similarly-situated institutions, Citi submitted its 2015 Title I Resolution Plan on July 1, 2015 and the industry has not yet received a formal response from the regulators.

Citi's Ability to Return Capital to Shareholders Substantially Depends on the CCAR Process and the Results of Regulatory Stress Tests.

In addition to Board of Directors' approval, any decision by Citi to return capital to shareholders, whether through an increase in its common stock dividend or through a share repurchase program, substantially depends on regulatory approval, including through the CCAR process required by the Federal Reserve Board and the supervisory stress tests

required under the Dodd-Frank Act. In March 2014, the Federal Reserve Board announced that it objected to the capital plan submitted by Citi as part of the 2014 CCAR process, meaning Citi was not able to increase its return of capital to shareholders as it had requested. Restrictions on Citi's ability to return capital to shareholders as a result of the 2014 CCAR process negatively impacted market and investor perceptions of Citi, and continued restrictions could do so in the future.

Citi's ability to accurately predict or explain to stakeholders the outcome of the CCAR process, and thus address any such market or investor perceptions, is difficult as the Federal Reserve Board's assessment of Citi is conducted not only by using the Board's proprietary stress test models, but also a number of qualitative factors, including a detailed assessment of Citi's "capital adequacy process," as defined by the Federal Reserve Board. These qualitative factors were cited by the Federal Reserve Board in its objection to Citi's 2014 capital plan, and the Board has stated that it expects leading capital adequacy practices will continue to evolve and will likely be determined by the Board each year as a result of its cross-firm review of capital plan submissions.

Similarly, the Federal Reserve Board has indicated that, as part of its stated goal to continually evolve its annual stress testing requirements, several parameters of the annual stress testing process may be altered from time to time, including the severity of the stress test scenario, Federal Reserve Board modeling of Citi's balance sheet and the addition of components deemed important by the Federal Reserve Board (e.g., a counterparty failure). In addition, the Federal Reserve Board indicated that it may consider that some or all of Citi's GSIB surcharge be integrated into its post-stress test minimum capital requirements. These parameter and other alterations could further increase the level of capital Citi must meet as

part of the stress tests, thus potentially impacting the level of capital returns to shareholders. Further, because it is not clear how the Federal Reserve Board's proprietary stress test models may differ from the modeling techniques employed by Citi, it is possible that Citi's stress test results (using its own models, estimation methodologies and processes) may not be consistent with those disclosed by the Federal Reserve Board, thus potentially leading to additional confusion and impacts to Citi's perception in the market.

Citi, Its Management and Businesses Must Continually Review, Analyze and Successfully Adapt to Ongoing Regulatory Changes and Uncertainties in the U.S. and Globally.

Despite the adoption of final regulations in numerous areas impacting Citi and its businesses over the past several years, including final U.S. Basel III capital rules, certain derivatives reforms and restrictions on proprietary trading under the Volcker Rule, Citi, its management and businesses continually face ongoing regulatory changes and uncertainties, both in the U.S. and globally.

While the areas of ongoing regulatory changes and uncertainties facing Citi are too numerous to list completely, various examples include, but are not limited to: (i) limits on the level of credit risk Citi may have against certain counterparties; (ii) potential changes to various aspects of the regulatory capital framework applicable to Citi (see "Capital Resources—Regulatory Capital Standards Developments" above); (iii) financial transaction taxes and/or other types of increased fees on financial institutions; (iv) international versions of the Volcker Rule and bank structural reforms; (v) whether and to what extent the European Union and CFTC will render any "equivalency" determinations or regulatory acknowledgment of the equivalency of derivatives regimes; (vi) U.S. and international requirements relating to sanctions against Russia, Iran and other countries; and (vii) the U.S. banking agencies' rules relating to the net stable funding ratio, or NSFR (see "Managing Global Risk—Liquidity Risk" below). There may also be regulatory changes not yet contemplated, or changes that have been proposed which could take a dramatically different form upon finalization.

Moreover, certain recent regulatory changes, while final, remain in the implementation period, and it remains uncertain what ultimate impact such changes will have on Citi's businesses, results of operations or financial condition. For example, in October and December 2015, the U.S. banking regulators and CFTC, respectively, adopted final rules relating to margin requirements for uncleared swaps. The final rules, which have a three-year phase-in period beginning on September 1, 2016, will require Citi to both collect and post margin to counterparties, as well as collect and post margin to certain of its affiliates, in connection with any uncleared swap, with the initial margin required to be held by unaffiliated third-party custodians. While Citi continues to work through the implications of the final rules, it is likely these requirements will significantly increase the cost to Citi and its counterparties of conducting uncleared swaps and impact its current inter-affiliate swap practices (e.g., require clearing of

more inter-affiliate swaps and/or enter into risk management swaps with third parties).

Ongoing regulatory changes and uncertainties make Citi's and its management's long-term business, balance sheet and budget planning difficult or subject to change, and can negatively impact Citi's results of operations, financial condition and, potentially, its strategy or organizational structure. In addition, in many cases, business planning is required to be based on possible or proposed rules, requirements or outcomes and is further complicated by management's continual need to review and evaluate the impact on Citi's businesses of ongoing rule proposals, final rules and implementation guidance from numerous regulatory bodies worldwide, which such guidance can change. Moreover, in many instances U.S. and international regulatory initiatives have not been undertaken or implemented on a coordinated basis, and areas of divergence have developed with respect to the scope, interpretation, timing, structure or approach, leading to inconsistent or even conflicting regulations, including within a single jurisdiction. Regulatory changes have also significantly increased Citi's compliance risks and costs (see "Compliance, Conduct and Legal Risks" below).

CREDIT AND MARKET RISKS

Citi's Results of Operations Could Be Negatively Impacted as Its Revolving Home Equity Lines of Credit Continue to "Reset."

As of December 31, 2015, Citi's home equity loan portfolio included approximately \$12.3 billion of home equity lines of credit that were still within their revolving period and had not commenced amortization, or "reset" (Revolving HELOCs). Of these Revolving HELOCs, approximately 66% will commence amortization during 2016 and 2017 (for additional information, see "Managing Global Risk—Credit Risk—Consumer Credit" below).

Before commencing amortization, Revolving HELOC borrowers are required to pay only interest on their loans. Upon amortization, these borrowers are required to pay both interest, usually at a variable rate, and principal that typically amortizes over 20 years, rather than the typical 30-year amortization. As a result, Citi's customers with Revolving HELOCs that reset could experience "payment shock" due to the higher required payments on the loans. Increases in interest rates could further increase these payments, given the variable nature of the interest rates on these loans post-reset.

Citi has experienced a higher 30+ days past due delinquency rate on its amortizing home equity loans as compared to its total outstanding home equity loan portfolio (amortizing and non-amortizing). Moreover, resets to date have generally occurred during a period of historically low interest rates, which Citi believes has likely reduced the overall payment shock to borrowers. While Citi continues to monitor this reset risk closely and will continue to consider any potential impact in determining its allowance for loan loss reserves, as well as review and take additional actions to offset potential reset risk, increasing interest rates, stricter lending criteria and high borrower loan-to-value positions could limit

Citi's ability to reduce or mitigate this reset risk going forward. Accordingly, as these loans further reset during 2016 and 2017, Citi could continue to experience higher delinquency rates as well as increased loan loss reserves and net credit losses in future periods, which could negatively impact its results of operations.

Macroeconomic and Geopolitical Challenges Globally Could Have a Negative Impact on Citi's Businesses and Results of Operations.

Citi has experienced, and could experience in the future, negative impacts to its businesses and results of operations as a result of macroeconomic and geopolitical challenges, uncertainties and volatility.

Energy and other commodity prices significantly deteriorated during the second half of 2015 and into 2016, which has impacted various financial markets, countries and industries. Global economic growth remains uneven and uncertain. Various regions or countries, including certain emerging markets, have experienced slower or no growth and volatility, whether due to macroeconomic conditions or geopolitical tensions, governmental or regulatory policies or economic conditions within the particular region or country. For example, the economic and fiscal situations of several European countries remain fragile, and geopolitical tensions throughout the region, including in Russia and the Middle East, have added to the uncertainties. While concerns relating to sovereign defaults or a partial or complete break-up of the European Monetary Union (EMU), including potential accompanying redenomination risks and uncertainties, seemed to have abated somewhat in recent years, concerns and uncertainties have surfaced in Europe over the potential exit of the United Kingdom from the European Union in 2016. In addition, governmental fiscal and monetary actions, or expected actions, have impacted the volatilities of global financial markets and foreign exchange rates.

These and other global macroeconomic and geopolitical challenges, uncertainties and volatilities have impacted, and could continue to negatively impact, Citi's businesses, results of operations and financial condition, including its credit costs, revenues in its Markets and securities services and other businesses, and AOCI (which can in turn negatively impact Citi's book and tangible book value). Further, if the economic situation in a non-U.S. jurisdiction where Citi operates were to deteriorate below a certain level, U.S. regulators can and have imposed mandatory loan loss and other reserve requirements on Citi, which could negatively impact its cost of credit and earnings, perhaps significantly.

Citi's Significant Presence in the Emerging Markets Subjects It to Various Risks as well as Increased Compliance and Regulatory Risks and Costs.

During 2015, emerging markets revenues accounted for approximately 41% of Citi's total revenues (for additional information on how Citi defines the emerging markets as well as its exposures in certain of these markets, see "Managing Global Risk—Country Risk" below).

Citi's significant presence in the emerging markets subjects it to a number of risks, including sovereign volatility,

political events, foreign exchange controls, limitations on foreign investment, sociopolitical instability (including from hyper-inflation), fraud, nationalization or loss of licenses, business restrictions, sanctions or asset freezes, potential criminal charges, closure of branches or subsidiaries and confiscation of assets. For example, Citi operates in several countries that have, or have had in the recent past, strict foreign exchange controls, such as Argentina and Venezuela, that limit its ability to convert local currency into U.S. dollars and/or transfer funds outside the country. Citi has also previously discovered fraud in certain emerging markets in which it operates in prior years. Political turmoil and other instability have occurred in certain countries, such as in Russia, Ukraine and the Middle East, which have required management time and attention (e.g., monitoring the impact of sanctions on the Russian economy as well as Citi's businesses and results of operations).

Citi's emerging markets presence also increases its compliance and regulatory risks and costs. For example, Citi's operations in emerging markets, including facilitating cross-border transactions on behalf of its clients, subject it to higher compliance risks under U.S. regulations primarily focused on various aspects of global corporate activities, such as anti-money-laundering regulations and the Foreign Corrupt Practices Act. These risks can be more acute in less developed markets and thus require substantial investment in compliance infrastructure or could result in a

reduction in certain of Citi's business activities. Any failure by Citi to comply with applicable U.S. regulations, as well as the regulations in the countries and markets in which it operates as a result of its global footprint, could result in fines, penalties, injunctions or other similar restrictions, any of which could negatively impact Citi's results of operations and its reputation.

Concentrations of Risk Can Increase the Potential for Citi to Incur Significant Losses.

Concentrations of risk, particularly credit and market risk, can increase Citi's risk of significant losses. As of December 31, 2015, Citi's most significant concentration of credit risk was with the U.S. government and its agencies, which primarily results from trading assets and investments issued by the U.S. government and its agencies (for additional information, see Note 24 to the Consolidated Financial Statements). Citi also routinely executes a high volume of securities, trading, derivative and foreign exchange transactions with counterparties in the financial services industry, including banks, insurance companies, investment banks, government and central banks and other financial institutions. To the extent regulatory or market developments lead to increased centralization of trading activity through particular clearing houses, central agents or exchanges, this could also increase Citi's concentration of risk in this industry. Concentrations of risk can limit, and have limited, the effectiveness of Citi's hedging strategies and have caused Citi to incur significant losses, and they may do so again in the future.

LIQUIDITY RISKS

The Federal Reserve Board's Total Loss-Absorbing Capacity Proposal Includes Uncertainties and Potential Operational Difficulties That Could Have a Negative Impact on Citi's Funding and Liquidity, Costs of Funds and Results of Operations.

Title II of the Dodd-Frank Act grants the FDIC the authority, under certain circumstances, to resolve systemically important financial institutions, including Citi. The FDIC has released a notice describing its preferred "single point of entry strategy" for such resolution, pursuant to which, generally, a bank holding company would be placed in receivership, the unsecured long-term debt of the holding company would bear losses and the operating subsidiaries would be recapitalized.

Consistent with this strategy, in November 2015, the Federal Reserve Board issued a notice of proposed rulemaking to require GSIBs, including Citi, to (i) issue and maintain minimum levels of external "total loss-absorbing capacity" (TLAC) and long-term debt (LTD), and (ii) adhere to various "clean holding company" requirements at the bank holding company level, including a prohibition on third-party short-term borrowings, derivatives and other qualified financial contracts and certain guarantees, as well as a limit on other non-TLAC eligible liabilities, such as structured notes and other operating liabilities. While not included in its proposed requirements, the Federal Reserve Board also indicated it was considering additional domestic internal TLAC requirements for U.S. GSIBs which could require, among other things, the "pre-positioning" of specified amounts of TLAC to certain material subsidiaries of the bank holding company (for a summary of the TLAC proposal, see "Managing Global Risk—Liquidity Risk" below).

There are significant uncertainties and interpretive issues arising from the Federal Reserve Board's proposal. With respect to the minimum external LTD and TLAC requirements, the proposal would disqualify from eligible LTD securities that permit acceleration for reasons other than insolvency or non-payment of principal or interest as well as securities not governed by U.S. law. Consistent with industry standards, the vast majority of Citi's otherwise eligible outstanding LTD provides for acceleration in circumstances other than those permitted by the proposal. Additionally, Citi has outstanding a significant amount of LTD not governed by U.S. law but which would otherwise be eligible to count towards the minimum external LTD requirement. Accordingly, if the requirements are adopted as proposed, and no "grandfathering" of existing outstanding LTD is provided, Citi could be required to refinance or issue significant amounts of additional debt, simultaneously with other GSIBs impacted by the requirements. Further, such ineligible debt securities would count against the limit imposed on non-TLAC liabilities imposed under the clean holding company requirements of the proposal, likely resulting in the need to repurchase significant amounts of Citi's outstanding debt in order not to be in breach of such limitations. Any of these actions could negatively and significantly impact Citi's funding and liquidity management and planning, operations and costs of funds.

The clean holding company requirements pose additional operational challenges and uncertainties. Citi, like many bank holding companies, often guarantees the obligations of its subsidiaries, which guarantees include a default right linked to the insolvency of Citi (i.e., downstream guarantees with cross-default provisions). With no grandfathering of such guarantees contemplated by the proposal, restructuring, revising or replacing the extensive number of guarantees outstanding in order to meet the clean holding company requirements could be costly and expose Citi to legal risk. Further, the potential consequences of breaching the proposed clean holding company requirements, as well as the consequences of not meeting many of the other requirements in the Federal Reserve Board's proposal, are not clear, including what would be required to cure and the timeframe to do so.

In addition, any requirement to pre-position TLAC-eligible instruments with material subsidiaries could result in additional funding inefficiencies, increase Citi's overall minimum TLAC requirements by reducing the fungibility of its funding sources and require certain of Citi's subsidiaries to replace lower cost funding with other higher cost funding, which would further impede Citi's funding and liquidity management and planning, costs of funds and results of operations.

The Maintenance of Adequate Liquidity and Funding Depends on Numerous Factors, Including Those Outside of Citi's Control, Such as Market Disruptions and Increases in Citi's Credit Spreads.

As a global financial institution, adequate liquidity and sources of funding are essential to Citi's businesses. Citi's liquidity and sources of funding can be significantly and negatively impacted by factors it cannot control, such as general disruptions in the financial markets, governmental fiscal and monetary policies, regulatory changes or negative investor perceptions of Citi's creditworthiness.

In addition, Citi's cost and ability to obtain deposits, secured funding and long-term unsecured funding are directly related to its credit spreads. Changes in credit spreads constantly occur and are market driven, including both external market factors and factors specific to Citi, and can be highly volatile. Citi's credit spreads may also be influenced by movements in the costs to purchasers of credit default swaps referenced to Citi's long-term debt, which are also impacted by these external and Citi-specific factors. Moreover, Citi's ability to obtain funding may be impaired if other market participants are seeking to access the markets at the same time, or if market appetite is reduced, as is likely to occur in a liquidity or other market crisis. In addition, clearing organizations, regulators, clients and financial institutions with which Citi interacts may exercise the right to require additional collateral based on these market perceptions or market conditions, which could further impair Citi's access to and cost of funding.

As a holding company, Citi relies on dividends, distributions and other payments from its subsidiaries to fund dividends as well as to satisfy its debt and other obligations. Several of Citi's U.S. and non-U.S. subsidiaries are or may be

subject to capital adequacy or other regulatory or contractual restrictions on their ability to provide such payments, including any local regulatory stress test requirements or potential domestic internal TLAC requirements (as discussed above). Limitations on the payments that Citi receives from its subsidiaries could also impact its liquidity.

The Credit Rating Agencies Continuously Review the Credit Ratings of Citi and Certain of Its Subsidiaries, and Ratings Downgrades Could Have a Negative Impact on Citi's Funding and Liquidity Due to Reduced Funding Capacity and Increased Funding Costs, Including Derivatives Triggers That Could Require Cash Obligations or Collateral Requirements.

The credit rating agencies, such as Fitch, Moody's and S&P, continuously evaluate Citi and certain of its subsidiaries, and their ratings of Citi and its more significant subsidiaries' long-term/senior debt and short-term/commercial paper, as applicable, are based on a number of factors, including standalone financial strength, as well as factors not entirely within the control of Citi and its subsidiaries, such as the agencies' proprietary rating agency methodologies and assumptions and conditions affecting the financial services industry and markets generally.

Citi and its subsidiaries may not be able to maintain their current respective ratings. Ratings downgrades could negatively impact Citi's ability to access the capital markets and other sources of funds as well as the costs of those funds, and its ability to maintain certain deposits. A ratings downgrade could also have a negative impact on Citi's funding and liquidity due to reduced funding capacity, including derivative triggers, which could take the form of cash obligations and collateral requirements. In addition, a ratings downgrade could also have a negative impact on other funding sources, such as secured financing and other margined transactions for which there are no explicit triggers, as well as on contractual provisions, which contain minimum ratings thresholds in order for Citi to hold third-party funds.

Moreover, credit ratings downgrades can have impacts, which may not be currently known to Citi or which are not possible to quantify. For example, some entities may have ratings limitations as to their permissible counterparties, of which Citi may or may not be aware. In addition, certain of Citi's corporate customers and trading counterparties, among other clients, could re-evaluate their business relationships with Citi and limit the trading of certain contracts or market instruments with Citi in response to ratings downgrades. Changes in customer and counterparty behavior could impact not only Citi's funding and liquidity but also the results of operations of certain Citi businesses. For additional information on the potential impact of a reduction in Citi's or Citibank, N.A.'s credit ratings, see "Managing Global Risk—Liquidity Risk" below.

OPERATIONAL RISKS

Citi Has Co-Branding and Private Label Credit Card Relationships with Various Retailers and Merchants and the Failure to Maintain These Relationships or the Renewal of These Relationships on Less Favorable Terms Could Have a Negative Impact on Citi's Results of Operations or Financial Condition.

Through its Citi-branded cards and Citi retail services credit card businesses, Citi has co-branding and private label relationships with various retailers and merchants globally in the ordinary course of business whereby Citi issues credit cards to customers of the retailers or merchants. Citi's co-branding and private label agreements provide for shared economics between the parties and generally have a fixed term. The five largest relationships constituted an aggregate of approximately 10% of Citi's revenues for the year ended December 31, 2015.

Competition among card issuers, including Citi, for these relationships is significant. As a result, Citi may not be able to renew these relationships, or the relationships may be renewed on terms substantially less favorable to Citi's credit card businesses. These relationships could also be negatively impacted due to, among other things, operational difficulties of the retailer or merchant, termination due to a breach by Citi, the retailer or merchant of its responsibilities, or external factors, including bankruptcies, liquidations, restructurings, consolidations and other similar events. While various mitigating factors could be available to Citi if any of these events were to occur - such as by replacing the retailer or merchant or offering new card products - such events could negatively impact Citi's results of operations or financial condition.

Citi's Operational Systems and Networks Have Been, and Will Continue to Be, Subject to an Increasing Risk of Continually Evolving Cybersecurity or Other Technological Risks Which Could Result in the Theft, Loss, Misuse or Disclosure of Confidential Client or Customer Information, Damage to Citi's Reputation, Additional Costs to Citi, Regulatory Penalties, Legal Exposure and Financial Losses.

A significant portion of Citi's operations relies heavily on the secure processing, storage and transmission of confidential and other information as well as the monitoring of a large number of complex transactions on a minute-by-minute basis. For example, through its Global Consumer Banking, credit card and securities services businesses, Citi obtains and stores an extensive amount of personal and client-specific information for its retail, corporate and governmental customers and clients and must accurately record and reflect their extensive account transactions. With the evolving proliferation of new technologies and the increasing use of the Internet and mobile devices to conduct financial transactions, large, global financial institutions such as Citi have been, and will continue to be, subject to an increasing risk of cyber incidents from these activities.

Citi's computer systems, software and networks are subject to ongoing cyber incidents such as unauthorized access; loss or destruction of data (including confidential

client information); account takeovers; unavailability of service; computer viruses or other malicious code; cyber attacks; and other events. These threats arise from numerous sources, not all of which are in Citi's control, including among others human error, fraud or malice on the part of employees or third parties, accidental technological failure, electrical or telecommunication outages, failures of computer servers or other damage to Citi's property or assets, natural disasters or severe weather conditions, health emergencies or pandemics, or outbreaks of hostilities or terrorist acts.

Additional challenges are posed by external parties, including extremist parties and certain foreign state actors that engage in cyber activities as a means to promote political ends. As further evidence of the increasing and potentially significant impact of cyber incidents, during 2015, the U.S. government as well as several multinational companies reported cyber incidents affecting their computer systems that resulted in the data of millions of customers and employees being compromised. In addition, in recent years several U.S. retailers and financial institutions and other multinational companies reported cyber incidents that compromised customer data.

While Citi has not been materially impacted by these reported or other cyber incidents, Citi has been subject to other intentional cyber incidents from external sources over the last several years, including (i) denial of service attacks, which attempted to interrupt service to clients and customers; (ii) data breaches, which obtained unauthorized access to customer account data; and (iii) malicious software attacks on client systems, which attempted to allow unauthorized entrance to Citi's systems under the guise of a client and the extraction of client data. While Citi's monitoring and protection services were able to detect and respond to the incidents targeting its systems before they became significant, they still resulted in limited losses in some instances as well as increases in expenditures to monitor against the threat of similar future cyber incidents. There can be no assurance that such cyber incidents will not occur again, and they could occur more frequently and on a more significant scale.

Although Citi devotes significant resources to implement, maintain, monitor and regularly upgrade its systems and networks with measures such as intrusion detection and prevention and firewalls to safeguard critical business applications, there is no guarantee that these measures or any other measures can provide absolute security. In addition, because the methods used to cause cyber attacks change frequently or, in some cases, are not recognized until launched, Citi may be unable to implement effective preventive measures or proactively address these methods until they are discovered.

If Citi were to be subject to a cyber incident, it could result in the disclosure of personal, confidential or proprietary client information, damage to Citi's reputation with its clients and the market, customer dissatisfaction, additional costs to Citi (such as repairing systems, replacing customer payment cards or adding new personnel or protection technologies), regulatory penalties, exposure to litigation and other financial losses to both Citi and its clients and customers. Such events could also cause interruptions or malfunctions in the

operations of Citi (such as the lack of availability of Citi's online banking system or mobile banking platform), as well as the operations of its clients, customers or other third parties. Given Citi's global footprint and the high volume of transactions processed by Citi, certain errors or actions may be repeated or compounded before they are discovered and rectified, which would further increase these costs and consequences.

Third parties with which Citi does business, as well as retailers and other third parties with which Citi's customers do business, may also be sources of cybersecurity or other operational and technological risks, particularly where activities of customers are beyond Citi's security and control systems. Citi outsources certain functions, such as processing customer credit card transactions, uploading content on customer-facing websites, and developing software for new products and services. These relationships allow for the storage and processing of customer information by third-party hosting of or access to Citi websites, which could result in service disruptions or website defacements, a risk the confidentiality, privacy and security of data held by third parties may be compromised and the potential to introduce vulnerable code, resulting in security breaches impacting Citi customers. While Citi engages in certain actions to reduce the exposure resulting from outsourcing, such as performing onsite security control assessments and limiting third-party access to the least privileged level necessary to perform job functions, ongoing threats may result in unauthorized access, loss or destruction of data or other cyber incidents with increased costs and consequences to Citi such as those discussed above. Furthermore, because financial institutions are becoming increasingly

interconnected with central agents, exchanges and clearing houses, including as a result of the derivatives reforms over the last few years, Citi has increased exposure to operational failure or cyber attacks through third parties. While Citi maintains insurance coverage that may, subject to policy terms and conditions including significant self-insured deductibles, cover certain aspects of cyber risks, such insurance coverage may be insufficient to cover all losses.

Citi's Ability to Utilize Its DTAs, and Thus Reduce the Negative Impact of the DTAs on Citi's Regulatory Capital, Will Be Driven by Its Ability to Generate U.S. Taxable Income.

At December 31, 2015, Citi's net DTAs were approximately \$47.8 billion, of which approximately \$31.0 billion was excluded from Citi's Common Equity Tier 1 Capital, on a fully implemented basis, under the U.S. Basel III rules (for additional information, see "Capital Resources—Components of Citigroup Capital Under Basel III (Advanced Approaches with Full Implementation)" above). In addition, of the net DTAs as of year-end 2015, approximately \$15.9 billion related to foreign tax credit carry-forwards (FTCs). The carry-forward utilization period for FTCs is 10 years and represents the most time-sensitive component of Citi's DTAs. Of the FTCs at year-end 2015, approximately \$4.8 billion expire in 2018 and the remaining \$11.1 billion expire over the period of

2019-2025. Citi must utilize any FTCs generated in the then-current year tax return prior to utilizing any carry-forward FTCs.

The accounting treatment for realization of DTAs, including FTCs, is complex and requires significant judgment and estimates regarding future taxable earnings in the jurisdictions in which the DTAs arise and available tax planning strategies. Citi's ability to utilize its DTAs, including the FTC components, and thus use the capital supporting the DTAs for more productive purposes, will be dependent upon Citi's ability to generate U.S. taxable income in the relevant tax carry-forward periods. Failure to realize any portion of the DTAs would also have a corresponding negative impact on Citi's net income.

In addition, with regard to FTCs, utilization will be influenced by actions to optimize U.S. taxable earnings for the purpose of consuming the FTC carry-forward component of the DTAs prior to expiration. These FTC actions, however, may serve to increase the DTAs for other less time sensitive components. Moreover, tax return limitations on FTCs and general business credits that cause Citi to incur current tax expense, notwithstanding its tax carry-forward position, could impact the rate of overall DTA utilization. DTA utilization will also continue to be driven by movements in Citi's AOCI, which can be impacted by changes in interest rates and foreign exchange rates. For additional information on Citi's DTAs, including the FTCs, see "Significant Accounting Policies and Significant Estimates—Income Taxes" below and Note 9 to the Consolidated Financial Statements.

Citi's Interpretation or Application of the Extensive Tax Laws to Which It Is Subject Could Differ from Those of the Relevant Governmental Authorities, Which Could Result in the Payment of Additional Taxes, Penalties or Interest. Citi is subject to the various tax laws of the U.S. and its states and municipalities, as well as the numerous foreign jurisdictions in which it operates. These tax laws are inherently complex and Citi must make judgments and interpretations about the application of these laws to its entities, operations and businesses. Citi's interpretations and application of the tax laws, including with respect to withholding tax obligations and stamp and other transactional taxes, could differ from that of the relevant governmental taxing authority, which could result in the potential for the payment of additional taxes, penalties or interest, which could be material.

The Value of Citi's DTAs Could Be Significantly Reduced if Corporate Tax Rates in the U.S. or Certain State, Local or Foreign Jurisdictions Decline or as a Result of Other Changes in the U.S. Corporate Tax System.

There have been discussions regarding decreasing the U.S. federal corporate tax rate. Similar discussions have taken place in certain local, state and foreign jurisdictions. While Citi may benefit in some respects from any decrease in corporate tax rates, a reduction in the U.S. federal, or state, local or foreign corporate tax rates could result in a decrease, perhaps significant, in the value of Citi's DTAs, which would result in

a reduction to Citi's net income during the period in which the change is enacted. There have also been recent discussions of more sweeping changes to the U.S. tax system. It is uncertain whether or when any such tax reform proposals will be enacted into law, and whether or how they will affect Citi's DTAs.

If Citi's Risk Models Are Ineffective or Require Modification or Enhancement, Citi Could Incur Significant Losses or Its Regulatory Capital and Capital Ratios Could Be Negatively Impacted.

Citi utilizes models extensively as part of its risk management and mitigation strategies, including in analyzing and monitoring the various risks Citi assumes in conducting its activities. For example, Citi uses models as part of its various stress testing initiatives across the firm. Management of these risks is made even more challenging within a global financial institution such as Citi, particularly given the complex, diverse and rapidly changing financial markets and conditions in which Citi operates.

These models and strategies are inherently limited because they involve techniques, including the use of historical data in many circumstances, and judgments that cannot anticipate every economic and financial outcome in the markets in which Citi operates, nor can they anticipate the specifics and timing of such outcomes. Citi could incur significant losses if its risk management models or strategies are ineffective in properly anticipating or managing these risks.

Moreover, Citi's Basel III regulatory capital models, including its credit, market and operational risk models, continue to be subject to ongoing regulatory review and approval, which may result in refinements, modifications or enhancements (required or otherwise) to these models. Modifications or requirements resulting from these ongoing reviews, as well as any future changes or guidance provided by the U.S. banking agencies regarding the regulatory capital framework applicable to Citi, have resulted in, and could continue to result in, significant changes to Citi's risk-weighted assets, total leverage exposure or other components of Citi's capital ratios. These changes can negatively impact Citi's capital ratios and its ability to achieve its regulatory capital requirements as it projects or as required.

Citi Must Continually Pursue Expense Management and Its Investments in Its Businesses May Not Be as Successful as Citi Projects or Expects.

Citi continues to pursue its disciplined expense management strategy, including ongoing repositioning and efficiency targets. However, there is no guarantee that Citi will be able to maintain or reduce its level of expenses as a result of its repositioning actions, efficiency initiatives or otherwise. Moreover, Citi's ability to maintain or reduce its expenses in part depends on factors which it cannot control, such as ongoing regulatory changes, continued higher regulatory and compliance costs, legal and regulatory proceedings and inquiries and macroeconomic conditions, among others. In addition, investments Citi has made, or may make, in its businesses or operations, such as those in technology systems

or in its U.S. credit card businesses, may not be as productive or effective as Citi expects or at all.

Citi's Ability to Continue to Wind-Down Citi Holdings Largely Depends on Factors Outside Its Control.

While Citi made significant progress in continuing to wind-down Citi Holdings in 2015, and Citi expects to maintain Citi Holdings at or above "break even" in 2016, as of December 31, 2015, the remaining assets in Citi Holdings largely consisted of North America legacy consumer mortgages, of which approximately 50% consisted of home equity loans for which a market for sales has not yet developed. Accordingly, sales of the remaining mortgage assets will largely continue to be subject to ongoing run-off, market appetite and/or opportunistic sales. As a result, the remaining assets in Citi Holdings will not likely decrease as significantly as in prior years and could continue to have a negative impact on Citi's risk-weighted assets.

Citi's Performance and the Performance of Its Individual Businesses Could Be Negatively Impacted if Citi Is Not Able to Hire and Retain Highly Qualified Employees for Any Reason.

Citi's performance and the performance of its individual businesses is largely dependent on the talents and efforts of highly skilled employees. Specifically, Citi's continued ability to compete in its businesses, to manage its businesses effectively and to continue to execute its overall global strategy depends on its ability to attract new employees and to retain and motivate its existing employees. If Citi is unable to continue to attract and retain the most highly qualified employees for any reason, Citi's performance, including its competitive position, the successful execution of its overall strategy and its results of operations could be negatively impacted.

Citi's ability to attract and retain employees depends on numerous factors, some of which are outside of its control. For example, given the heightened regulatory and political environment in which Citi operates relative to competitors for talent both within and outside of the financial services area, it may be more difficult for Citi to hire or retain highly qualified employees in the future. Other factors that impact Citi's ability to attract and retain employees include its culture, compensation, the management and leadership of the company as well as its individual businesses, Citi's presence in the particular market or region at issue and the professional opportunities it offers. Generally, the banking industry is subject to more stringent regulation of executive and employee compensation than other industries, including deferral and clawback requirements for incentive compensation and other limitations. Citi often competes in the market for talent with entities that are not subject to such significant regulatory restrictions on the structure of incentive compensation.

Incorrect Assumptions or Estimates in Citi's Financial Statements Could Cause Significant Unexpected Losses in the Future, and Changes to Financial Accounting and Reporting Standards or Interpretations Could Have a Material Impact on How Citi Records and Reports Its Financial Condition and Results of Operations.

Citi is required to use certain assumptions and estimates in preparing its financial statements under U.S. GAAP, including determining credit loss reserves, reserves related to litigation and regulatory exposures, valuation of DTAs and the fair values of certain assets and liabilities, among other items. If Citi's assumptions or estimates underlying its financial statements are incorrect or differ from actual future events, Citi could experience unexpected losses, some of which could be significant.

Moreover, the Financial Accounting Standards Board (FASB) is currently reviewing, or has proposed or issued, changes to several financial accounting and reporting standards that govern key aspects of Citi's financial statements or interpretations thereof, including those areas where Citi is required to make assumptions or estimates. For example, the FASB has proposed a new accounting model intended to require earlier recognition of credit losses on financial instruments. The proposed accounting model would require that lifetime "expected credit losses" on financial assets not recorded at fair value through net income, such as loans and held-to-maturity securities, be recorded at inception of the financial asset, replacing the multiple existing impairment models under U.S. GAAP which generally require that a loss be "incurred" before it is recognized (for additional information on this and other proposed changes, see Note 1 to the Consolidated Financial Statements).

Changes to financial accounting or reporting standards or interpretations, whether promulgated or required by the FASB or other regulators, could present operational challenges and could require Citi to change certain of the assumptions or estimates it previously used in preparing its financial statements, which could negatively impact how it records and reports its financial condition and results of operations generally and/or with respect to particular businesses. For additional information on the key areas for which assumptions and estimates are used in preparing Citi's financial statements, see "Significant Accounting Policies and Significant Estimates" below and Note 28 to the Consolidated Financial Statements.

COMPLIANCE, CONDUCT AND LEGAL RISKS

Ongoing Implementation and Interpretation of Regulatory Changes and Requirements in the U.S. and Globally Have Increased Citi's Compliance Risks and Costs.

As referenced above, over the past several years, Citi has been required to implement a significant number of regulatory changes across all of its businesses and functions, and these changes continue. In some cases, Citi's implementation of a regulatory requirement is occurring simultaneously with changing or conflicting regulatory guidance, legal challenges or legislative action to modify or repeal final rules. Moreover, in many cases, these are entirely new regulatory requirements or regimes, resulting in much uncertainty regarding regulatory expectations as to what is definitely required in order to be in compliance with the requirements. Accompanying this compliance uncertainty is heightened regulatory scrutiny and expectations in the U.S. and globally for the financial services industry with respect to governance and risk management practices, including its compliance and regulatory risks (for a discussion of heightened regulatory expectations on "conduct risk" at, and the overall "culture" of, financial institutions such as Citi, see "Legal Risks" below). All of these factors have resulted in increased compliance risks and costs for Citi.

Examples of regulatory changes that have resulted in increased compliance risks and costs include:

The Volcker Rule required Citi to develop an extensive global compliance regime, including developing and maintaining detailed trading and permitted activity mandates for businesses, submitting extensive trading information to regulatory agencies, conducting independent testing and audit, training, recordkeeping and similar requirements and governance, including an annual CEO attestation, beginning on March 31, 2016, with respect to the global processes Citi has in place to achieve compliance with the rules.

Numerous aspects of the U.S. derivatives reform regime require extensive compliance systems and processes to be maintained by Citi on a global basis, including electronic recordkeeping, real-time public transaction reporting and external business conduct requirements (e.g., required swap counterparty disclosures).

A proliferation of data protection and "onshoring" requirements adopted by various non-U.S. jurisdictions, such as in Russia, South Korea, Vietnam and Indonesia, require Citi to take measures to ensure client data is stored or processed within national borders. These requirements could conflict with anti-money laundering and other requirements in other jurisdictions.

Extensive compliance requirements can result in increased reputational and legal risks, as failure to comply with regulations and requirements, or failure to comply as expected, can result in enforcement and/or regulatory proceedings (for additional discussion, see "Legal Risks" below). In addition, increased and ongoing compliance requirements and uncertainties have resulted in higher costs for Citi. For example, Citi employed approximately 30,000 regulatory and compliance staff as of year-end 2015, out of a

total employee population of 231,000, compared to approximately 14,000 as of year-end 2008 with a total employee population of 323,000. These higher regulatory and compliance costs also offset Citi's ongoing cost reduction initiatives. For example, data protection and "onshoring" requirements often require redundant investments in local data storage and security and thus impede or potentially reverse Citi's centralization or standardization efforts, which provide expense efficiencies. Higher compliance costs may also require management to reallocate resources, including potentially away from ongoing business investment initiatives.

Citi Is Subject to Extensive Legal and Regulatory Proceedings, Investigations and Inquiries That Could Result in Significant Penalties and Other Negative Impacts on Citi, Its Businesses and Results of Operations.

At any given time, Citi is defending a significant number of legal and regulatory proceedings and is subject to numerous governmental and regulatory examinations, investigations and other inquiries. The frequency with which such proceedings, investigations and inquiries are initiated have increased substantially over the last few years, and the global judicial, regulatory and political environment generally remains hostile to large financial institutions. For

example, under recent guidance by the U.S. Department of Justice (DOJ), a corporation (such as Citi) is required to identify all individuals involved in or responsible for perceived misconduct at issue and provide all related facts and circumstances in order to qualify for any cooperation credit in civil and criminal investigations of corporate wrongdoing. The complexity of the federal and state regulatory and enforcement regimes in the U.S., coupled with the global scope of Citi's operations, also means that a single event or issue may give rise to a large number of overlapping investigations and regulatory proceedings, either by multiple federal and state agencies in the U.S. or by multiple regulators and other governmental entities in different jurisdictions.

Moreover, U.S. and non-U.S. regulators have been increasingly focused on "conduct risk," a term that is used to describe the risks associated with behavior by employees and agents, including third-party vendors utilized by Citi, that could harm consumers, investors or the markets, such as failures to safeguard consumers' and investors' personal information, failures to identify and manage conflicts of interest and improperly creating, selling and marketing products and services. In addition to increasing Citi's compliance risks, this focus on conduct risk could lead to more regulatory or other enforcement proceedings and litigation, including for practices which historically were acceptable but are now receiving greater scrutiny. Further, while Citi takes numerous steps to prevent and detect conduct by employees and agents that could potentially harm customers, investors or the markets, such behavior may not always be deterred or prevented. Banking regulators have also focused on the overall culture of financial services firms, including Citi. In addition to regulatory restrictions or structural changes that could result from perceived deficiencies in Citi's culture, such focus could also lead to additional regulatory proceedings.

Further, the severity of the remedies sought in legal and regulatory proceedings to which Citi is subject has increased substantially in recent years. U.S. and certain international governmental entities have increasingly brought criminal actions against, or have sought criminal convictions from, financial institutions, and criminal prosecutors in the U.S. have increasingly sought and obtained criminal guilty pleas or deferred prosecution agreements against corporate entities and other criminal sanctions from those institutions. As previously disclosed, in May 2015 an affiliate of Citi entered into a settlement with the DOJ whereby the affiliate pleaded guilty to an antitrust violation and paid a substantial fine to resolve the DOJ's investigations into Citi's foreign exchange business practices. These types of actions by U.S. and international governmental entities may, in the future, have significant collateral consequences for a financial institution, including loss of customers and business, and the inability to offer certain products or services and/or operate certain businesses. Citi may be required to accept or be subject to similar types of criminal remedies, consent orders, substantial fines and penalties or other requirements in the future, including for matters or practices not yet known to Citi, any of which could materially and negatively affect Citi's businesses, business practices, financial condition or results of operations, require material changes in Citi's operations or cause Citi reputational harm.

Further, many large claims asserted against Citi are highly complex, slow to develop and may involve novel or untested legal theories. The outcome of such proceedings is difficult to predict or estimate until late in the proceedings. Although Citi establishes accruals for its legal and regulatory matters according to accounting requirements, Citi's estimates of, and changes to, these accruals, involve significant judgment and may be subject to significant uncertainty and the amount of loss ultimately incurred in relation to those matters may be substantially higher than the amounts accrued. In addition, certain settlements are subject to court approval and may not be approved.

For additional information relating to Citi's legal and regulatory proceedings and matters, including Citi's policies on establishing legal accruals, see Note 28 to the Consolidated Financial Statements.

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For additional information regarding certain credit risk, market risk and other quantitative and qualitative (1) information, refer to Citi's Pillar 3 Basel III Advanced Approaches Disclosures, as required by the rules of the Federal Reserve Board, on Citi's Investor Relations website.

MANAGING GLOBAL RISK

OVERVIEW

For Citi, effective risk management is of primary importance to its overall operations. Accordingly, Citi's risk management process has been designed to monitor, evaluate and manage the principal risks it assumes in conducting its activities. Specifically, the activities that Citi engages in, and the risks those activities generate, must be consistent with Citi's mission and value proposition, the key principles that guide it, and Citi's risk appetite.

Risk management must be built on a foundation of ethical culture. Under Citi's mission and value proposition, which was developed by Citi's senior leadership and distributed throughout the firm, Citi strives to serve as a trusted partner to its clients by responsibly providing financial services that enable growth and economic progress while earning and maintaining the public's trust by constantly adhering to the highest ethical standards. As such, Citi asks all employees to ensure that their decisions pass three tests: they are in clients' interests, create economic value and are always systemically responsible. Additionally, Citi evaluates employees' performance against behavioral expectations set out in Citi's leadership standards, which were designed in part to effectuate Citi's mission and value proposition. Other culture-related efforts in connection with conduct risk, ethics and leadership, escalation, and treating customers fairly help Citi to execute its mission and value proposition.

Four key principles—common purpose, responsible finance, ingenuity, and leadership—guide Citi as it performs its mission. Citi's risk appetite, which is approved by the Citigroup Board of Directors, specifies the aggregate levels and types of risk the Board and management are willing to assume to achieve Citi's strategic objectives and business plan, consistent with applicable capital, liquidity, and other regulatory requirements.

Citi selectively takes risks in support of its underlying business strategy, while striving to ensure it operates within its mission and value proposition and risk appetite.

Citi's risks are generally categorized and summarized as follows:

Credit risk is the risk arising from an obligor's failure to meet the terms of any contract or otherwise perform as agreed. Credit risk is found in all activities in which settlement or repayment depends on counterparty, issuer, or borrower performance.

Liquidity risk is the risk arising from an inability to meet obligations when they come due. Liquidity risk includes the inability to access funding sources or manage fluctuations in funding levels. Liquidity risk also results from a failure to recognize or address changes in market conditions that affect Citi's ability to liquidate assets quickly and with minimal loss in value.

Market risk is the risk of potential losses arising from changes in the value of Citi's assets and liabilities resulting from changes in market variables, such as interest rates.

- Operational risk is the risk of loss resulting from inadequate or failed internal processes, systems, or human factors, or from external events.

Country risk is the risk that an event in a country (precipitated by developments within or external to a country) will impair the value of Citi's franchise or will adversely affect the ability of obligors within that country to honor their obligations. Country risk events may include sovereign defaults, banking crises, currency crises, currency convertibility and/or transferability restrictions, or political events.

Compliance risk is the risk arising from violations of, or non-conformance with, local, national, or cross-border laws, rules, or regulations, our own internal policies and procedures, or relevant standards of conduct.

Conduct risk is the risk that Citi's employees or agents may, intentionally or through negligence, harm customers, clients, or the integrity of the markets, and thereby the integrity of Citi.

Legal risk includes the risk of loss, whether financial or reputational, due to legal or regulatory actions, proceedings, or investigations, or uncertainty in the applicability or interpretation of contracts, laws, or regulations.

Reputational risk is the risk to current or anticipated earnings, capital, or franchise or enterprise value arising from negative public opinion.

Citi manages its risks through each of its three lines of defense: (i) business management, (ii) independent control functions and (iii) Internal Audit. The three lines of defense collaborate with each other in structured forums and processes to bring various perspectives together and to steer the organization toward outcomes that are in clients' interests, create economic value and are systemically responsible.

First Line of Defense: Business Management

Each of Citi's businesses owns its risks and is responsible for assessing and managing its risks. Each business is also responsible for having controls in place to mitigate key risks, assessing internal controls and promoting a culture of compliance and control. In doing so, a business is required to maintain appropriate staffing and implement appropriate procedures to fulfill its risk governance responsibilities.

The CEOs of each region and business report to the Citigroup CEO. The Head of Operations and Technology and the Head of Productivity, who are considered part of the first line of defense, also report to the Citigroup CEO.

Businesses at Citi organize and chair many committees and councils that cover risk considerations with participation from independent control functions, including committees or councils that are designed to consider matters related to capital, assets and liabilities, business practices, business risks and controls, mergers and acquisitions, the Community Reinvestment Act and fair lending and incentives.

Second Line of Defense: Independent Control Functions

Citi's independent control functions, including Risk, Compliance, Human Resources, Legal and Finance, set

standards by which Citi and its businesses are expected to manage and oversee risks, including compliance with applicable laws, regulatory requirements, policies and relevant standards of conduct. Additionally, among other responsibilities, the independent control functions provide advice and training to Citi's businesses and establish tools, methodologies, processes and oversight for controls used by the businesses to foster a culture of compliance and control.

Risk

The Risk organization is designed to act as an independent partner of the business to manage market, credit and operational risk in a manner consistent with Citi's risk appetite. Risk establishes policies and guidelines for risk assessments and risk management and contributes to controls and tools to manage, measure and mitigate risks taken by the firm.

The Chief Risk Officer reports to the Citigroup CEO and the Risk Management Committee of the Citigroup Board of Directors. The Chief Risk Officer has regular and unrestricted access to the Risk Management Committee of the Board and also to the Citigroup Board of Directors to address risks and issues identified through Risk's activities.

Compliance

The Compliance organization is designed to protect Citi not only by managing adherence to applicable laws, regulations, and other standards of conduct, but also by promoting business behavior that is consistent with Citi's mission and value proposition, the principle of responsible finance and Citi's compliance risk appetite. For further information on Citi's compliance risk appetite, see "Compliance, Conduct and Legal Risk" below.

The Chief Compliance Officer reports to the Citigroup CEO and has regular and unrestricted access to the Audit Committee, Ethics and Culture Committee and other ad hoc committees of the Citigroup Board of Directors to report on, among other items, possible breaches of Citi's compliance risk appetite.

Human Resources

The Human Resources organization provides personnel support and governance in connection with, among other things: recognizing and rewarding employees who demonstrate Citi's values and excel in their roles and responsibilities; setting ethical- and performance-related expectations and developing and promoting employees who meet those expectations; and searching for, assessing, and hiring staff who exemplify Citi's leadership standards, which outline Citi's expectations of its employees' behavior.

The Head of Human Resources reports to the Citigroup CEO and interacts regularly with the Personnel and Compensation Committee of the Citigroup Board of Directors.

Legal

The Legal organization is involved in a number of activities designed to promote the appropriate management of Citi's exposure to legal risk. Those activities include, among others: promoting and supporting Citigroup's governance processes; advising businesses management, other independent control functions, the Citigroup Board of Directors and committees of the Board regarding analysis of laws and regulations, regulatory matters, disclosure matters, and potential risks and exposures on key litigation and transactional matters, among other things; advising other independent control functions in their efforts to ensure compliance with applicable laws and regulations as well as other internal standards of conduct; serving on key management committees; reporting and escalating key legal issues to senior management or other independent control functions; participating in internal investigations and overseeing regulatory investigations; and advising businesses on a day-to-day basis on legal, regulatory and contractual matters. The General Counsel reports to the Citigroup CEO and is responsible to the full Citigroup Board. In addition to having regular and unrestricted access to the full Citigroup Board of Directors, the General Counsel, or his delegates, regularly attends meetings of the Risk Management Committee, Audit Committee, Personnel and Compensation Committee, Ethics and Culture Committee, Operations and Technology Committee, and Nomination, Governance and Public Affairs Committee as well as other ad hoc committees of the Citigroup Board of Directors.

Finance

The Finance organization is primarily comprised of the following disciplines: treasury, controllers, tax and financial planning and analysis. These disciplines partner with the businesses, providing key data and consultation to facilitate sound decisions in support of the businesses' objectives. Through these activities, Finance serves as an independent control function advising business management, escalating identified risks and establishing policies or processes to manage risk.

Through the treasury discipline, Finance has overall responsibility for managing Citi's balance sheet and accordingly partners with the businesses to manage Citi's liquidity and interest rate risk (price risk for non-trading portfolios). Treasury works with the businesses to establish balance sheet targets and limits, as well as sets policies on funding costs charged for business assets based on their liquidity and duration.

Principally through the controllers discipline, Finance is responsible for establishing a strong control environment over Citi's financial reporting processes consistent with the 2013 Committee of Sponsoring Organizations of the Treadway Commission, or COSO, Internal Control—Integrated Framework.

Finance is led by Citi's Chief Financial Officer (CFO), who reports directly to the Citigroup CEO. The CFO chairs or co-chairs several management committees that serve as key governance and oversight forums for business activities. In addition, the CFO has regular and unrestricted access to the

full Citigroup Board of Directors as well as to the Audit Committee of the Board of Directors.

Third Line of Defense: Internal Audit

Citi's Internal Audit function independently reviews activities of the first two lines of defense based on a risk-based audit plan and methodology approved by the Audit Committee of the Citigroup Board of Directors. Internal Audit also provides independent assurance to the Citigroup Board of Directors, the Audit Committee of the Board, senior management and regulators regarding the effectiveness of Citi's governance and controls designed to mitigate Citi's exposure to risks and to enhance Citi's culture of compliance and control.

The Chief Auditor reports functionally to the Chairman of the Citigroup Audit Committee and administratively to the CEO of Citigroup. Internal Audit's responsibilities are carried out independently under the oversight of the Audit Committee. Internal Audit's employees accordingly report to the Chief Auditor and do not have reporting lines to front-line units or senior management. Internal Audit's staff members are not permitted to provide internal-audit services for a business line or function in which they had business line or function responsibilities within the previous 12 months.

Citigroup Board of Directors and Committees of the Board

Citigroup's Board of Directors oversees Citi's risk-taking activities. To do so, directors review risk assessments and reports prepared by Risk, Compliance, Human Resources, Legal, Finance and Internal Audit and exercise independent judgment to question, challenge, and when necessary, oppose recommendations and decisions made by senior management that could cause Citi's risk profile to exceed its risk appetite or jeopardize the safety and soundness of the firm.

The standing committees of the Citigroup Board of Directors are the Executive Committee, Risk Management Committee, Audit Committee, Personnel and Compensation Committee, Ethics and Culture Committee, Operations and Technology Committee and Nomination, Governance and Public Affairs Committee. In addition to the standing committees, the Board creates ad hoc committees from time to time in response to regulatory, legal, or other requirements.

CREDIT RISK

OVERVIEW

Credit risk is the potential for financial loss resulting from the failure of a borrower or counterparty to honor its financial or contractual obligations. Credit risk arises in many of Citigroup's business activities, including:

- wholesale and retail lending;
- capital markets derivative transactions;
- structured finance; and
- repurchase and reverse repurchase transactions.

Credit risk also arises from settlement and clearing activities, when Citi transfers an asset in advance of receiving its counter-value or advances funds to settle a transaction on behalf of a client. Concentration risk, within credit risk, is the risk associated with having credit exposure concentrated within a specific client, industry, region or other category.

Credit risk is one of the most significant risks Citi faces as an institution. As a result, Citi has a well-established framework in place for managing credit risk across all businesses. This includes a defined risk appetite, credit limits and credit policies, both at the business level as well as at the company-wide level. Citi's credit risk management also includes processes and policies with respect to problem recognition, including "watch lists," portfolio review, updated risk ratings and classification triggers.

With respect to Citi's settlement and clearing activities, intra-day client usage of lines is closely monitored against limits, as well as against "normal" usage patterns. To the extent a problem develops, Citi typically moves the client to a secured (collateralized) operating model. Generally, Citi's intra-day settlement and clearing lines are uncommitted and cancellable at any time.

To manage concentration of risk within credit risk, Citi has in place a concentration management framework consisting of industry limits, obligor limits and single-name triggers. In addition, the independent Risk organization reviews concentration of risk across Citi's regions and businesses to assist in managing this type of risk.

Credit exposures are generally reported in notional terms for accrual loans, reflecting the value at which the loans as well as loan and other off-balance sheet commitments are carried on the Consolidated Balance Sheet. Credit exposure arising from capital markets activities is generally expressed as the current mark-to-market, net of margin, reflecting the net value owed to Citi by a given counterparty.

The credit risk associated with these credit exposures is a function of the creditworthiness of the obligor, as well as the terms and conditions of the specific obligation. Citi assesses the credit risk associated with its credit exposures on a regular basis through its loan loss reserve process (see "Significant Accounting Policies and Significant Estimates" below and Notes 1 and 16 to the Consolidated Financial Statements), as well as through regular stress testing at the company, business, geography and product levels. These stress-testing processes typically estimate potential incremental credit costs that would

occur as a result of either downgrades in the credit quality or defaults of the obligors or counterparties. For additional information on Citi's credit risk management, see Note 15 to the Consolidated Financial Statements.

CONSUMER CREDIT

North America Consumer Mortgage Lending

Overview

Citi's North America consumer mortgage portfolio consists of both residential first mortgages and home equity loans. At December 31, 2015, Citi's North America consumer mortgage portfolio was \$79.7 billion (compared to \$95.9

billion at December 31, 2014), of which the residential first mortgage portfolio was \$56.9 billion (compared to \$67.8 billion at December 31, 2014), and the home equity loan portfolio was \$22.8 billion (compared to \$28.1 billion at December 31, 2014). The decline during the year was primarily attributed to \$14.7 billion of North America consumer mortgages sold or transferred to held-for-sale, including \$6.6 billion of CitiFinancial consumer mortgages (\$5.4 billion of residential first mortgages and \$1.2 billion of home equity loans) transferred to held-for-sale and classified as Other assets in the fourth quarter of 2015. At December 31, 2015, \$18.7 billion of residential first mortgages were recorded in Citi Holdings, with the remaining \$38.2 billion recorded in Citicorp. At December 31, 2015, \$19.1 billion of home equity loans was recorded in Citi Holdings, with the remaining \$3.6 billion recorded in Citicorp.

Citi's residential first mortgage portfolio included \$3.4 billion of loans with Federal Housing Administration (FHA) insurance or Department of Veterans Affairs (VA) guarantees at December 31, 2015, compared to \$5.2 billion at December 31, 2014. The decline during the year was primarily due to mortgage loans with FHA insurance sold or transferred to held-for-sale. Citi's FHA/VA portfolio consists of loans to low-to-moderate-income borrowers with lower FICO (Fair Isaac Corporation) scores and generally higher loan-to-value ratios (LTVs). Credit losses on FHA loans are borne by the sponsoring governmental agency, provided that the insurance terms have not been rescinded as a result of an origination defect. With respect to VA loans, the VA establishes a loan-level loss cap, beyond which Citi is liable for loss. While FHA and VA loans have high delinquency rates, given the insurance and guarantees, respectively, Citi has experienced negligible credit losses on these loans.

As of December 31, 2015, Citi's North America residential first mortgage portfolio contained approximately \$2.4 billion of adjustable rate mortgages that are currently required to make a payment consisting of only accrued interest for the payment period, or an interest-only payment, compared to \$3.8 billion at December 31, 2014. This decline resulted primarily from repayments and conversions to amortizing loans. Residential first mortgages with this payment feature are primarily to high-credit-quality borrowers who have on

average significantly higher origination and refreshed FICO scores than other loans in the residential first mortgage portfolio, and have exhibited significantly lower 30+ delinquency rates as compared with residential first mortgages without this payment feature. As such, Citi does not believe the residential mortgage loans with this payment feature represent substantially higher risk in the portfolio.

Citi does not offer option-adjustable rate mortgages/negative-amortizing mortgage products to its customers. As a result, option-adjustable rate mortgages/negative-amortizing mortgages represent an insignificant portion of total balances, since they were acquired only incidentally as part of prior portfolio and business purchases.

For additional information on Citi's North America consumer mortgage portfolio, see Note 15 to the Consolidated Financial Statements.

North America Consumer Mortgage Quarterly Credit Trends—Net Credit Losses and Delinquencies—Residential First Mortgages

The following charts detail the quarterly credit trends for Citi's residential first mortgage portfolio in North America.

North America Residential First Mortgage - EOP Loans

In billions of dollars

North America Residential First Mortgage - Net Credit

Losses

In millions of dollars

Note: CMI refers to loans originated by CitiMortgage. CFNA refers to loans originated by CitiFinancial. Totals may not sum due to rounding.

(1) Decrease in 4Q'15 EOP loans primarily reflects the transfer of CFNA residential first mortgages to held-for-sale and classification as Other assets at year-end 2015. This transfer did not impact net credit losses.

(2) Year-over-year change in the S&P/Case-Shiller U.S. National Home Price Index.

(3) Year-over-year change as of October 2015.

North America Residential First Mortgage

Delinquencies-Citi Holdings

In billions of dollars

Note: Days past due excludes (i) U.S. mortgage loans that are guaranteed by U.S. government-sponsored agencies because the potential loss predominantly resides with the U.S. agencies, and (ii) loans recorded at fair value. Totals may not sum due to rounding.

(1) Decrease in 4Q'15 primarily reflects the transfer of CFNA residential first mortgages to held-for-sale and classification as Other assets at year-end 2015.

Net credit losses in the North America residential first mortgage portfolio continued to improve during 2015 as a result of improvements in the home price index (HPI) and sales or transfers to held-for-sale of residential first mortgages during 2015, as well as overall loss mitigation activities within CitiFinancial.

Residential first mortgages originated by CitiFinancial have a higher net credit loss rate as CitiFinancial borrowers tend to have higher LTVs and lower FICO scores than CitiMortgage borrowers. CitiFinancial's residential first mortgages also have a significantly different geographic distribution, with different mortgage market conditions that tend to lag the overall improvements in HPI.

During 2015, continued management actions, primarily the sale or transfer to held-for-sale of approximately \$1.5 billion of delinquent residential first mortgages, including \$0.9 billion in the fourth quarter largely associated with the transfer of CitiFinancial loans to held-for-sale referenced above, were the primary driver of the overall improvement in

delinquencies within Citi Holdings' residential first mortgage portfolio. Credit performance from quarter to quarter could continue to be impacted by the amount of delinquent loan sales or transfers to held-for-sale, as well as overall trends in HPI and interest rates.

North America Residential First Mortgages—State Delinquency Trends

The following tables set forth the six U.S. states and/or regions with the highest concentration of Citi's residential first mortgages.

In billions of dollars	December 31, 2015					December 31, 2014				
	ENR ⁽²⁾	ENR Distribution	90+DPD %	% LTV > 100% ⁽³⁾	Refreshed FICO	ENR ⁽²⁾	ENR Distribution	90+DPD %	% LTV > 100% ⁽³⁾	Refreshed FICO
CA	\$19.2	37	%0.2	%1	%754	\$18.9	31	%0.6	%2	%745
NY/NJ/CT ⁽⁴⁾	12.7	25	0.8	1	751	12.2	20	1.9	2	740
VA/MD	2.2	4	1.2	2	719	3.0	5	3.0	8	695
IL ⁽⁴⁾	2.2	4	1.0	3	735	2.5	4	2.5	9	713
FL ⁽⁴⁾	2.2	4	1.1	4	723	2.8	5	3.0	14	700
TX	1.9	4	1.0	—	711	2.5	4	2.7	—	680
Other	11.0	21	1.3	2	710	18.2	30	3.3	7	677
Total ⁽⁵⁾	\$51.5	100	%0.7	%1	%738	\$60.1	100	%2.1	%4	%715

Note: Totals may not sum due to rounding.

(1) Certain of the states are included as part of a region based on Citi's view of similar HPI within the region.

Ending net receivables. Excludes loans in Canada and Puerto Rico, loans guaranteed by U.S. government agencies, (2) loans recorded at fair value and loans subject to long term standby commitments (LTSCs). Excludes balances for which FICO or LTV data are unavailable.

(3) LTV ratios (loan balance divided by appraised value) are calculated at origination and updated by applying market price data.

(4) New York, New Jersey, Connecticut, Florida and Illinois are judicial states.

Improvement in state trends during 2015 was primarily due to the sale or transfer to held-for-sale of residential first (5) mortgages, including the transfer of CitiFinancial residential first mortgages to held-for-sale in the fourth quarter of 2015.

Foreclosures

A substantial majority of Citi's foreclosure inventory consists of residential first mortgages. At December 31, 2015, Citi's foreclosure inventory included approximately \$0.1 billion, or 0.2%, of the total residential first mortgage portfolio, compared to \$0.6 billion, or 0.9%, at December 31, 2014, based on the dollar amount of ending net receivables of loans in foreclosure inventory, excluding loans that are guaranteed by U.S. government agencies and loans subject to LTSCs.

North America Consumer Mortgage Quarterly Credit Trends—Net Credit Losses and Delinquencies—Home Equity Loans

Citi's home equity loan portfolio consists of both fixed-rate home equity loans and loans extended under home equity lines of credit. Fixed-rate home equity loans are fully amortizing. Home equity lines of credit allow for amounts to be drawn for a period of time with the payment of interest only and then, at the end of the draw period, the then-outstanding amount is converted to an amortizing loan (the interest-only payment feature during the revolving period is standard for this product across the industry). After conversion, the home equity loans typically have a 20-year amortization period. As of December 31, 2015, Citi's home equity loan portfolio of \$22.8 billion consisted of \$6.3 billion of fixed-rate home equity loans and \$16.5 billion of loans extended under home equity lines of credit (Revolving HELOCs).

Revolving HELOCs

As noted above, as of December 31, 2015, Citi had \$16.5 billion of Revolving HELOCs, of which \$4.2 billion had commenced amortization (compared to \$1.9 billion at December 31, 2014) and \$12.3 billion were still within their revolving period and have not commenced amortization, or “reset,” (compared to \$16.7 billion at December 31, 2014). The following chart indicates the FICO and combined loan-to-value (CLTV) characteristics of Citi’s Revolving HELOCs portfolio and the year in which they reset:

North America Home Equity Lines of Credit

Amortization – Citigroup

Total ENR by Reset Year

In billions of dollars as of December 31, 2015

Note: Totals may not sum due to rounding.

Approximately 25% of Citi’s total Revolving HELOCs portfolio had commenced amortization as of December 31, 2015 (compared to 10% as of December 31, 2014). Of the remaining Revolving HELOCs portfolio, approximately 66% will commence amortization during the period of 2016–2017. Before commencing amortization, Revolving HELOC borrowers are required to pay only interest on their loans. Upon amortization, these borrowers will be required to pay both interest, usually at a variable rate, and principal that amortizes typically over 20 years, rather than the typical 30-year amortization. As a result, Citi’s customers with Revolving HELOCs that reset could experience “payment shock” due to the higher required payments on the loans.

While it is not certain what ultimate impact this payment shock could have on Citi’s delinquency rates and net credit losses, Citi currently estimates that the monthly loan payment for its Revolving HELOCs that reset during the period of 2016–2017 could increase on average by approximately \$370, or 165%. Increases in interest rates could further increase these payments given the variable nature of the interest rates on these loans post-reset. Of the Revolving HELOCs that will commence amortization during the period of 2016–2017, approximately \$0.6 billion, or 8%, of the loans have a CLTV greater than 100% as of December 31, 2015. Borrowers’ high loan-to-value positions, as well as the cost and availability of refinancing options, could limit borrowers’ ability to refinance their Revolving HELOCs as these loans begin to reset.

Approximately 6.7% of the Revolving HELOCs that have begun amortization as of December 31, 2015 were 30+ days past due, compared to 3.2% of the total outstanding home equity loan portfolio (amortizing and non-amortizing). This compared to 6.4% and 2.7%, respectively, as of December 31,

2014. As newly amortizing loans continue to season, the delinquency rate of the amortizing Revolving HELOC portfolio and total home equity loan portfolio is expected to continue to increase. In addition, resets to date have generally occurred during a period of historically low interest rates, which Citi believes has likely reduced the overall “payment shock” to the borrower.

Citi continues to monitor this reset risk closely and will continue to consider any potential impact in determining its allowance for loan loss reserves. In addition, management continues to review and take additional actions to offset potential reset risk, such as a borrower outreach program to provide reset risk education and proactively working with high-risk borrowers through a specialized single point of contact unit. For further information on reset risk, see “Risk Factors—Credit and Market Risks” above.

Net Credit Losses and Delinquencies

The following charts detail the quarterly credit trends for Citi’s home equity loan portfolio in North America:

North America Home Equity - EOP Loans

In billions of dollars

North America Home Equity - Net Credit Losses

In millions of dollars

Note: Totals may not sum due to rounding.

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North America Home Equity Loan Delinquencies - Citi Holdings

In billions of dollars

Note: Totals may not sum due to rounding.

As evidenced by the tables above, net credit losses in the North America home equity loan portfolio continued to improve during 2015, largely driven by the continued improvement in HPI. Delinquencies in the portfolio also improved during 2015, primarily due to liquidations and continued management actions, including the transfer of CitiFinancial home equity loans to held-for-sale in the fourth quarter of 2015 and continued modifications, partially offset by increased delinquencies associated with the increase in Revolving HELOCs commencing amortization. Given the limited market in which to sell delinquent home equity loans to date, as well as the relatively smaller number of home equity loan modifications and modification programs (see Note 15 to the Consolidated Financial Statements), Citi's ability to reduce delinquencies or net credit losses in its home equity loan portfolio in Citi Holdings, whether pursuant to deterioration of the underlying credit performance of these loans, the reset of the Revolving HELOCs (as discussed above) or otherwise, is more limited as compared to residential first mortgages.

North America Home Equity Loans—State Delinquency Trends

The following tables set forth the six U.S. states and/or regions with the highest concentration of Citi's home equity loans:

In billions of dollars

State ⁽¹⁾	December 31, 2015					December 30, 2014				
	ENR ⁽²⁾	ENR Distribution	90+DPD %	% CLTV > 100% ⁽³⁾	Refreshed FICO	ENR ⁽²⁾	ENR Distribution	90+DPD %	% CLTV > 100% ⁽³⁾	Refreshed FICO
CA	\$6.2	29	%1.7	%6	%731	\$7.4	28	%1.5	%10	%729
NY/NJ/CT ⁽⁴⁾	6.0	28	2.5	8	725	6.7	25	2.4	11	721
FL ⁽⁴⁾	1.5	7	2.0	24	715	1.8	7	2.2	36	707
VA/MD	1.3	6	2.0	23	715	1.6	6	1.6	28	706
IL ⁽⁴⁾	0.9	4	1.6	29	722	1.1	4	1.4	35	716
IN/OH/MI ⁽⁴⁾	0.5	3	1.9	24	703	0.8	3	1.7	31	688
Other	5.1	24	1.7	12	712	7.1	27	1.7	19	702
Total	\$21.5	100	%2.0	%12	%722	\$26.6	100	%1.8	%17	%715

Note: Totals may not sum due to rounding.

(1) Certain of the states are included as part of a region based on Citi's view of similar HPI within the region.

(2) Ending net receivables. Excludes loans in Canada and Puerto Rico and loans subject to LTSCs. Excludes balances for which FICO or LTV data are unavailable.

Represents combined loan-to-value (CLTV) for both residential first mortgages and home equity loans. CLTV

(3) ratios (loan balance divided by appraised value) are calculated at origination and updated by applying market price data.

(4) New York, New Jersey, Connecticut, Indiana, Ohio, Florida and Illinois are judicial states.

ADDITIONAL CONSUMER CREDIT DETAILS

Consumer Loan Delinquency Amounts and Ratios

	EOP loans ⁽¹⁾	90+ days past due ⁽²⁾			30–89 days past due ⁽²⁾			
	December 31,	December 31,		December 31,				
In millions of dollars, except EOP loan amounts in billions Citicorp ⁽³⁾⁽⁴⁾	2015	2015	2014	2013	2015	2014	2013	
Total	\$285.3	\$2,213	\$2,566	\$2,872	\$2,512	\$2,688	\$3,054	
Ratio		0.78	%0.88	%0.98	%0.88	%0.93	%1.04	%
Retail banking								
Total	\$146.8	\$577	\$816	\$927	\$795	\$854	\$970	
Ratio		0.40	%0.55	%0.63	%0.55	%0.58	%0.66	%
North America	51.8	165	225	257	221	212	205	
Ratio		0.33	%0.49	%0.60	%0.44	%0.46	%0.48	%
Latin America	24.0	235	397	460	224	290	368	
Ratio		0.98	%1.52	%1.60	%0.93	%1.11	%1.28	%
Asia ⁽⁵⁾	71.0	177	194	210	350	352	397	
Ratio		0.25	%0.25	%0.28	%0.49	%0.46	%0.53	%
Cards								
Total	\$138.5	\$1,636	\$1,750	\$1,945	\$1,717	\$1,834	\$2,084	
Ratio		1.18	%1.23	%1.33	%1.24	%1.29	%1.42	%
North America—Citi-branded	67.2	538	593	681	523	568	661	
Ratio		0.80	%0.88	%0.97	%0.78	%0.84	%0.94	%
North America—Citi retail services	46.1	705	678	771	773	748	830	
Ratio		1.53	%1.46	%1.67	%1.68	%1.61	%1.79	%
Latin America	7.5	213	284	290	196	262	298	
Ratio		2.84	%3.05	%2.79	%2.61	%2.82	%2.87	%
Asia ⁽⁵⁾	17.7	180	195	203	225	256	295	
Ratio		1.02	%1.05	%1.05	%1.27	%1.38	%1.52	%
Citi Holdings ⁽⁶⁾⁽⁷⁾								
Total	\$44.3	\$840	\$2,073	\$2,857	\$960	\$1,831	\$2,890	
Ratio		2.00	%2.77	%3.12	%2.28	%2.45	%3.15	%
International	3.8	70	110	263	103	168	366	
Ratio		1.84	%1.38	%1.93	%2.71	%2.10	%2.69	%
North America	40.5	770	1,963	2,594	857	1,663	2,524	
Ratio		2.01	%2.94	%3.33	%2.24	%2.49	%3.24	%
Other ⁽⁸⁾	0.2							
Total Citigroup	\$329.8	\$3,053	\$4,639	\$5,729	\$3,472	\$4,519	\$5,944	
Ratio		0.94	%1.27	%1.49	%1.06	%1.24	%1.54	%

(1) End-of-period (EOP) loans include interest and fees on credit cards.

(2) The ratios of 90+ days past due and 30–89 days past due are calculated based on EOP loans, net of unearned income.

(3)

The 90+ days past due balances for North America—Citi-branded and North America—Citi retail services are generally still accruing interest. Citigroup's policy is generally to accrue interest on credit card loans until 180 days past due, unless notification of bankruptcy filing has been received earlier.

- The 90+ days and 30–89 days past due and related ratios for Citicorp North America exclude U.S. mortgage loans that are guaranteed by U.S. government-sponsored entities since the potential loss predominantly resides within the U.S. government-sponsored entities. The amounts excluded for loans 90+ days past due and (EOP loans) were (4) \$491 million (\$1.1 billion), \$562 million (\$1.1 billion) and \$690 million (\$1.2 billion) at December 31, 2015, 2014 and 2013, respectively. The amounts excluded for loans 30–89 days past due (EOP loans have the same adjustment as above) were \$87 million, \$122 million and \$141 million at December 31, 2015, 2014 and 2013, respectively.
- (5) For reporting purposes, Asia GCB includes the results of operations of EMEA GCB for all periods presented.
- The 90+ days and 30–89 days past due and related ratios for Citi Holdings North America exclude U.S. mortgage (6) loans that are guaranteed by U.S. government-sponsored entities since the potential loss predominantly resides within the U.S. government-sponsored entities. The amounts excluded for loans 90+ days past

due (and EOP loans) for each period were \$1.5 billion (\$2.2 billion), \$2.2 billion (\$4.0 billion) and \$3.3 billion (\$6.4 billion) at December 31, 2015, 2014 and 2013, respectively. The amounts excluded for loans 30–89 days past due (EOP loans have the same adjustment as above) for each period were \$0.2 billion, \$0.5 billion and \$1.1 billion at December 31, 2015, 2014 and 2013, respectively.

The December 31, 2015, 2014 and 2013 loans 90+ days past due and 30–89 days past due and related ratios for (7)North America exclude \$11 million, \$14 million and \$0.9 billion, respectively, of loans that are carried at fair value.

(8) Represents loans classified as Consumer loans on the Consolidated Balance Sheet that are not included in the Citi Holdings consumer credit metrics.

Consumer Loan Net Credit Losses and Ratios

In millions of dollars, except average loan amounts in billions	Average loans ⁽¹⁾	Net credit losses ⁽²⁾⁽³⁾			
		2015	2014	2013	
Citicorp					
Total	\$281.3	\$6,029	\$6,860	\$7,017	
Ratio		2.14	%2.36	%2.52	%
Retail banking					
Total	\$148.1	\$1,241	\$1,366	\$1,274	
Ratio		0.84	%0.90	%0.89	%
North America	49.5	152	143	186	
Ratio		0.31	%0.31	%0.44	%
Latin America	25.0	764	907	816	
Ratio		3.06	%3.20	%2.90	%
Asia ⁽⁴⁾	73.6	325	316	272	
Ratio		0.44	%0.41	%0.38	%
Cards					
Total	\$133.2	\$4,788	\$5,494	\$5,743	
Ratio		3.59	%3.96	%4.26	%
North America—Citi-branded	64.0	1,892	2,197	2,555	
Ratio		2.96	%3.31	%3.72	%
North America—Retail services	43.4	1,709	1,866	1,895	
Ratio		3.94	%4.32	%4.92	%
Latin America	8.2	785	954	794	
Ratio		9.57	%9.54	%9.57	%
Asia ⁽⁴⁾	17.6	402	477	499	
Ratio		2.28	%2.51	%2.57	%
Citi Holdings⁽³⁾					
Total	\$61.6	\$1,035	\$1,819	\$3,239	
Ratio		1.68	%2.01	%2.98	%
International					
Total	5.0	173	261	411	
Ratio		3.46	%2.21	%2.91	%
North America	56.6	862	1,558	2,828	
Ratio		1.52	%1.97	%2.99	%
Other ⁽⁵⁾	—	4	6	6	
Total Citigroup	\$342.9	\$7,068	\$8,685	\$10,262	
Ratio		2.06	%2.28	%2.64	%

(1) Average loans include interest and fees on credit cards.

(2) The ratios of net credit losses are calculated based on average loans, net of unearned income.

As a result of the entry into an agreement to sell OneMain Financial (OneMain), OneMain was classified as held-for-sale (HFS) beginning March 31, 2015. As a result of HFS accounting treatment, approximately \$350

(3) million of net credit losses (NCLs) were recorded as a reduction in revenue (Other revenue) during 2015.

Accordingly, these NCLs are not included in this table. Loans HFS are excluded from this table as they are recorded in Other assets.

(4) For reporting purposes, Asia GCB includes the results of operations of EMEA GCB for all periods presented.

(5) Represents NCLs on loans classified as Consumer loans on the Consolidated Balance Sheet that are not included in the Citi Holdings consumer credit metrics.

Loan Maturities and Fixed/Variable Pricing
U.S. Consumer Mortgages

In millions of dollars at year end 2015	Due within 1 year	Greater than 1 year but within 5 years	Greater than 5 years	Total
U.S. consumer mortgage loan portfolio				
Residential first mortgages	\$126	\$724	\$57,545	\$58,395
Home equity loans	7,638	8,658	5,590	21,886
Total	\$7,764	\$9,382	\$63,135	\$80,281
Fixed/variable pricing of U.S. consumer mortgage loans with maturities due after one year				
Loans at fixed interest rates		\$1,195	\$43,666	
Loans at floating or adjustable interest rates		8,187	19,468	
Total		\$9,382	\$63,134	

CORPORATE CREDIT

Consistent with its overall strategy, Citi's corporate clients are typically large, multi-national corporations which value Citi's global network. Citi aims to establish relationships with these clients that encompass multiple products, consistent with client needs, including cash management and trade services, foreign exchange, lending, capital markets and M&A advisory.

Corporate Credit Portfolio

The following table sets forth Citi's corporate credit portfolio within ICG (excluding private bank), before consideration of collateral or hedges, by remaining tenor for the periods indicated:

In billions of dollars	At December 31, 2015				At September 30, 2015				At December 31, 2014			
	Due within 1 year	Greater than 1 year but within 5 years	Greater than 5 years	Total exposure	Due within 1 year	Greater than 1 year but within 5 years	Greater than 5 years	Total exposure	Due within 1 year	Greater than 1 year but within 5 years	Greater than 5 years	Total exposure
Direct outstandings (on-balance sheet) ⁽¹⁾	\$98	\$97	\$25	\$220	\$95	\$99	\$30	\$224	\$95	\$85	\$33	\$213
Unfunded lending commitments (off-balance sheet) ⁽²⁾	99	231	26	356	91	222	36	349	92	207	33	332
Total exposure	\$197	\$328	\$51	\$576	\$186	\$321	\$66	\$573	\$187	\$292	\$66	\$545

(1) Includes drawn loans, overdrafts, bankers' acceptances and leases.

(2) Includes unused commitments to lend, letters of credit and financial guarantees.

Portfolio Mix—Geography, Counterparty and Industry

Citi's corporate credit portfolio is diverse across geography and counterparty. The following table shows the percentage by region based on Citi's internal management geography:

	December 31, 2015	September 30, 2015	December 31, 2014	
North America	56	% 56	% 55	%
EMEA	25	25	25	
Asia	12	12	13	
Latin America	7	7	7	
Total	100	% 100	% 100	%

The maintenance of accurate and consistent risk ratings across the corporate credit portfolio facilitates the comparison of credit exposure across all lines of business, geographic regions and products. Counterparty risk ratings reflect an estimated probability of default for a counterparty and are derived primarily through the use of validated statistical models, scorecard models and external agency ratings (under defined circumstances), in combination with consideration of factors specific to the obligor or market, such as management experience, competitive position, regulatory environment and commodity prices. Facility risk ratings are assigned that reflect the probability of default of

the obligor and factors that affect the loss-given-default of the facility, such as support or collateral. Internal obligor ratings that generally correspond to BBB and above are considered investment grade, while those below are considered non-investment grade. Citigroup also has incorporated climate risk assessment and reporting criteria for certain obligors, as necessary. Factors evaluated include consideration of climate risk to an obligor's business and physical assets and, when relevant, consideration of cost-effective options to reduce greenhouse gas emissions. The following table presents the corporate credit portfolio by facility risk rating as a percentage of the total corporate credit portfolio:

	Total Exposure December 31, 2015	September 30, 2015	December 31, 2014	
AAA/AA/A	48	%49	%49	%
BBB	35	35	33	
BB/B	15	15	16	
CCC or below	2	1	1	
Unrated	—	—	1	
Total	100	%100	%100	%

Note: Total exposure includes direct outstandings and unfunded lending commitments.

Citi's corporate credit portfolio is also diversified by industry. The following table shows the allocation of Citi's total corporate credit portfolio by industry:

	Total Exposure			
	December 31, 2015	September 30, 2015	December 31, 2014	
Transportation and industrial	20	%21	%21	%
Consumer retail and health	16	16	17	
Technology, media and telecom	12	10	9	
Power, chemicals, commodities and metals and mining	11	10	10	
Energy ⁽¹⁾	9	9	10	
Banks/broker-dealers/finance companies	7	7	8	
Real estate	6	6	6	
Hedge funds	5	6	5	
Insurance and special purpose entities	5	6	5	
Public sector	5	5	5	
Other industries	4	4	4	
Total	100	%100	%100	%

Note: Total exposure includes direct outstandings and unfunded lending commitments.

(1) In addition to this exposure, Citi has energy-related exposure within the "Public sector" (e.g., energy-related state-owned entities) and "Transportation and industrial" sector (e.g., off-shore drilling entities) included in the table above. As of December 31, 2015, Citi's total exposure to these energy-related entities remained largely consistent with the prior quarter, at approximately \$6 billion, of which approximately \$4 billion consisted of direct outstanding funded loans.

Exposure to the Energy and Energy-Related Sector

As of December 31, 2015, Citi's total corporate credit exposure to the energy and energy-related sector (see footnote 1 to the table above) was approximately \$58 billion, with approximately \$21 billion, or 3%, of Citi's total outstanding loans consisting of direct outstanding funded loans. This compared to approximately \$61 billion of total corporate credit exposure and \$21 billion of direct outstanding funded loans as of September 30, 2015. In addition, as of December 31, 2015, approximately 72% of Citi's total corporate credit energy and energy-related exposure was in the United States, United Kingdom and Canada (compared to approximately 73% at September 30, 2015). Also as of December 31, 2015, approximately 80% of Citi's total energy and energy-related exposures were rated investment grade (compared to approximately 79% as of September 30, 2015).

During the fourth quarter of 2015, Citi built additional energy and energy-related loan loss reserves of approximately \$250 million, and incurred approximately \$75 million of net credit losses in these portfolios. For the full year 2015, Citi built net loan loss reserves against energy and energy-related exposures by approximately \$530

million, and incurred net credit losses of approximately \$95 million. As of December 31, 2015, Citi held loan loss reserves against its funded energy and energy-related loans equal to approximately 3.8% of these loans. For additional information on energy and energy-related reserving actions in ICG, see "Institutional Clients Group" above.

Exposure to Banks, Broker-Dealers and Finance Companies

As of December 31, 2015, Citi's total corporate credit exposure to banks, broker-dealers and finance companies was approximately \$42 billion, of which \$29 billion represented direct outstanding funded loans, or 5% of Citi's total outstanding loans. These amounts were mostly unchanged when compared to \$43 billion of total corporate credit exposure and \$29 billion of direct outstanding funded loans to banks, broker-dealers and finance companies as of September 30, 2015. Also as of December 31, 2015, approximately 84% of Citi's bank, broker-dealers and finance companies total corporate credit exposure was rated investment grade.

Included in the amounts noted above, Citi's total corporate credit exposure to banks was approximately \$26 billion as of December 31, 2015 and was not concentrated in any particular geographic region. Of this exposure, more than 70% had a tenor of less than 12 months. As of December 31, 2015, Citi's direct outstanding funded loans to banks was \$21 billion, or 3% of Citi's total outstanding loans.

In addition to the corporate lending exposures described above, Citi has additional exposure to banks, broker-dealers and finance companies in the form of derivatives and securities financing transactions, which are typically executed as repurchase and reverse repurchase agreements or securities loaned or borrowed arrangements. As of December 31, 2015, Citi had net derivative credit exposure to banks, broker dealers and finance companies of approximately \$5 billion after the application of netting arrangements, legally enforceable margin agreements and other collateral arrangements. The collateral considered as part of the net derivative credit exposure was represented primarily by high quality, liquid assets. As of December 31, 2015, Citi had net credit exposure to banks, broker-dealers and finance companies in the form of securities financing transactions of \$7 billion after the application of netting and collateral arrangements. The collateral considered in the net exposure for the securities financing transactions exposure was primarily cash and highly liquid investment grade securities.

Credit Risk Mitigation

As part of its overall risk management activities, Citigroup uses credit derivatives and other risk mitigants to hedge portions of the credit risk in its corporate credit portfolio, in addition to outright asset sales. The results of the mark-to-market and any realized gains or losses on credit derivatives are reflected primarily in Other revenue on the Consolidated Statement of Income.

At December 31, 2015, September 30, 2015 and December 31, 2014, \$34.5 billion, \$33.0 billion and \$27.6 billion, respectively, of the corporate credit portfolio was economically hedged. Citigroup's expected loss model used in the calculation of its loan loss reserve does not include the favorable impact of credit derivatives and other mitigants that are marked to market. In addition, the reported amounts of direct outstandings and unfunded lending commitments in the tables above do not reflect the impact of these hedging transactions. The credit protection was economically hedging underlying corporate credit portfolio exposures with the following risk rating distribution:

Rating of Hedged Exposure

	December 31, 2015	September 30, 2015	December 31, 2014	
AAA/AA/A	21	% 24	% 24	%
BBB	48	44	42	
BB/B	27	28	28	
CCC or below	4	4	6	
Total	100	% 100	% 100	%

The credit protection was economically hedging underlying corporate credit portfolio exposures with the following industry distribution:

Industry of Hedged Exposure

	December 31, 2015	September 30, 2015	December 31, 2014	
Transportation and industrial	28	% 28	% 30	%
Consumer retail and health	17	15	11	
Technology, media and telecom	16	15	15	
Energy	13	13	10	
Power, chemicals, commodities and metals and mining	12	13	15	
Public sector	4	4	6	
Insurance and special purpose entities	5	6	4	
Banks/broker-dealers	4	4	7	
Other industries	1	2	2	
Total	100	% 100	% 100	%

Loan Maturities and Fixed/Variable Pricing Corporate Loans

In millions of dollars at December 31, 2015	Due within 1 year	Over 1 year but within 5 years	Over 5 years	Total
Corporate loan				

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In U.S. offices				
Commercial and industrial loans	\$ 19,921	\$ 13,522	\$ 7,704	\$ 41,147
Financial institutions	17,620	11,961	6,815	36,396
Mortgage and real estate	18,187	12,345	7,033	37,565
Lease financing	862	585	333	1,780
Installment, revolving credit, other	16,157	10,968	6,249	33,374
In offices outside the U.S.	90,365	34,440	13,427	138,232
Total corporate loans	\$ 163,112	\$ 83,821	\$ 41,561	\$ 288,494
Fixed/variable pricing of corporate loans with maturities due after one year ⁽¹⁾				
Loans at fixed interest rates		\$ 9,858	\$ 11,192	
Loans at floating or adjustable interest rates		73,963	30,369	
Total		\$ 83,821	\$ 41,561	

(1) Based on contractual terms. Repricing characteristics may effectively be modified from time to time using derivative contracts. See Note 23 to the Consolidated Financial Statements.

ADDITIONAL CONSUMER AND CORPORATE CREDIT DETAILS

Loans Outstanding

In millions of dollars	December 31,				
	2015	2014	2013	2012	2011
Consumer loans					
In U.S. offices					
Mortgage and real estate ⁽¹⁾	\$80,281	\$96,533	\$108,453	\$125,946	\$139,177
Installment, revolving credit, and other	3,480	14,450	13,398	14,070	15,616
Cards	112,800	112,982	115,651	111,403	117,908
Commercial and industrial	6,407	5,895	6,592	5,344	4,766
Lease financing	—	—	—	—	1
	\$202,968	\$229,860	\$244,094	\$256,763	\$277,468
In offices outside the U.S.					
Mortgage and real estate ⁽¹⁾	\$47,062	\$54,462	\$55,511	\$54,709	\$52,052
Installment, revolving credit, and other	29,480	31,128	33,182	33,958	32,673
Cards	27,342	32,032	36,740	40,653	38,926
Commercial and industrial	21,679	22,561	24,107	22,225	21,915
Lease financing	427	609	769	781	711
	\$125,990	\$140,792	\$150,309	\$152,326	\$146,277
Total consumer loans	\$328,958	\$370,652	\$394,403	\$409,089	\$423,745
Unearned income ⁽²⁾	825	(682)	(572)	(418)	(405)
Consumer loans, net of unearned income	\$329,783	\$369,970	\$393,831	\$408,671	\$423,340
Corporate loans					
In U.S. offices					
Commercial and industrial	\$41,147	\$35,055	\$32,704	\$26,985	\$20,830
Loans to financial institutions	36,396	36,272	25,102	18,159	15,113
Mortgage and real estate ⁽¹⁾	37,565	32,537	29,425	24,705	21,516
Installment, revolving credit, and other	33,374	29,207	34,434	32,446	33,182
Lease financing	1,780	1,758	1,647	1,410	1,270
	\$150,262	\$134,829	\$123,312	\$103,705	\$91,911
In offices outside the U.S.					
Commercial and industrial	\$78,420	\$79,239	\$82,663	\$82,939	\$79,764
Loans to financial institutions	28,704	33,269	38,372	37,739	29,794
Mortgage and real estate ⁽¹⁾	5,106	6,031	6,274	6,485	6,885
Installment, revolving credit, and other	20,853	19,259	18,714	14,958	14,114
Lease financing	238	356	527	605	568
Governments and official institutions	4,911	2,236	2,341	1,159	1,576
	\$138,232	\$140,390	\$148,891	\$143,885	\$132,701
Total corporate loans	\$288,494	\$275,219	\$272,203	\$247,590	\$224,612
Unearned income ⁽³⁾	(660)	(554)	(562)	(797)	(710)
Corporate loans, net of unearned income	\$287,834	\$274,665	\$271,641	\$246,793	\$223,902
Total loans—net of unearned income	\$617,617	\$644,635	\$665,472	\$655,464	\$647,242
Allowance for loan losses—on drawn exposures	(12,626)	(15,994)	(19,648)	(25,455)	(30,115)
Total loans—net of unearned income and allowance for credit losses	\$604,991	\$628,641	\$645,824	\$630,009	\$617,127
Allowance for loan losses as a percentage of total loans—	2.06%	2.50%	2.97%	3.92%	4.69%

net of unearned income⁽⁴⁾

Allowance for consumer loan losses as a percentage of total consumer loans—net of unearned income ⁽⁴⁾	3.01	%3.68	%4.34	%5.57	%6.45	%
Allowance for corporate loan losses as a percentage of total corporate loans—net of unearned income ⁽⁴⁾	0.96	%0.89	%0.97	%1.14	%1.31	%

(1) Loans secured primarily by real estate.

Unearned income on consumer loans primarily represents unamortized origination fees, costs, premiums and discounts. Prior to December 31, 2015, these items were more than offset by prepaid interest on loans outstanding issued by OneMain Financial. The sale of OneMain Financial was completed on November 16, 2015.

(2) Unearned income on corporate loans primarily represents interest received in advance but not yet earned on loans originated on a discount basis.

(3) All periods exclude loans that are carried at fair value.

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Details of Credit Loss Experience

In millions of dollars	2015	2014	2013	2012	2011
Allowance for loan losses at beginning of period	\$15,994	\$19,648	\$25,455	\$30,115	\$40,655
Provision for loan losses					
Consumer	\$6,265	\$6,693	\$7,603	\$10,371	\$12,075
Corporate	843	135	1	87	(739)
	\$7,108	\$6,828	\$7,604	\$10,458	\$11,336
Gross credit losses					
Consumer					
In U.S. offices ⁽¹⁾⁽²⁾	\$5,500	\$6,780	\$8,402	\$12,226	\$15,767
In offices outside the U.S.	3,210	3,901	3,998	4,139	4,932
Corporate					
Commercial and industrial, and other					
In U.S. offices	112	66	125	154	392
In offices outside the U.S.	164	283	144	305	649
Loans to financial institutions					
In U.S. offices	—	2	2	33	215
In offices outside the U.S.	4	13	7	68	391
Mortgage and real estate					
In U.S. offices	8	8	62	59	182
In offices outside the U.S.	43	55	29	21	171
	\$9,041	\$11,108	\$12,769	\$17,005	\$22,699
Credit recoveries ⁽³⁾					
Consumer					
In U.S. offices	\$975	\$1,122	\$1,073	\$1,302	\$1,467
In offices outside the U.S.	667	874	1,065	1,055	1,159
Corporate					
Commercial and industrial, and other					
In U.S. offices	22	64	62	243	175
In offices outside the U.S.	59	63	52	95	93
Loans to financial institutions					
In U.S. offices	7	1	1	—	—
In offices outside the U.S.	2	11	20	43	89
Mortgage and real estate					
In U.S. offices	7	—	31	17	27
In offices outside the U.S.	—	—	2	19	2
	\$1,739	\$2,135	\$2,306	\$2,774	\$3,012
Net credit losses					
In U.S. offices	\$4,609	\$5,669	\$7,424	\$10,910	\$14,887
In offices outside the U.S.	2,693	3,304	3,039	3,321	4,800
Total	\$7,302	\$8,973	\$10,463	\$14,231	\$19,687
Other— ⁽⁴⁾⁽⁵⁾⁽⁶⁾⁽⁷⁾⁽⁸⁾⁽⁹⁾⁽¹⁰⁾ net	\$(3,174)	\$(1,509)	\$(2,948)	(887)	\$(2,189)
Allowance for loan losses at end of period	\$12,626	\$15,994	\$19,648	\$25,455	\$30,115
Allowance for loan losses as a percentage of total loans ⁽¹¹⁾	2.06	%2.50	%2.97	%3.92	%4.69
Allowance for unfunded lending commitments ⁽¹⁰⁾⁽¹²⁾	\$1,402	\$1,063	\$1,229	\$1,119	\$1,136
Total allowance for loan losses and unfunded lending commitments	\$14,028	\$17,057	\$20,877	\$26,574	\$31,251
Net consumer credit losses	\$7,068	\$8,685	\$10,262	\$14,008	\$18,073
As a percentage of average consumer loans	2.06	%2.28	%2.63	%3.43	%4.15

Net corporate credit losses	\$234	\$288	\$201	\$223	\$1,614
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As a percentage of average corporate loans	0.08	%0.10	%0.08	%0.09	%0.79	%
Allowance for loan losses at end of period ⁽¹³⁾						
Citicorp	\$10,616	\$11,465	\$13,174	\$14,623	\$16,699	
Citi Holdings	2,010	4,529	6,474	10,832	13,416	
Total Citigroup	\$12,626	\$15,994	\$19,648	\$25,455	\$30,115	
Allowance by type						
Consumer	\$9,916	\$13,605	\$17,064	\$22,679	\$27,236	
Corporate	2,710	2,389	2,584	2,776	2,879	
Total Citigroup	\$12,626	\$15,994	\$19,648	\$25,455	\$30,115	

(1) 2012 includes approximately \$635 million of incremental charge-offs related to the Office of the Comptroller of the Currency (OCC) guidance issued in the third quarter of 2012, which required mortgage loans to borrowers that have gone through Chapter 7 U.S. Bankruptcy Code to be written down to collateral value. There was a corresponding approximate \$600 million release in the third quarter of 2012 Allowance for loan losses related to these charge-offs. 2012 also includes a benefit to charge-offs of approximately \$40 million related to finalizing the impact of the OCC guidance in the fourth quarter of 2012.

(2) 2012 includes approximately \$370 million of incremental charge-offs related to previously deferred principal balances on modified loans in the first quarter of 2012. These charge-offs were related to anticipated forgiveness of principal in connection with the national mortgage settlement. There was a corresponding approximate \$350 million reserve release in the first quarter of 2012 related to these charge-offs.

(3) Recoveries have been reduced by certain collection costs that are incurred only if collection efforts are successful.

(4) Includes all adjustments to the allowance for credit losses, such as changes in the allowance from acquisitions, dispositions, securitizations, FX translation, purchase accounting adjustments, etc.

(5) 2015 includes reductions of approximately \$2.4 billion related to the sale or transfer to held-for-sale (HFS) of various loan portfolios, which includes approximately \$1.5 billion related to the transfer of various real estate loan portfolios to HFS. Additionally, 2015 includes a reduction of approximately \$474 million related to FX translation.

(6) 2014 includes reductions of approximately \$1.1 billion related to the sale or transfer to HFS of various loan portfolios, which includes approximately \$411 million related to the transfer of various real estate loan portfolios to HFS, approximately \$204 million related to the transfer to HFS of a business in Greece, approximately \$177 million related to the transfer to HFS of a business in Spain, approximately \$29 million related to the transfer to HFS of a business in Honduras, and approximately \$108 million related to the transfer to HFS of various EMEA loan portfolios. Additionally, 2014 includes a reduction of approximately \$463 million related to FX translation.

(7) 2013 includes reductions of approximately \$2.4 billion related to the sale or transfer to HFS of various loan portfolios, which includes approximately \$360 million related to the sale of Credicard and approximately \$255 million related to a transfer to HFS of a loan portfolio in Greece, approximately \$230 million related to a non-provision transfer of reserves associated with deferred interest to other assets which includes deferred interest and approximately \$220 million related to FX translation.

(8) 2012 includes reductions of approximately \$875 million related to the sale or transfer to HFS of various U.S. loan portfolios.

(9) 2011 includes reductions of approximately \$1.6 billion related to the sale or transfer to HFS of various U.S. loan portfolios, approximately \$240 million related to the sale of the Egg Banking PLC credit card business, approximately \$72 million related to the transfer of the Citi Belgium business to held-for-sale and approximately \$290 million related to FX translation.

(10) 2015 includes a reclassification of \$271 million of Allowance for loan losses to allowance for unfunded lending commitments, included in the Other line item. This reclassification reflects the re-attribution of \$271 million in allowance for credit losses between the funded and unfunded portions of the corporate credit portfolios and does not reflect a change in the underlying credit performance of these portfolios.

(11) December 31, 2015, December 31, 2014, December 31, 2013, December 31, 2012 and December 31, 2011 exclude \$5.0 billion, \$5.9 billion, \$5.0 billion, \$5.3 billion and \$5.3 billion, respectively, of loans which are

carried at fair value.

(12) Represents additional credit reserves recorded as Other liabilities on the Consolidated Balance Sheet.

Allowance for loan losses represents management's best estimate of probable losses inherent in the portfolio, as well as probable losses related to large individually evaluated impaired loans and troubled debt restructurings. See

(13) "Significant Accounting Policies and Significant Estimates" and Note 1 to the Consolidated Financial Statements below. Attribution of the allowance is made for analytical purposes only and the entire allowance is available to absorb probable credit losses inherent in the overall portfolio.

Allowance for Loan Losses

The following tables detail information on Citi's allowance for loan losses, loans and coverage ratios:

In billions of dollars	December 31, 2015		
	Allowance for loan losses	Loans, net of unearned income	Allowance as a percentage of loans ⁽¹⁾
North America cards ⁽²⁾	\$4.5	\$113.4	4.0 %
North America mortgages ⁽³⁾⁽⁴⁾	1.7	79.6	2.1
North America other	0.5	12.6	4.0
International cards	1.6	26.7	6.0
International other ⁽⁵⁾	1.6	97.5	1.6
Total consumer	\$9.9	\$329.8	3.0 %
Total corporate	2.7	287.8	1.0
Total Citigroup	\$12.6	\$617.6	2.0 %

(1) Allowance as a percentage of loans excludes loans that are carried at fair value.

(2) Includes both Citi-branded cards and Citi retail services. The \$4.5 billion of loan loss reserves represented approximately 15 months of coincident net credit loss coverage.

Of the \$1.7 billion, approximately \$1.6 billion was allocated to North America mortgages in Citi Holdings. The \$1.7 billion of loan loss reserves represented approximately 97 months of coincident net credit loss coverage (for both total North America mortgages and Citi Holdings North America mortgages), excluding the HFS portfolios.

(3) The increased months of coverage from December 31, 2014 was primarily due to the high percentage of troubled debt restructuring (TDR) loans and related Allowance for loan losses, as well as the transfer of certain consumer mortgages and related Allowance for loan losses to HFS during the fourth quarter of 2015.

Of the \$1.7 billion in loan loss reserves, approximately \$0.6 billion and \$1.1 billion are determined in accordance with ASC 450-20 and ASC 310-10-35 (troubled debt restructurings), respectively. Of the \$79.6 billion in loans,

(4) approximately \$72.3 billion and \$7.1 billion of the loans are evaluated in accordance with ASC 450-20 and ASC 310-10-35 (troubled debt restructurings), respectively. For additional information, see Note 16 to the Consolidated Financial Statements.

(5) Includes mortgages and other retail loans.

In billions of dollars	December 31, 2014		
	Allowance for loan losses	Loans, net of unearned income	Allowance as a percentage of loans ⁽¹⁾
North America cards ⁽²⁾	\$4.9	\$114.0	4.3 %
North America mortgages ⁽³⁾⁽⁴⁾	3.7	95.9	3.9
North America other	1.2	21.6	5.6
International cards	1.9	31.5	6.0
International other ⁽⁵⁾	1.9	106.9	1.8
Total consumer	\$13.6	\$369.9	3.7 %
Total corporate	2.4	274.7	0.9
Total Citigroup	\$16.0	\$644.6	2.5 %

(1) Allowance as a percentage of loans excludes loans that are carried at fair value.

(2) Includes both Citi-branded cards and Citi retail services. The \$4.9 billion of loan loss reserves represented approximately 15 months of coincident net credit loss coverage.

Of the \$3.7 billion, approximately \$3.5 billion was allocated to North America mortgages in Citi Holdings. The \$3.7 billion of loan loss reserves represented approximately 53 months of coincident net credit loss coverage (for both total North America mortgages and Citi Holdings North America mortgages).

(4)

Of the \$3.7 billion in loan loss reserves, approximately \$1.2 billion and \$2.5 billion are determined in accordance with ASC 450-20 and ASC 310-10-35 (troubled debt restructurings), respectively. Of the \$95.9 billion in loans, approximately \$80.4 billion and \$15.2 billion of the loans are evaluated in accordance with ASC 450-20 and ASC 310-10-35 (troubled debt restructurings), respectively. For additional information, see Note 16 to the Consolidated Financial Statements.

(5) Includes mortgages and other retail loans.

Non-Accrual Loans and Assets and Renegotiated Loans

There is a certain amount of overlap among non-accrual loans and assets and renegotiated loans. The following summary provides a general description of each category:

Non-Accrual Loans and Assets:

Corporate and consumer (commercial market) non-accrual status is based on the determination that payment of interest or principal is doubtful.

A corporate loan may be classified as non-accrual and still be performing under the terms of the loan structure.

Payments received on corporate non-accrual loans are generally applied to loan principal and not reflected as interest income. Approximately 45% and 40% of Citi's corporate non-accrual loans were performing at December 31, 2015 and September 30, 2015, respectively.

Consumer non-accrual status is generally based on aging, i.e., the borrower has fallen behind on payments.

Mortgage loans in regulated bank entities discharged through Chapter 7 bankruptcy, other than FHA insured loans, are classified as non-accrual. Non-bank mortgage loans discharged through Chapter 7 bankruptcy are classified as non-accrual at 90 days or more past due. In addition, home equity loans in regulated bank entities are classified as non-accrual if the related residential first mortgage loan is 90 days or more past due.

North America Citi-branded cards and Citi retail services are not included because, under industry standards, credit card loans accrue interest until such loans are charged off, which typically occurs at 180 days contractual delinquency.

Renegotiated Loans:

Includes both corporate and consumer loans whose terms have been modified in a troubled debt restructuring (TDR).

Includes both accrual and non-accrual TDRs.

Non-Accrual Loans and Assets

The table below summarizes Citigroup's non-accrual loans as of the periods indicated. Non-accrual loans may still be current on interest payments. In situations where Citi reasonably expects that only a portion of the principal owed

will ultimately be collected, all payments received are reflected as a reduction of principal and not as interest income. For all other non-accrual loans, cash interest receipts are generally recorded as revenue.

In millions of dollars	December 31,				
	2015	2014	2013	2012	2011
Citicorp	\$3,092	\$3,011	\$3,777	\$4,031	\$3,776
Citi Holdings	2,162	4,096	5,226	7,499	7,292
Total non-accrual loans	\$5,254	\$7,107	\$9,003	\$11,530	\$11,068
Corporate non-accrual loans ⁽¹⁾⁽²⁾					
North America	\$818	\$321	\$736	\$735	\$1,246
EMEA	317	267	766	1,131	1,293
Latin America	301	416	127	128	362
Asia	128	179	279	339	335
Total corporate non-accrual loans	\$1,564	\$1,183	\$1,908	\$2,333	\$3,236
Citicorp	\$1,511	\$1,126	\$1,580	\$1,909	\$2,217
Citi Holdings	53	57	328	424	1,019
Total corporate non-accrual loans	\$1,564	\$1,183	\$1,908	\$2,333	\$3,236
Consumer non-accrual loans ⁽¹⁾⁽³⁾					
North America	\$2,515	\$4,412	\$5,238	\$7,149	\$5,888
Latin America	876	1,188	1,426	1,285	1,107
Asia ⁽⁴⁾	299	324	431	763	837
Total consumer non-accrual loans	\$3,690	\$5,924	\$7,095	\$9,197	\$7,832
Citicorp	\$1,581	\$1,885	\$2,197	\$2,122	\$1,559
Citi Holdings	2,109	4,039	4,898	7,075	6,273
Total consumer non-accrual loans	\$3,690	\$5,924	\$7,095	\$9,197	\$7,832

Excludes purchased distressed loans, as they are generally accreting interest. The carrying value of these loans was (1) \$250 million at December 31, 2015, \$421 million at December 31, 2014, \$703 million at December 31, 2013, \$537 million at December 31, 2012 and \$511 million at December 31, 2011.

Included within the increase in corporate non-accrual loans from December 31, 2014 to December 31, 2015 is an (2) approximate \$340 million increase during the third quarter of 2015 primarily related to Citi's North America energy and energy-related corporate credit exposure. For additional information, see "Corporate Credit Details" above.

(3) 2015 decline includes the impact related to the transfer of approximately \$8 billion of mortgage loans to Loans, held-for-sale (HFS) (included within Other assets).

(4) For reporting purposes, Asia GCB includes the results of operations of EMEA GCB for all periods presented.

The changes in Citigroup's non-accrual loans were as follows:

In millions of dollars	Year ended		
	December 31, 2015		
	Corporate	Consumer	Total
Non-accrual loans at beginning of period	\$1,183	\$5,924	\$7,107
Additions	1,318	5,219	6,537
Sales and transfers to held-for-sale	(222)	(2,249)	(2,471)
Returned to performing	(64)	(1,080)	(1,144)
Paydowns/settlements	(459)	(1,255)	(1,714)

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Charge-offs	(145)	(2,642)	(2,787)
Other	(47)	(227)	(274)
Ending balance	\$1,564		\$3,690		\$5,254	

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(3) 2015 decline includes the impact related to the transfer of approximately \$8 billion of mortgage loans to Loans, held-for-sale (HFS) (included within Other assets).
N/A Not available at the Citicorp or Citi Holdings level.

Renegotiated Loans

The following table presents Citi's loans modified in TDRs.

In millions of dollars	Dec. 31, 2015	Dec. 31, 2014
Corporate renegotiated loans ⁽¹⁾		
In U.S. offices		
Commercial and industrial ⁽²⁾	\$25	\$12
Mortgage and real estate ⁽³⁾	104	106
Loans to financial institutions	5	—
Other	273	316
	\$407	\$434
In offices outside the U.S.		
Commercial and industrial ⁽²⁾	\$111	\$105
Mortgage and real estate ⁽³⁾	33	1
Other	35	39
	\$179	\$145
Total corporate renegotiated loans	\$586	\$579
Consumer renegotiated loans ⁽⁴⁾⁽⁵⁾⁽⁶⁾⁽⁷⁾		
In U.S. offices		
Mortgage and real estate ⁽⁸⁾	\$7,058	\$15,514
Cards	1,396	1,751
Installment and other	79	580
	\$8,533	\$17,845
In offices outside the U.S.		
Mortgage and real estate	\$474	\$695
Cards	555	656
Installment and other	524	586
	\$1,553	\$1,937
Total consumer renegotiated loans	\$10,086	\$19,782

(1) Includes \$258 million and \$135 million of non-accrual loans included in the non-accrual assets table above at December 31, 2015 and December 31, 2014, respectively. The remaining loans are accruing interest.

In addition to modifications reflected as TDRs at December 31, 2015, Citi also modified \$173 million and \$17 million of commercial loans risk rated "Substandard Non-Performing" or worse (asset category defined by (2) banking regulators) in offices inside and outside the U.S., respectively. These modifications were not considered TDRs because the modifications did not involve a concession (a required element of a TDR for accounting purposes).

In addition to modifications reflected as TDRs at December 31, 2015, Citi also modified \$22 million of (3) commercial real estate loans risk rated "Substandard Non-Performing" or worse (asset category defined by banking regulators) in offices inside the U.S. These modifications were not considered TDRs because the modifications did not involve a concession (a required element of a TDR for accounting purposes).

(4) Includes \$1,861 million and \$3,132 million of non-accrual loans included in the non-accrual assets table above at December 31, 2015 and 2014, respectively. The remaining loans are accruing interest.

(5) Includes \$53 million and \$124 million of commercial real estate loans at December 31, 2015 and 2014, respectively.

(6) Includes \$138 million and \$184 million of other commercial loans at December 31, 2015 and 2014, respectively.

(7) Smaller-balance homogeneous loans were derived from Citi's risk management systems.

(8) Reduction in 2015 includes \$7,548 million related to TDRs sold or transferred to held-for-sale.

Foregone Interest Revenue on Loans⁽¹⁾

In millions of dollars	In U.S. offices	In non- U.S. offices	2015 total
Interest revenue that would have been accrued at original contractual rates ⁽²⁾	\$1,155	\$555	\$1,710
Amount recognized as interest revenue ⁽²⁾	691	189	880
Foregone interest revenue	\$464	\$366	\$830

(1) Relates to corporate non-accrual loans, renegotiated loans and consumer loans on which accrual of interest has been suspended.

(2) Interest revenue in offices outside the U.S. may reflect prevailing local interest rates, including the effects of inflation and monetary correction in certain countries.

LIQUIDITY RISK

OVERVIEW

Adequate and diverse sources of funding and liquidity are essential to Citi's businesses. Funding and liquidity risks arise from several factors, many of which are mostly or entirely outside Citi's control, such as disruptions in the financial markets, changes in key funding sources, credit spreads, changes in Citi's credit ratings and political and economic conditions in certain countries. For additional information, see "Risk Factors" above.

Citi's funding and liquidity objectives are aimed at (i) funding its existing asset base; (ii) growing its core businesses in Citicorp; (iii) maintaining sufficient liquidity, structured appropriately, so that Citi can operate under a variety of adverse circumstances, including potential firm-specific and/or market liquidity events in varying durations and severity; and (iv) satisfying regulatory requirements. Citigroup's primary liquidity objectives are established by entity, and in aggregate, across two major categories:

Citibank; and

the non-bank and other, which includes the parent holding company (Citigroup), Citi's broker-dealer subsidiaries and other non-bank subsidiaries that are consolidated into Citigroup, as well as Banamex and Citibank (Switzerland) AG.

At an aggregate level, Citigroup's goal is to maintain sufficient funding in amount and tenor to fully fund customer assets and to provide an appropriate amount of cash and high-quality liquid assets (as discussed further below), even in times of stress. The liquidity risk management framework provides that certain entities be self-sufficient or net providers of liquidity, including in conditions established under their designated stress tests.

Citi's primary sources of funding include (i) deposits via Citi's bank subsidiaries, which are Citi's most stable and lowest cost source of long-term funding, (ii) long-term debt (primarily senior and subordinated debt) primarily issued at the parent and certain bank subsidiaries, and (iii) stockholders' equity. These sources may be supplemented by short-term borrowings, primarily in the form of secured funding transactions.

As referenced above, Citigroup works to ensure that the structural tenor of these funding sources is sufficiently long in relation to the tenor of its asset base. The goal of Citi's asset/liability management is to ensure that there is excess tenor in the liability structure relative to the liquidity profile of the assets. This reduces the risk that liabilities will become due before asset maturities or monetizations through sale, and in turn generates liquidity. This liquidity is held primarily in the form of high-quality liquid assets (HQLA), as set forth in the table below.

Citi's Treasurer has overall responsibility for management of Citi's HQLA. Citi's liquidity is managed via a centralized treasury model by Corporate Treasury, in conjunction with regional and in-country treasurers. Pursuant to this approach, Citi's HQLA is managed with emphasis on asset-liability management and entity-level liquidity adequacy throughout Citi.

Citi's Chief Risk Officer is responsible for the overall risk profile of Citi's HQLA. The Chief Risk Officer and Citi's CFO co-chair Citi's Asset Liability Management Committee (ALCO), which includes Citi's Treasurer and other senior executives. ALCO sets the strategy of the liquidity portfolio and monitors its performance. Significant changes to portfolio asset allocations need to be approved by ALCO.

High-Quality Liquid Assets (HQLA)

In billions of dollars	Citibank			Non-Bank and Other ⁽¹⁾			Total		
	Dec. 31, 2015	Sept. 30, 2015	Dec. 31, 2014	Dec. 31, 2015	Sept. 30, 2015	Dec. 31, 2014	Dec. 31, 2015	Sept. 30, 2015	Dec. 31, 2014
Available cash	\$52.4	\$68.9	\$65.2	\$16.9	\$21.5	\$37.5	\$69.3	\$90.4	\$102.7
U.S. sovereign	110.1	119.6	112.4	32.4	22.4	27.1	142.4	142.0	139.5
U.S. agency/agency MBS	63.8	60.1	56.4	1.0	1.0	0.8	64.9	61.1	57.1

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Foreign government debt ⁽²⁾	84.8	87.6	97.3	14.9	15.5	12.8	99.7	103.0	110.2
Other investment grade	1.0	0.8	1.8	1.2	1.5	1.4	2.2	2.4	3.1
Total	\$312.1	\$337.0	\$333.1	\$66.4	\$61.9	\$79.6	\$378.5	\$398.9	\$412.6

Note: Amounts set forth in the table above are as of period end and may increase or decrease intra-period in the ordinary course of business. For securities, the amounts represent the liquidity value that potentially could be realized, and thus exclude any securities that are encumbered, as well as the haircuts that would be required for securities financing transactions.

“Non-Bank and Other” includes the parent holding company (Citigroup), Citi’s broker-dealer subsidiaries and other non-bank subsidiaries that are consolidated into Citigroup as well as Banamex and Citibank (Switzerland) AG.

(1) Banamex and Citibank (Switzerland) AG account for approximately \$6 billion of the “Non-Bank and Other” HQLA balance as of December 31, 2015.

Foreign government debt includes securities issued or guaranteed by foreign sovereigns, agencies and multilateral (2) development banks. Foreign government debt securities are held largely to support local liquidity requirements and

Citi’s local franchises, and principally include government bonds from Hong Kong, India, Korea and Mexico.

As set forth in the table above, Citi's HQLA decreased both year-over-year as well as sequentially, driven primarily by reductions in long-term debt and short-term borrowings, as discussed further under "Secured Funding Transactions and Short-Term Borrowings" below.

Citi's HQLA as set forth above does not include Citi's available borrowing capacity from the Federal Home Loan Banks (FHLB) of which Citi is a member, which was approximately \$36 billion as of December 31, 2015 (unchanged from September 30, 2015 and compared to \$26 billion as of December 31, 2014) and maintained by eligible collateral pledged to such banks. The HQLA also does not include Citi's borrowing capacity at the U.S. Federal Reserve Bank discount window or other central banks, which would be in addition to the resources noted above.

In general, Citi's liquidity is fungible across legal entities within its bank group. Citi's bank subsidiaries, including Citibank, can lend to the Citi parent and broker-dealer entities in accordance with Section 23A of the Federal Reserve Act. As of December 31, 2015, the capacity available for lending to these entities under Section 23A was approximately \$17 billion, largely unchanged from prior periods, subject to certain eligible non-cash collateral requirements.

Loans

As part of its funding and liquidity objectives, Citi seeks to fund its existing asset base appropriately as well as maintain sufficient liquidity to grow its core businesses in Citicorp, including its loan portfolio. Citi maintains a diversified portfolio of loans to its consumer and institutional clients. The table below sets forth the end-of-period loans, by business and/or segment, and the total average loans for each of the periods indicated:

In billions of dollars	Dec. 31, 2015	Sept. 30, 2015	Dec. 31, 2014
Global Consumer Banking			
North America	\$165.1	\$158.5	\$160.8
Latin America	31.5	31.4	35.5
Asia ⁽¹⁾	88.7	88.4	94.8
Total	\$285.3	\$278.3	\$291.1
Institutional Clients Group			
Corporate lending	114.9	116.5	108.4
Treasury and trade solutions (TTS)	71.3	73.4	76.0
Private bank, markets and securities services and other	101.3	98.9	89.9
Total	\$287.5	\$288.8	\$274.3
Total Citicorp	572.8	567.1	565.4
Total Citi Holdings	44.8	55.3	79.2
Total Citigroup loans (EOP)	\$617.6	\$622.4	\$644.6
Total Citigroup loans (AVG)	\$625.1	\$623.2	\$650.8

(1) For reporting purposes, includes EMEA GCB for all periods presented.

End-of-period loans declined 4% year-over-year and 1% quarter-over-quarter. Excluding the impact of FX translation, Citigroup's end-of-period loans decreased 1% both year-over-year and sequentially, in each case driven by continued overall declines in Citi Holdings.

Excluding the impact of FX translation, Citicorp loans increased 5% year-over-year. GCB loans grew 2% year-over-year, driven by 3% growth in North America. ICG loans increased 8% year-over-year. Within ICG, corporate loans increased 9% driven by both new business and the funding of prior commitments. Treasury and trade solutions loans declined 3%, as Citi continued to distribute a significant portion of its trade loan originations, which allows it to support its clients while maintaining balance sheet discipline in a continued low spread environment.

Private bank, markets and securities services and other loans grew 14% year-over-year.

Citi Holdings loans decreased 43% year-over-year driven by over \$21 billion of reductions in North America mortgages, including transfers to held-for-sale (see Note 15 to the Consolidated Financial Statements), as well as the

sale of OneMain Financial, which was completed during the fourth quarter of 2015.

Deposits

Deposits are Citi's primary and lowest cost funding source. The table below sets forth the end-of-period deposits, by business and/or segment, and the total average deposits for each of the periods indicated:

In billions of dollars	Dec. 31, 2015	Sept. 30, 2015	Dec. 31, 2014
Global Consumer Banking			
North America	\$172.8	\$170.9	\$171.4
Latin America	40.8	38.8	43.7
Asia ⁽¹⁾	87.8	87.1	89.2
Total	\$301.4	\$296.8	\$304.3
Institutional Clients Group			
Treasury and trade solutions (TTS)	392.2	398.7	378.0
Banking ex-TTS	118.8	117.4	94.5
Markets and securities services	76.3	78.8	82.9
Total	\$587.3	\$594.9	\$555.4
Corporate/Other	12.1	5.4	22.8
Total Citicorp	\$900.8	\$897.1	\$882.5
Total Citi Holdings	7.1	7.1	16.8
Total Citigroup deposits (EOP)	\$907.9	\$904.2	\$899.3
Total Citigroup deposits (AVG)	\$908.8	\$903.1	\$938.7

(1) For reporting purposes, includes EMEA GCB for all periods presented.

End-of-period deposits increased 1% year-over-year and remained relatively unchanged quarter-over-quarter.

Excluding the impact of FX translation, Citigroup's end-of-period deposits increased 4% year-over-year and 1% sequentially, despite significant reductions in Citi Holdings deposits from the prior-year period.

Excluding the impact of FX translation, Citicorp deposits grew 5% year-over-year. Within Citicorp, GCB deposits increased 2% year-over-year, driven by 5% growth in international deposits. ICG deposits increased 9% year-over-year, with continued deposit growth in treasury and trade solutions and the private bank.

The decline in Citi Holdings deposits from the prior-year period was primarily driven by the now-complete transfer of Morgan Stanley Smith Barney (MSSB) deposits to Morgan Stanley.

Citi monitors its deposit base across multiple dimensions, including what Citi refers to as "LCR value" or the liquidity value of the deposit base under the U.S. LCR rules (as discussed under "Short-Term Liquidity Measurement: Liquidity Coverage Ratio (LCR)" below). Citi defines the liquidity value of deposits as the percentage of deposits assumed to remain following a 30-day period of liquidity stress. As discussed below, under the LCR rules, deposits are assigned liquidity values based on expected behavior under stress, determined by the type of deposit and the type of client. Generally, the LCR rules prioritize transactional and operating accounts of consumers (including retail and commercial banking deposits) and corporations respectively, while assigning lower liquidity values to non-operating deposit balances of financial institutions. As of December 31, 2015, Citi's total deposits had an aggregate liquidity value of approximately 73%, down slightly sequentially and unchanged from December 31, 2014. Within the 73% total liquidity value as of year-end 2015, Citi's GCB deposits had a liquidity value of approximately 87% and ICG deposits, including Corporate/Other, had a liquidity value of approximately 66%.

Long-Term Debt

Long-term debt (generally defined as debt with original maturities of one year or more) represents the most significant component of Citi's funding for the parent entities and is a supplementary source of funding for the bank entities.

Long-term debt is an important funding source due in part to its multi-year contractual maturity structure. The weighted-average maturities of unsecured long-term debt issued by Citigroup and its affiliates (including Citibank) with a remaining life greater than one year (excluding remaining trust preferred securities outstanding) was approximately 6.9 years as of December 31, 2015, unchanged from the prior-year period and a slight increase sequentially, due in part to the issuance of longer-dated debt securities and the redemption of shorter-dated debt securities during the fourth quarter of 2015.

Citi's long-term debt outstanding at the parent includes senior and subordinated debt and what Citi refers to as customer-related debt, consisting of structured notes, such as equity- and credit-linked notes, as well as non-structured notes. Citi's issuance of customer-related debt is generally

driven by customer demand and supplements benchmark debt issuance as a source of funding for Citi's parent entities. Citi's long-term debt at the bank also includes FHLB advances and securitizations.

Long-Term Debt Outstanding

The following table sets forth Citi's total long-term debt outstanding for the periods indicated:

In billions of dollars	Dec. 31, 2015	Sept. 30, 2015	Dec. 31, 2014
Parent			
Benchmark debt:			
Senior debt	\$90.3	\$99.5	\$97.9
Subordinated debt	26.9	26.8	25.5
Trust preferred	1.7	1.7	1.7
Customer-related debt			
Structured debt	21.8	23.1	22.3
Non-structured debt	3.0	3.6	5.9
Local country and other ⁽¹⁾	2.4	2.1	4.7
Total parent	\$146.1	\$156.8	\$158.0

Bank			
FHLB borrowings	\$17.8	\$17.3	\$19.8
Securitized ⁽²⁾	30.9	32.0	38.1
Local country and other ⁽¹⁾	6.5	7.4	7.2
Total bank	\$55.2	\$56.7	\$65.1
Total long-term debt	\$201.3	\$213.5	\$223.1

Note: Amounts represent the current value of long-term debt on Citi's Consolidated Balance Sheet which, for certain debt instruments, includes consideration of fair value, hedging impacts and unamortized discounts and premiums.

(1) Local country debt includes debt issued by Citi's affiliates in support of their local operations.

(2) Predominantly credit card securitizations, primarily backed by Citi-branded credit card receivables.

Citi's total long-term debt outstanding decreased both year-over-year and quarter-over-quarter, primarily due to significant buybacks of senior and subordinated debt at the parent level during the fourth quarter of 2015 (discussed below), as well as continued reductions in securitizations at the bank entities.

As part of its liability management, Citi has considered, and may continue to consider, opportunities to repurchase its long-term debt pursuant to open market purchases, tender offers or other means. Such repurchases help reduce Citi's overall funding costs and assist it in meeting regulatory changes and requirements. During 2015, Citi repurchased an aggregate of approximately \$21.1 billion of its outstanding long-term debt, including early redemptions of FHLB advances. Of this amount, approximately \$11.5 billion was repurchased in the fourth quarter of 2015 as Citi completed significant asset sales in Citi Holdings, including the OneMain Financial business. Accordingly, while Citi anticipates continued liability management activities in 2016, it does not currently expect repurchases to remain at the level experienced in 2015.

Long-Term Debt Issuances and Maturities

The table below details Citi's long-term debt issuances and maturities (including repurchases and redemptions) during the periods presented:

In billions of dollars	2015		2014		2013	
	Maturities	Issuances	Maturities	Issuances	Maturities	Issuances
Parent						
Benchmark debt:						
Senior debt	\$23.9	\$20.2	\$18.9	\$18.6	\$25.6	\$17.8
Subordinated debt	4.0	7.5	5.0	2.8	1.0	4.6
Trust preferred	—	—	2.1	—	6.4	—
Customer-related debt:						
Structured debt	7.7	9.1	7.5	9.5	8.5	7.3
Non-structured debt	2.2	0.4	2.4	1.4	3.7	1.0
Local country and other	0.4	1.9	2.4	3.7	0.8	—
Total parent	\$38.2	\$39.1	\$38.3	\$36.0	\$46.0	\$30.7
Bank						
FHLB borrowings	\$4.0	\$2.0	\$8.0	\$13.9	\$11.8	\$9.5
Securitized debt	7.9	0.8	8.9	13.6	2.4	11.5
Local country and other	2.8	2.7	3.7	3.3	3.6	2.7
Total bank	\$14.7	\$5.5	\$20.6	\$30.8	\$17.8	\$23.7
Total	\$52.9	\$44.6	\$58.9	\$66.8	\$63.8	\$54.4

The table below shows Citi's aggregate long-term debt maturities (including repurchases and redemptions) in 2015, as well as its aggregate expected annual long-term debt maturities as of December 31, 2015:

In billions of dollars	Maturities							Total
	2015	2016	2017	2018	2019	2020	Thereafter	
Parent								
Benchmark debt:								
Senior debt	\$23.9	\$11.8	\$14.3	\$17.9	\$13.6	\$6.4	\$26.3	\$90.3
Subordinated debt	4.0	1.5	2.3	1.1	1.3	—	20.7	26.9
Trust preferred	—	—	—	—	—	—	1.7	1.7
Customer-related debt:								
Structured debt	7.7	4.9	2.5	2.4	1.6	2.3	8.1	21.8
Non-structured debt	2.2	0.5	0.5	0.4	0.2	0.2	1.2	3.0
Local country and other	0.4	0.3	0.1	0.3	0.2	—	1.5	2.4
Total parent	\$38.2	\$19.0	\$19.7	\$22.1	\$16.9	\$8.9	\$59.5	\$146.1
Bank								
FHLB borrowings	\$4.0	\$9.5	\$7.8	\$0.5	\$—	\$—	\$—	\$17.8
Securitized debt	7.9	11.6	5.3	8.4	2.0	0.1	3.5	30.9
Local country and other	2.8	3.4	1.6	0.4	0.3	0.4	0.4	6.5
Total bank	\$14.7	\$24.5	\$14.7	\$9.3	\$2.3	\$0.5	\$3.9	\$55.2
Total long-term debt	\$52.9	\$43.5	\$34.4	\$31.4	\$19.2	\$9.4	\$63.4	\$201.3

Total Loss-Absorbing Capacity (TLAC)

In November 2015, the Federal Reserve Board issued a notice of proposed rulemaking that would impose minimum loss-absorbing capacity and long-term debt requirements on global systemically important bank holding companies (GSIBs), including Citi, the intended purpose of which would be to facilitate the orderly resolution of U.S. GSIBs under the U.S. Bankruptcy Code and Title II of the Dodd-Frank Act. There are significant uncertainties and interpretive issues arising from the Federal Reserve Board's proposal. For additional information, see "Risk Factors—Liquidity Risks" above. For an additional discussion of the method 1 and method 2 GSIB capital surcharge methodology as well as other regulatory capital aspects of the TLAC proposal, see "Capital Resources" above. Pursuant to the proposal, U.S. GSIBs would be required to issue and maintain minimum levels of external TLAC and eligible long-term debt (LTD), each set by reference to the GSIB's consolidated risk-weighted assets (RWA) and total leverage exposure. The proposed minimum external TLAC requirement would be the greater of (i) 18% of the GSIB's RWA plus the applicable external TLAC buffer and (ii) 9.5% of its total leverage exposure. The applicable external TLAC buffer equals the 2.5% capital conservation buffer, plus any applicable countercyclical capital buffer, plus the GSIB's capital surcharge as determined under method 1 of the GSIB surcharge rule. Accordingly, Citi's total estimated current TLAC requirement would be 22.5% of RWA under the proposal. Breach of the proposed external TLAC buffer would subject the GSIB to restrictions on distributions and discretionary bonus payments. The proposed minimum external LTD requirement would be the greater of (i) 6% of the GSIB's RWA plus its capital surcharge as determined under method 2 of the GSIB surcharge rule, for a total estimated current requirement of 9% of RWA for Citi and (ii) 4.5% of the GSIB's total leverage exposure.

As proposed, external TLAC would generally include (i) Common Equity Tier 1 Capital and Additional Tier 1 Capital issued directly by the bank holding company plus (ii) eligible external LTD. Eligible external LTD, which is a subcategory of external TLAC, would include unsecured, "plain vanilla" debt securities (i.e., would not include structured notes or securities containing derivative-linked features) issued directly by the bank holding company, governed by U.S. law and with a remaining maturity greater than one year. Further, pursuant to what has been referred to as the "haircut" provision, otherwise eligible external LTD with a remaining maturity of less than two years would be subject to a 50% haircut for purposes of meeting the minimum external LTD requirement. In addition, otherwise eligible external LTD which provides for acceleration of the payment of principal and interest other than upon the occurrence of insolvency or non-payment would not be eligible LTD.

Designed to further enhance the resolvability of a U.S. GSIB, the proposal would also prohibit or limit certain financial arrangements at the bank holding company level, or what are referred to as "clean holding company" requirements. Pursuant to these requirements, the bank holding company

would be prohibited from having certain types of third-party liabilities, including short-term debt, derivatives and other qualified financial contracts, liabilities guaranteed by a subsidiary (i.e., upstream guarantees) and guarantees of subsidiary liabilities or similar arrangements if the liability or guarantee includes a default right linked to the insolvency of the bank holding company (i.e., downstream guarantees with cross default provisions). In addition, the clean holding company requirements would limit the third-party, non-contingent liabilities of the bank holding company that are not related to TLAC or LTD and are pari passu with or junior to eligible external LTD, including structured notes and various operating liabilities, to 5% of the U.S. GSIB's outstanding external TLAC.

The proposal would further require that U.S. GSIBs deduct from their regulatory capital any investment in unsecured debt issued by GSIBs in excess of certain thresholds. This deduction would be required regardless of the tenor of the instrument and regardless of whether the debt instrument would qualify as eligible external LTD.

While not included in its proposed requirements, the Federal Reserve Board also indicated in its notice of proposed rulemaking that it was considering imposing "domestic internal TLAC" requirements for the material operating subsidiaries of U.S. GSIBs. The Board indicated any such requirements would be designed to, among other things, require the maintenance of "contributable resources" (in the form of high-quality liquid assets) at the bank holding company and/or "prepositioned resources" at the level of the material operating subsidiaries (in the form of debt and equity investments in the subsidiaries).

The proposed effective date for the requirements included in the proposal would be January 1, 2019, with the exception of the RWA component of the external TLAC requirement, which would be 16% as of January 1, 2019 and would increase to 18% on January 1, 2022.

Secured Funding Transactions and Short-Term Borrowings

As referenced above, Citi supplements its primary sources of funding with short-term borrowings. Short-term borrowings generally include (i) secured funding transactions (securities loaned or sold under agreements to repurchase, or repos) and (ii) to a lesser extent, short-term borrowings consisting of commercial paper and borrowings from the FHLB and other market participants (see Note 18 to the Consolidated Financial Statements for further information on Citigroup's and its affiliates' outstanding short-term borrowings). Citi has purposefully reduced its other short-term borrowings, including FHLB borrowings, as it continued to grow its high-quality deposits.

Secured Funding

Secured funding is primarily accessed through Citi's broker-dealer subsidiaries to fund efficiently both secured lending activity and a portion of securities inventory held in the context of market making and customer activities. Citi also executes a smaller portion of its secured funding transactions through its bank entities, which is typically collateralized by foreign government debt securities. Generally, daily changes

in the level of Citi's secured funding are primarily due to fluctuations in secured lending activity in the matched book (as described below) and securities inventory.

Secured funding of \$146 billion as of December 31, 2015 declined 16% from the prior-year period and 13% sequentially. Excluding the impact of FX translation, secured funding decreased 11% from the prior-year period and 12% sequentially, both driven by normal business activity. Average balances for secured funding were approximately \$163 billion for the quarter ended December 31, 2015.

The portion of secured funding in the broker-dealer subsidiaries that funds secured lending is commonly referred to as "matched book" activity. The majority of this activity is secured by high quality, liquid securities such as U.S. Treasury securities, U.S. agency securities and foreign government debt securities. Other secured funding is secured by less liquid securities, including equity securities, corporate bonds and asset-backed securities. The tenor of Citi's matched book liabilities is generally equal to or longer than the tenor of the

corresponding matched book assets.

The remainder of the secured funding activity in the broker-dealer subsidiaries serves to fund securities inventory held in the context of market making and customer activities. To maintain reliable funding under a wide range of market conditions, including under periods of stress, Citi manages these activities by taking into consideration the quality of the underlying collateral, and stipulating financing tenor. The weighted average maturity of Citi's secured funding of less liquid securities inventory was greater than 110 days as of December 31, 2015.

Citi manages the risks in its secured funding by conducting daily stress tests to account for changes in capacity, tenors, haircut, collateral profile and client actions. Additionally, Citi maintains counterparty diversification by establishing concentration triggers and assessing counterparty reliability and stability under stress. Citi generally sources secured funding from more than 150 counterparties.

The following table contains the year-end, average and maximum month-end amounts for the following respective short-term borrowings categories at the end of each of the three prior fiscal years:

In billions of dollars	Federal funds purchased and securities sold under agreements to repurchase			Short-term borrowings ⁽¹⁾ Commercial paper ⁽²⁾			Other short-term borrowings ⁽³⁾		
	2015	2014	2013	2015	2014	2013	2015	2014	2013
Amounts outstanding at year end	\$146.5	\$173.4	\$203.5	\$10.0	\$16.2	\$17.9	\$11.1	\$42.1	\$41.0
Average outstanding during the year ⁽⁴⁾⁽⁵⁾	174.5	190.0	229.4	10.7	16.8	16.3	22.2	45.3	39.6
Maximum month-end outstanding	186.2	200.1	239.9	15.3	17.9	18.8	41.9	47.1	44.7
Weighted-average interest rate									
During the year ⁽⁴⁾⁽⁵⁾⁽⁶⁾	0.93	% 1.00	% 1.02	% 0.31	% 0.21	% 0.28	% 1.42	% 1.20	% 1.39
At year end ⁽⁷⁾	0.59	0.49	0.59	0.22	0.23	0.26	1.50	0.53	0.87

(1) Original maturities of less than one year.

(2) Substantially all commercial paper outstanding was issued by certain Citibank entities for the periods presented.

(3) Other short-term borrowings include borrowings from the FHLB and other market participants.

(4) Interest rates and amounts include the effects of risk management activities associated with the respective liability categories.

(5) Average volumes of securities loaned or sold under agreements to repurchase are reported net pursuant to FIN 41 (ASC 210-20-45); average rates exclude the impact of FIN 41 (ASC 210-20-45).

(6)

Average rates reflect prevailing local interest rates, including inflationary effects and monetary correction in certain countries.

- (7) Based on contractual rates at respective year ends; non-interest-bearing accounts are excluded from the weighted average interest rate calculated at year end.

Liquidity Monitoring and Measurement

Stress Testing

Liquidity stress testing is performed for each of Citi's major entities, operating subsidiaries and/or countries. Stress testing and scenario analyses are intended to quantify the potential impact of a liquidity event on the balance sheet and liquidity position, and to identify viable funding alternatives that can be utilized. These scenarios include assumptions about significant changes in key funding sources, market triggers (such as credit ratings), potential uses of funding and political and economic conditions in certain countries. These conditions include expected and stressed market conditions as well as Company-specific events.

Liquidity stress tests are conducted to ascertain potential mismatches between liquidity sources and uses over a variety of time horizons (overnight, one week, two weeks, one month, three months, one year) and over a variety of stressed conditions. Liquidity limits are set accordingly. To monitor the liquidity of an entity, these stress tests and potential mismatches are calculated with varying frequencies, with several tests performed daily.

Given the range of potential stresses, Citi maintains a series of contingency funding plans on a consolidated basis and for individual entities. These plans specify a wide range of readily available actions for a variety of adverse market conditions or idiosyncratic stresses.

Short-Term Liquidity Measurement: Liquidity Coverage Ratio (LCR)

In addition to internal measures that Citi has developed for a 30-day stress scenario, Citi also monitors its liquidity by reference to the LCR, as calculated pursuant to the U.S. LCR rules.

Generally, the LCR is designed to ensure that banks maintain an adequate level of HQLA to meet liquidity needs under an acute 30-day stress scenario. The LCR is calculated by dividing HQLA by estimated net outflows over a stressed 30-day period, with the net outflows determined by applying prescribed outflow factors to various categories of liabilities, such as deposits, unsecured and secured wholesale borrowings, unused lending commitments and derivatives-related exposures, partially offset by inflows from assets maturing within 30 days. Banks are required to calculate an add-on to address potential maturity mismatches between contractual cash outflows and inflows within the 30-day period in determining the total amount of net outflows. The minimum LCR requirement is 90% effective January 2016, increasing to 100% in January 2017.

The table below sets forth the components of Citi's LCR calculation and HQLA in excess of net outflows as of the

periods indicated:

In billions of dollars	Dec. 31, 2015	Sept. 30, 2015	Dec. 31, 2014	
HQLA	\$378.5	\$398.9	\$412.6	
Net outflows	336.5	355.6	368.6	
LCR	112	% 112	% 112	%
HQLA in excess of net outflows	\$42.0	\$43.3	\$44.0	

As set forth in the table above, Citi's LCR was unchanged both year-over-year and quarter-over-quarter, as the reduction in Citi's HQLA was offset by a reduction in net outflows, reflecting reductions in Citi's long-term debt and short-term borrowings.

Long-Term Liquidity Measurement: Net Stable Funding Ratio (NSFR)

For 12-month liquidity stress periods, Citi uses several measures, including its internal long-term liquidity measure, based on a 12-month scenario assuming deterioration due to a combination of idiosyncratic and market stresses of moderate to high severity. It is broadly defined as the ratio of unencumbered liquidity resources to net stressed cumulative outflows over a 12-month period.

In addition, in October 2014, the Basel Committee on Banking Supervision (Basel Committee) issued final standards for the implementation of the Basel III NSFR, with full compliance required by January 1, 2018. Similar to Citi's internal long-term liquidity measure, the NSFR is intended to measure the stability of a banking organization's funding

over a one-year time horizon. Pursuant to the Basel Committee's final standards, the NSFR is calculated by dividing the level of a bank's available stable funding by its required stable funding. The ratio is required to be greater than 100%. Under the Basel Committee standards, available stable funding primarily includes portions of equity, deposits and long-term debt, while required stable funding primarily includes the portion of long-term assets which are deemed illiquid. The U.S. banking agencies have not yet proposed the U.S. version of the NSFR, although a proposal is expected during 2016.

Credit Ratings

Citigroup's funding and liquidity, its funding capacity, ability to access capital markets and other sources of funds, the cost of these funds, and its ability to maintain certain deposits are partially dependent on its credit ratings.

The table below sets forth the ratings for Citigroup and Citibank as of December 31, 2015. While not included in the table below, the long-term and short-term ratings of Citigroup Global Markets Inc. (CGMI) were A/A-1 at Standard & Poor's and A+/F1 at Fitch as of December 31, 2015. The long-term and short-term ratings of Citigroup Global Markets Holdings Inc. (CGMHI) were BBB+/A-2 at Standard & Poor's and A/

F1 at Fitch as of December 31, 2015.

	Citigroup Inc.			Citibank, N.A.		
	Senior debt	Commercial paper	Outlook	Long-term	Short-term	Outlook
Fitch Ratings (Fitch)	A	F1	Stable	A+	F1	Stable
Moody's Investors Service (Moody's)	Baa1	P-2	Stable	A1	P-1	Stable
Standard & Poor's (S&P)	BBB+	A-2	Stable	A	A-1	Watch Positive

Recent Credit Rating Developments

On December 8, 2015, Fitch affirmed Citigroup Inc.'s Viability Rating (VR) and Long-Term Issuer Default Rating (IDR) at 'a/A', respectively. At the same time, Fitch affirmed Citibank's VR and IDR at 'a/A+', respectively. The outlooks for the Long-Term IDRs are stable.

On December 2, 2015, as expected, S&P downgraded the holding company ratings of all eight U.S. GSIBs, including Citigroup Inc., by one notch, reflecting its view of the likelihood of extraordinary government support to be "uncertain." As a result, Citigroup Inc.'s long-term rating now stands at BBB+ and the outlook was upgraded to "Stable." The short-term rating of Citigroup Inc. remained at A-2. The operating company ratings of the GSIBs, including Citibank, N.A. and Citigroup Global Markets Inc., remained unchanged, with a "Watch Positive" outlook, as S&P waits for further clarity from the regulators regarding TLAC eligibility of certain instruments. S&P has stated it expects to conclude its credit watch within the first half of 2016.

Potential Impacts of Ratings Downgrades

Ratings downgrades by Moody's, Fitch or S&P could negatively impact Citigroup's and/or Citibank's funding and liquidity due to reduced funding capacity, including derivatives triggers, which could take the form of cash obligations and collateral requirements.

The following information is provided for the purpose of analyzing the potential funding and liquidity impact to Citigroup and Citibank of a hypothetical, simultaneous ratings downgrade across all three major rating agencies. This analysis is subject to certain estimates, estimation methodologies, and judgments and uncertainties. Uncertainties include potential ratings limitations that certain entities may have with respect to permissible counterparties, as well as general subjective counterparty behavior. For example, certain corporate customers and markets counterparties could re-

evaluate their business relationships with Citi and limit transactions in certain contracts or market instruments with Citi. Changes in counterparty behavior could impact Citi's funding and liquidity, as well as the results of operations of certain of its businesses. The actual impact to Citigroup or Citibank is unpredictable and may differ materially from the potential funding and liquidity impacts described below. For additional information on the impact of credit rating changes on Citi and its applicable subsidiaries, see "Risk Factors—Liquidity Risks" above.

Citigroup Inc. and Citibank—Potential Derivative Triggers

As of December 31, 2015, Citi estimates that a hypothetical one-notch downgrade of the senior debt/long-term rating of Citigroup Inc. across all three major rating agencies could impact Citigroup's funding and liquidity due to derivative triggers by approximately \$0.6 billion, compared to \$0.7 billion as of September 30, 2015. Other funding sources,

such as securities financing transactions and other margin requirements, for which there are no explicit triggers, could also be adversely affected.

As of December 31, 2015, Citi estimates that a hypothetical one-notch downgrade of the senior debt/long-term rating of Citibank across all three major rating agencies could impact Citibank's funding and liquidity by approximately \$1.3 billion, compared to \$1.5 billion as of September 30, 2015, due to derivative triggers.

In total, Citi estimates that a one-notch downgrade of Citigroup and Citibank, across all three major rating agencies, could result in aggregate cash obligations and collateral requirements of approximately \$1.9 billion, compared to \$2.2 billion as of September 30, 2015 (see also Note 23 to the Consolidated Financial Statements). As set forth under “High-Quality Liquid Assets” above, the liquidity resources of Citibank were approximately \$312 billion and the liquidity resources of Citi’s non-bank and other entities were approximately \$66 billion, for a total of approximately \$379 billion as of December 31, 2015. These liquidity resources are available in part as a contingency for the potential events described above.

In addition, a broad range of mitigating actions are currently included in Citigroup’s and Citibank’s contingency funding plans. For Citigroup, these mitigating factors include, but are not limited to, accessing surplus funding capacity from existing clients, tailoring levels of secured lending, and adjusting the size of select trading books and collateralized borrowings from certain Citibank subsidiaries. Mitigating actions available to Citibank include, but are not limited to, selling or financing highly liquid government securities, tailoring levels of secured lending, adjusting the size of select trading assets, reducing loan originations and renewals, raising additional deposits, or borrowing from the FHLB or central banks. Citi believes these mitigating actions could substantially reduce the funding and liquidity risk, if any, of the potential downgrades described above.

Citibank—Additional Potential Impacts

In addition to the above derivative triggers, Citi believes that a potential one-notch downgrade of Citibank’s senior debt/long-term rating by S&P could also have an adverse impact on the commercial paper/short-term rating of Citibank. As of December 31, 2015, Citibank had liquidity commitments of approximately \$10.0 billion to consolidated asset-backed commercial paper conduits, compared to \$9.4 billion as of September 30, 2015 (as referenced in Note 22 to the Consolidated Financial Statements).

In addition to the above-referenced liquidity resources of certain Citibank and Banamex entities, Citibank could reduce the funding and liquidity risk, if any, of the potential downgrades described above through mitigating actions, including repricing or reducing certain commitments to commercial paper conduits. In the event of the potential downgrades described above, Citi believes that certain corporate customers could re-evaluate their deposit relationships with Citibank. This re-evaluation could result in clients adjusting their discretionary deposit levels or changing their depository institution, which could potentially reduce certain deposit levels at Citibank. However, Citi could choose to adjust pricing, offer alternative deposit products to its existing customers or seek to attract deposits from new customers, in addition to the mitigating actions referenced above.

MARKET RISK

OVERVIEW

Market risk is the potential for losses arising from changes in the value of Citi's assets and liabilities resulting from changes in market variables such as interest rates, foreign exchange rates, equity prices, commodity prices and credit spreads, as well as their implied volatilities.

Each business is required to establish, with approval from Citi's market risk management, a market risk limit framework for identified risk factors that clearly defines approved risk profiles and is within the parameters of Citi's overall risk appetite. These limits are monitored by the Risk organization, Citi's country and business Asset and Liability Committees and the Citigroup Asset and Liability Committee. In all cases, the businesses are ultimately responsible for the market risks taken and for remaining within their defined limits.

Market risk emanates from both Citi's trading and non-trading portfolios. Trading portfolios comprise all assets and liabilities marked-to-market, with results reflected in earnings. Non-trading portfolios include all other assets and liabilities.

MARKET RISK OF NON-TRADING PORTFOLIOS

Market risk from non-trading portfolios stems from the potential impact of changes in interest rates and foreign exchange rates on Citi's net interest revenues, the changes in Accumulated other comprehensive income (loss) (AOCI) from its investment portfolios and capital invested in foreign currencies.

Net Interest Revenue at Risk

Net interest revenue, for interest rate exposure purposes, is the difference between the yield earned on the non-trading portfolio assets (including customer loans) and the rate paid on the liabilities (including customer deposits or company borrowings). Net interest revenue is affected by changes in the level of interest rates, as well as the amounts of assets and liabilities, and the timing of repricing of assets and liabilities to reflect market rates.

Citi's principal measure of risk to net interest revenue is interest rate exposure (IRE). IRE measures the change in expected net interest revenue in each currency resulting solely from unanticipated changes in forward interest rates. Citi's estimated IRE incorporates various assumptions including prepayment rates on loans, customer behavior, and the impact of pricing decisions. For example, in rising interest rate scenarios, portions of the deposit portfolio may be assumed to experience rate increases that are less than the change in market interest rates. In declining interest rate scenarios, it is assumed that mortgage portfolios experience higher prepayment rates. IRE assumes that businesses and/or Citi Treasury make no additional changes in balances or positioning in response to the unanticipated rate changes.

In order to manage changes in interest rates effectively, Citi may modify pricing on new customer loans and deposits, purchase fixed rate securities, issue debt that is either fixed or floating or enter into derivative transactions that have the opposite risk exposures. Citi regularly assesses the viability of these and other strategies to reduce its interest rate risks and

implements such strategies when it believes those actions are prudent.

Citi manages interest rate risk as a consolidated company-wide position. Citi's client-facing businesses create interest-rate sensitive positions, including loans and deposits, as part of their ongoing activities. Citi Treasury aggregates these risk positions and manages them centrally. Operating within established limits, Citi Treasury makes positioning decisions and uses tools, such as Citi's investment securities portfolio, company-issued debt, and interest rate derivatives, to target the desired risk profile. Changes in Citi's interest rate risk position reflect the accumulated changes in all non-trading assets and liabilities, with potentially large and offsetting impacts, as well as Citi Treasury's positioning decisions.

Citigroup employs additional measurements, including stress testing the impact of non-linear interest rate movements on the value of the balance sheet; the analysis of portfolio duration and volatility, particularly as they relate to mortgage loans and mortgage-backed securities; and the potential impact of the change in the spread between different

market indices.

Interest Rate Risk of Investment Portfolios—Impact on AOCI

Citi also measures the potential impacts of changes in interest rates on the value of its AOCI, which can in turn impact Citi's Common Equity Tier 1 Capital ratio. Citi's goal is to benefit from an increase in the market level of interest rates, while limiting the impact of changes in AOCI on its regulatory capital position.

AOCI at risk is managed as part of the company-wide interest rate risk position. AOCI at risk considers potential changes in AOCI (and the corresponding impact on the Common Equity Tier 1 Capital ratio) relative to Citi's capital generation capacity.

The following table sets forth the estimated impact to Citi's net interest revenue, AOCI and the Common Equity Tier 1 Capital ratio (on a fully implemented basis), each assuming an unanticipated parallel instantaneous 100 basis point increase in interest rates.

In millions of dollars (unless otherwise noted)	Dec. 31, 2015	Sept. 30, 2015	Dec. 31, 2014	
Estimated annualized impact to net interest revenue				
U.S. dollar ⁽¹⁾	\$1,419	\$1,533	\$1,123	
All other currencies	635	616	629	
Total	\$2,054	\$2,149	\$1,752	
As a percentage of average interest-earning assets	0.13	%0.13	%0.11	%
Estimated initial impact to AOCI (after-tax) ⁽²⁾	\$(4,837	) \$(4,450	) \$(3,961)
Estimated initial impact on Common Equity Tier 1 Capital ratio (bps) ⁽³⁾	(57	) (50	) (44)

Certain trading-oriented businesses within Citi have accrual-accounted positions that are excluded from the estimated impact to net interest revenue in the table since these exposures are managed economically in combination with mark-to-market positions. The U.S. dollar interest rate exposure associated with these businesses was \$(211) million for a 100 basis point instantaneous increase in interest rates as of December 31, 2015.

(1) Includes the effect of changes in interest rates on AOCI related to investment securities, cash flow hedges and pension liability adjustments.

(2) The estimated initial impact to the Common Equity Tier 1 Capital ratio considers the effect of Citi's deferred tax asset position and is based on only the estimated initial AOCI impact above.

The sequential decrease in the estimated impact to net interest revenue primarily reflected Citi Treasury actions, offset by an increase in certain of Citi's deposit balances and an increasing capital base. The sequential increase in the estimated impact to AOCI and the Common Equity Tier 1 Capital ratio primarily reflected changes in the composition of Citi Treasury's investment and interest rate derivatives portfolio.

In the event of an unanticipated parallel instantaneous 100 basis point increase in interest rates, Citi expects the negative impact to AOCI would be offset in shareholders' equity

through the combination of expected incremental net interest revenue and the expected recovery of the impact on AOCI through accretion of Citi's investment portfolio over a period of time. As of December 31, 2015, Citi expects that the negative \$4.8 billion impact to AOCI in such a scenario could potentially be offset over approximately 22 months.

The following table sets forth the estimated impact to Citi's net interest revenue, AOCI and the Common Equity Tier 1 Capital ratio (on a fully implemented basis) under four different changes in interest rate scenarios for the U.S. dollar and Citi's other currencies.

In millions of dollars (unless otherwise noted)	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Overnight rate change (bps)	100	100	—	—
10-year rate change (bps)	100	—	100	(100)
Estimated annualized impact to net interest revenue				
U.S. dollar	\$1,419	\$1,346	\$100	\$(172)
All other currencies	635	580	36	(36)
Total	\$2,054	\$1,926	\$136	\$(208)
Estimated initial impact to AOCI (after-tax) ⁽¹⁾	\$(4,837)	) \$(2,893)	) \$(2,212)	) \$1,845
Estimated initial impact to Common Equity Tier 1 Capital ratio (bps) ⁽²⁾	(57)	) (34)	) (26)	) 22

Note: Each scenario in the table above assumes that the rate change will occur instantaneously. Changes in interest rates for maturities between the overnight rate and the 10-year rate are interpolated.

(1) Includes the effect of changes in interest rates on AOCI related to investment securities, cash flow hedges and pension liability adjustments.

(2) The estimated initial impact to the Common Equity Tier 1 Capital ratio considers the effect of Citi's deferred tax asset position and is based on only the estimated AOCI impact above.

As shown in the table above, the magnitude of the impact to Citi's net interest revenue and AOCI is greater under scenario 2 as compared to scenario 3. This is because the combination of changes to Citi's investment portfolio, partially offset by changes related to Citi's pension liabilities, results in a net position that is more sensitive to rates at shorter and intermediate term maturities.

Changes in Foreign Exchange Rates—Impacts on AOCI and Capital

As of December 31, 2015, Citi estimates that an unanticipated parallel instantaneous 5% appreciation of the U.S. dollar against all of the other currencies in which Citi has invested capital could reduce Citi's tangible common equity (TCE) by approximately \$1.5 billion, or 0.8% of TCE, as a result of changes to Citi's foreign currency translation adjustment in AOCI, net of hedges. This impact would be primarily due to changes in the value of the Mexican peso, the Euro, the British pound sterling and the Chinese yuan.

This impact is also before any mitigating actions Citi may take, including ongoing management of its foreign currency translation exposure. Specifically, as currency movements change the value of Citi's net investments in foreign-currency-denominated capital, these movements also change the value of Citi's risk-weighted assets denominated in those currencies. This, coupled with Citi's foreign currency hedging strategies, such as foreign currency borrowings, foreign currency forwards and other currency hedging instruments, lessens the impact of foreign currency movements on Citi's Common Equity Tier 1 Capital ratio. Changes in these hedging strategies, as well as hedging costs, divestitures and tax impacts, can further impact the actual impact of changes in foreign exchange rates on Citi's capital as compared to an unanticipated parallel shock, as described above.

The effect of Citi's ongoing management strategies with respect to changes in foreign exchange rates and the impact of these changes on Citi's TCE and Common Equity Tier 1 Capital ratio are shown in the table below. For additional information in the changes in AOCI, see Note 20 to the Consolidated Financial Statements.

For the quarter ended

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In millions of dollars (unless otherwise noted)	Dec. 31, 2015	Sept. 30, 2015	Dec. 31, 2014
Change in FX spot rate ⁽¹⁾	(1.1)%	(6.0)%	(4.9)%
Change in TCE due to FX translation, net of hedges	\$(696)	\$(2,010)	\$(1,932)
As a percentage of TCE	(0.4)%	(1.1)%	(1.1)%
Estimated impact to Common Equity Tier 1 Capital ratio (on a fully implemented basis) due to changes in FX translation, net of hedges (bps)	—	(5)	(1)

(1) FX spot rate change is a weighted average based upon Citi's quarterly average GAAP capital exposure to foreign countries.

Interest Revenue/Expense and Net Interest Margin

In millions of dollars, except as otherwise noted	2015	2014	2013	Change 2015 vs. 2014	Change 2014 vs. 2013
Interest revenue ⁽¹⁾	\$59,040	\$62,180	\$63,491	(5)%	(2)%
Interest expense	11,921	13,690	16,177	(13)	(15)
Net interest revenue ⁽¹⁾⁽²⁾	\$47,119	\$48,490	\$47,314	(3)%	2 %
Interest revenue—average rate	3.68 %	3.72 %	3.83 %	(4) bps	(11) bps
Interest expense—average rate	0.95	1.02	1.19	(7) bps	(17) bps
Net interest margin	2.93	2.90	2.85	3 bps	5 bps
Interest-rate benchmarks					
Two-year U.S. Treasury note—average rate	0.69 %	0.46 %	0.31 %	23 bps	15 bps
10-year U.S. Treasury note—average rate	2.14	2.54	2.35	(40) bps	19 bps
10-year vs. two-year spread	145 bps	208 bps	204 bps		

Note: All interest expense amounts include FDIC deposit insurance assessments.

Net interest revenue includes the taxable equivalent adjustments related to the tax-exempt bond portfolio (based on (1) the U.S. federal statutory tax rate of 35%) of \$487 million, \$498 million, and \$521 million for 2015, 2014 and 2013, respectively.

(2) Excludes expenses associated with certain hybrid financial instruments, which are classified as Long-term debt and accounted for at fair value with changes recorded in Principal transactions.

Citi's net interest margin (NIM) is calculated by dividing gross interest revenue less gross interest expense by average interest earning assets. Citi's NIM was 2.92% in the fourth quarter of 2015, a slight decrease from 2.94% in the third quarter of 2015, and improved to 2.93% for the full year 2015, compared to 2.90% in 2014. The improvement in Citi's NIM for the full year 2015 was driven by trading NIM and the impact of lower cost of funds, primarily declines in the cost of long-term debt, partially offset by lower loan yields. Going into 2016, Citi's NIM will reflect the sale of OneMain Financial, which will be partially offset by the benefit of debt repurchases during 2015, including in the fourth quarter of 2015. Accordingly, Citi currently expects a decrease in its NIM in the first half of 2016.

As noted in the tables above, Citi's interest expense includes the impact of FDIC deposit insurance assessments.

As part of the Dodd-Frank Act, the FDIC is required to ensure that its deposit insurance fund reserve ratio reaches 1.35% by September 30, 2020. In the fourth quarter of 2015, the FDIC issued a notice of proposed rulemaking that would impose on insured depository institutions with at least \$10 billion in assets (large banks), which includes Citibank, a surcharge of 4.5 basis points per annum until the fund reaches the required ratio, which the FDIC estimates would take approximately two years. Based on its current assessment base, Citi estimates the net impact to Citibank would be approximately \$500 million over the two-year period. As part of its proposed rulemaking, the FDIC also discussed an alternative to the surcharge proposal which would impose a one-time assessment, similar to a shortfall assessment, on large banks in order to reach the 1.35% target. As discussed by the FDIC, this shortfall assessment would be approximately 12 basis points on the

then-current assessment base in the quarter determined by the FDIC. If the FDIC were to adopt this approach, Citi estimates the net impact to Citibank would be approximately \$900 million, based on its current assessment base. As an alternative to either of the proposals put forth by the FDIC, in commenting on the FDIC's notice of proposed rulemaking, industry groups recommended that in lieu of any surcharge on

large banks, the FDIC maintain the assessment rate framework in effect as of year-end 2015 until the reserve ratio reaches 1.35%, which would be expected to occur by year-end 2019 (and within the timeframe required under the Dodd-Frank Act). It is not certain when the FDIC's proposal will be finalized and what the ultimate impact will be to Citi.

Additional Interest Rate Details

Average Balances and Interest Rates—Assets⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾

In millions of dollars, except rates	Average volume			Interest revenue			% Average rate		
	2015	2014	2013	2015	2014	2013	2015	2014	2013
Assets									
Deposits with banks ⁽⁵⁾	\$ 133,790	\$ 161,359	\$ 144,904	\$ 727	\$ 959	\$ 1,026	0.54 %	0.59 %	0.71 %
Federal funds sold and securities borrowed or purchased under agreements to resell ⁽⁶⁾									
In U.S. offices	\$ 150,359	\$ 153,688	\$ 158,237	\$ 1,211	\$ 1,034	\$ 1,133	0.81 %	0.67 %	0.72 %
In offices outside the U.S. ⁽⁵⁾	84,006	101,177	109,233	1,305	1,332	1,433	1.55	1.32	1.31
Total	\$ 234,365	\$ 254,865	\$ 267,470	\$ 2,516	\$ 2,366	\$ 2,566	1.07 %	0.93 %	0.96 %
Trading account assets ⁽⁷⁾⁽⁸⁾									
In U.S. offices	\$ 114,639	\$ 114,910	\$ 126,123	\$ 3,945	\$ 3,472	\$ 3,728	3.44 %	3.02 %	2.96 %
In offices outside the U.S. ⁽⁵⁾	103,348	119,801	127,291	2,141	2,538	2,683	2.07	2.12	2.11
Total	\$ 217,987	\$ 234,711	\$ 253,414	\$ 6,086	\$ 6,010	\$ 6,411	2.79 %	2.56 %	2.53 %
Investments									
In U.S. offices									
Taxable	\$ 214,714	\$ 188,910	\$ 174,084	\$ 3,812	\$ 3,286	\$ 2,713	1.78 %	1.74 %	1.56 %
Exempt from U.S. income tax	20,034	20,386	18,075	443	626	811	2.21	3.07	4.49
In offices outside the U.S. ⁽⁵⁾	102,376	113,163	114,122	3,071	3,627	3,761	3.00	3.21	3.30
Total	\$ 337,124	\$ 322,459	\$ 306,281	\$ 7,326	\$ 7,539	\$ 7,285	2.17 %	2.34 %	2.38 %
Loans (net of unearned income) ⁽⁹⁾									
In U.S. offices	\$ 354,439	\$ 361,769	\$ 354,707	\$ 24,558	\$ 26,076	\$ 25,941	6.93 %	7.21 %	7.31 %
In offices outside the U.S. ⁽⁵⁾	273,072	296,656	292,852	15,988	18,723	19,660	5.85	6.31	6.71
Total	\$ 627,511	\$ 658,425	\$ 647,559	\$ 40,546	\$ 44,799	\$ 45,601	6.46 %	6.80 %	7.04 %
Other interest-earning assets ⁽¹⁰⁾	\$ 55,060	\$ 40,375	\$ 38,233	\$ 1,839	\$ 507	\$ 602	3.34 %	1.26 %	1.57 %
Total interest-earning assets	\$ 1,605,837	\$ 1,672,194	\$ 1,657,861	\$ 59,040	\$ 62,180	\$ 63,491	3.68 %	3.72 %	3.83 %
Non-interest-earning assets ⁽⁷⁾	\$ 218,000	\$ 224,721	\$ 222,526						
Total assets from discontinued operations	—	—	2,909						
Total assets	\$ 1,823,837	\$ 1,896,915	\$ 1,883,296						

Net interest revenue includes the taxable equivalent adjustments related to the tax-exempt bond portfolio (based on (1) the U.S. federal statutory tax rate of 35%) of \$487 million, \$498 million and \$521 million for 2015, 2014 and 2013, respectively.

(2) Interest rates and amounts include the effects of risk management activities associated with the respective asset categories.

(3) Monthly or quarterly averages have been used by certain subsidiaries where daily averages are unavailable.

(4)

Detailed average volume, Interest revenue and Interest expense exclude Discontinued operations. See Note 2 to the Consolidated Financial Statements.

- (5) Average rates reflect prevailing local interest rates, including inflationary effects and monetary corrections in certain countries.
- (6) Average volumes of securities borrowed or purchased under agreements to resell are reported net pursuant to ASC 210-20-45. However, Interest revenue excludes the impact of ASC 210-20-45.
- (7) The fair value carrying amounts of derivative contracts are reported net, pursuant to ASC 815-10-45, in Non-interest-earning assets and Other non-interest-bearing liabilities.
- (8) Interest expense on Trading account liabilities of ICG is reported as a reduction of Interest revenue. Interest revenue and Interest expense on cash collateral positions are reported in interest on Trading account assets and Trading account liabilities, respectively.
- (9) Includes cash-basis loans.
- (10) Includes brokerage receivables.

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Average Balances and Interest Rates—Liabilities and Equity, and Net Interest Revenue⁽¹⁾⁽²⁾⁽³⁾⁽⁴⁾

In millions of dollars, except rates	Average volume			Interest expense			% Average rate			
	2015	2014	2013	2015	2014	2013	2015	2014	2013	
Liabilities										
Deposits										
In U.S. offices ⁽⁵⁾	\$273,122	\$289,669	\$262,544	\$1,291	\$1,432	\$1,754	0.47	%0.49	%0.67	%
In offices outside the U.S. ⁽⁶⁾	425,053	465,144	481,134	3,761	4,260	4,482	0.88	0.92	0.93	
Total	\$698,175	\$754,813	\$743,678	\$5,052	\$5,692	\$6,236	0.72	%0.75	%0.84	%
Federal funds purchased and securities loaned or sold under agreements to repurchase⁽⁷⁾										
In U.S. offices	\$108,286	\$102,246	\$126,742	\$721	\$656	\$677	0.67	%0.64	%0.53	%
In offices outside the U.S. ⁽⁶⁾	66,200	87,777	102,623	893	1,239	1,662	1.35	1.41	1.62	
Total	\$174,486	\$190,023	\$229,365	\$1,614	\$1,895	\$2,339	0.93	%1.00	%1.02	%
Trading account liabilities⁽⁸⁾⁽⁹⁾										
In U.S. offices	\$25,837	\$30,451	\$24,834	\$111	\$75	\$93	0.43	%0.25	%0.37	%
In offices outside the U.S. ⁽⁶⁾	44,126	45,205	47,908	105	93	76	0.24	0.21	0.16	
Total	\$69,963	\$75,656	\$72,742	\$216	\$168	\$169	0.31	%0.22	%0.23	%
Short-term borrowings⁽¹⁰⁾										
In U.S. offices	\$66,086	\$79,028	\$77,439	\$234	\$161	\$176	0.35	%0.20	%0.23	%
In offices outside the U.S. ⁽⁶⁾	50,043	39,220	35,551	288	419	421	0.58	1.07	1.18	
Total	\$116,129	\$118,248	\$112,990	\$522	\$580	\$597	0.45	%0.49	%0.53	%
Long-term debt⁽¹¹⁾										
In U.S. offices	\$182,371	\$194,295	\$194,140	\$4,309	\$5,093	\$6,602	2.36	%2.62	%3.40	%
In offices outside the U.S. ⁽⁶⁾	7,643	7,761	10,194	208	262	234	2.72	3.38	2.30	
Total	\$190,014	\$202,056	\$204,334	\$4,517	\$5,355	\$6,836	2.38	%2.65	%3.35	%
Total interest-bearing liabilities										
Demand deposits in U.S. offices	\$26,124	\$26,216	\$21,948							
Other non-interest-bearing liabilities ⁽⁸⁾	329,756	317,351	299,052							
Total liabilities from discontinued operations	—	—	362							
Total liabilities	\$1,604,647	\$1,684,363	\$1,684,471							
Citigroup stockholders' equity⁽¹²⁾										
Noncontrolling interest	1,315	1,689	1,941							
Total equity ⁽¹²⁾	\$219,190	\$212,552	\$198,825							
Total liabilities and stockholders' equity										
	\$1,823,837	\$1,896,915	\$1,883,296							
Net interest revenue as a percentage of average interest-earning assets⁽¹³⁾										
In U.S. offices	\$923,334	\$953,394	\$926,291	\$28,495	\$27,497	\$25,591	3.09	%2.88	%2.76	%
In offices outside the U.S. ⁽⁶⁾	682,503	718,800	731,570	18,624	20,993	21,723	2.73	2.92	2.97	

- | | | | | | | | | | | |
|-------|-------------|-------------|-------------|----------|----------|----------|------|-------|-------|---|
| Total | \$1,605,837 | \$1,672,194 | \$1,657,861 | \$47,119 | \$48,490 | \$47,314 | 2.93 | %2.90 | %2.85 | % |
|-------|-------------|-------------|-------------|----------|----------|----------|------|-------|-------|---|
- Net interest revenue includes the taxable equivalent adjustments related to the tax-exempt bond portfolio (based on (1) the U.S. federal statutory tax rate of 35%) of \$487 million, \$498 million and \$521 million for 2015, 2014 and 2013, respectively.
- (2) Interest rates and amounts include the effects of risk management activities associated with the respective liability categories.
- (3) Monthly or quarterly averages have been used by certain subsidiaries where daily averages are unavailable.
- (4) Detailed average volume, Interest revenue and Interest expense exclude Discontinued operations. See Note 2 to the Consolidated Financial Statements.
- (5) Consists of other time deposits and savings deposits. Savings deposits are made up of insured money market accounts, NOW accounts, and other savings deposits. The interest expense on savings deposits includes FDIC deposit insurance assessments.
- (6) Average rates reflect prevailing local interest rates, including inflationary effects and monetary corrections in certain countries.
- (7) Average volumes of securities sold under agreements to repurchase are reported net pursuant to ASC 210-20-45. However, Interest expense excludes the impact of ASC 210-20-45.
- (8) The fair value carrying amounts of derivative contracts are reported net, pursuant to ASC 815-10-45, in Non-interest-earning assets and Other non-interest-bearing liabilities.

Interest expense on Trading account liabilities of ICG is reported as a reduction of Interest revenue. Interest (9) revenue and Interest expense on cash collateral positions are reported in interest on Trading account assets and Trading account liabilities, respectively.

(10) Includes brokerage payables.

(11) Excludes hybrid financial instruments and beneficial interests in consolidated VIEs that are classified as

(11) Long-term debt, as these obligations are accounted for in changes in fair value recorded in Principal transactions.

(12) Includes stockholders' equity from discontinued operations.

(13) Includes allocations for capital and funding costs based on the location of the asset.

Analysis of Changes in Interest Revenue⁽¹⁾⁽²⁾⁽³⁾

In millions of dollars	2015 vs. 2014			2014 vs. 2013		
	Increase (decrease)			Increase (decrease)		
	due to change in:			due to change in:		
	Average volume	Average rate	Net change	Average volume	Average rate	Net change
Deposits with banks ⁽⁴⁾	\$(154)	\$(78)	\$(232)	\$109	\$(176)	\$(67)
Federal funds sold and securities borrowed or purchased under agreements to resell						
In U.S. offices	\$ (23)	\$200	\$177	\$ (32)	\$(67)	\$(99)
In offices outside the U.S. ⁽⁴⁾	(246)	219	(27)	(106)	5	(101)
Total	\$(269)	\$419	\$150	\$(138)	\$(62)	\$(200)
Trading account assets ⁽⁵⁾						
In U.S. offices	\$ (8)	\$481	\$473	\$(337)	\$81	\$(256)
In offices outside the U.S. ⁽⁴⁾	(342)	(55)	(397)	(159)	14	(145)
Total	\$(350)	\$426	\$76	\$(496)	\$95	\$(401)
Investments ⁽¹⁾						
In U.S. offices	\$464	\$(121)	\$(343)	\$319	\$69	\$388
In offices outside the U.S. ⁽⁴⁾	(332)	(224)	(556)	(31)	(103)	(134)
Total	\$132	\$(345)	\$(213)	\$288	\$(34)	\$254
Loans (net of unearned income) ⁽⁶⁾						
In U.S. offices	\$(521)	\$(997)	\$(1,518)	\$512	\$(377)	\$135
In offices outside the U.S. ⁽⁴⁾	(1,432)	(1,303)	(2,735)	253	(1,190)	(937)
Total	\$(1,953)	\$(2,300)	\$(4,253)	\$765	\$(1,567)	\$(802)
Other interest-earning assets ⁽⁷⁾	\$239	\$1,093	\$1,332	\$32	\$(127)	\$(95)
Total interest revenue	\$(2,355)	\$(785)	\$(3,140)	\$560	\$(1,871)	\$(1,311)

(1) The taxable equivalent adjustment is related to the tax-exempt bond portfolio based on the U.S. federal statutory tax rate of 35% and is included in this presentation.

(2) Rate/volume variance is allocated based on the percentage relationship of changes in volume and changes in rate to the total net change.

(3) Detailed average volume, Interest revenue and Interest expense exclude Discontinued operations. See Note 2 to the Consolidated Financial Statements.

(4) Changes in average rates reflect changes in prevailing local interest rates, including inflationary effects and monetary corrections in certain countries.

Interest expense on Trading account liabilities of ICG is reported as a reduction of Interest revenue. Interest (5) revenue and Interest expense on cash collateral positions are reported in interest on Trading account assets and Trading account liabilities, respectively.

(6) Includes cash-basis loans.

(7) Includes brokerage receivables.

Analysis of Changes in Interest Expense and Net Interest Revenue⁽¹⁾⁽²⁾⁽³⁾

In millions of dollars	2015 vs. 2014			2014 vs. 2013		
	Increase (decrease)			Increase (decrease)		
	due to change in:			due to change in:		
	Average volume	Average rate	Net change	Average volume	Average rate	Net change
Deposits						
In U.S. offices	\$ (80)	\$ (61)	\$ (141)	\$ 168	\$ (490)	\$ (322)
In offices outside the U.S. ⁽⁴⁾	(358)	(141)	(499)	(147)	(75)	(222)
Total	\$ (438)	\$ (202)	\$ (640)	\$ 21	\$ (565)	\$ (544)
Federal funds purchased and securities loaned or sold under agreements to repurchase						
In U.S. offices	\$ 40	\$ 25	\$ 65	\$ (144)	\$ 123	\$ (21)
In offices outside the U.S. ⁽⁴⁾	(293)	(53)	(346)	(224)	(199)	(423)
Total	\$ (253)	\$ (28)	\$ (281)	\$ (368)	\$ (76)	\$ (444)
Trading account liabilities ⁽⁵⁾						
In U.S. offices	\$ (13)	\$ 49	\$ 36	\$ 18	\$ (36)	\$ (18)
In offices outside the U.S. ⁽⁴⁾	(2)	14	12	(4)	21	17
Total	\$ (15)	\$ 63	\$ 48	\$ 14	\$ (15)	\$ (1)
Short-term borrowings ⁽⁶⁾						
In U.S. offices	\$ (30)	\$ 103	\$ 73	\$ 4	\$ (19)	\$ (15)
In offices outside the U.S. ⁽⁴⁾	96	(227)	(131)	41	(43)	(2)
Total	\$ 66	\$ (124)	\$ (58)	\$ 45	\$ (62)	\$ (17)
Long-term debt						
In U.S. offices	\$ (301)	\$ (483)	\$ (784)	\$ 5	\$ (1,514)	\$ (1,509)
In offices outside the U.S. ⁽⁴⁾	(4)	(50)	(54)	(65)	93	28
Total	\$ (305)	\$ (533)	\$ (838)	\$ (60)	\$ (1,421)	\$ (1,481)
Total interest expense	\$ (945)	\$ (824)	\$ (1,769)	\$ (348)	\$ (2,139)	\$ (2,487)
Net interest revenue	\$ (1,410)	\$ 39	\$ (1,371)	\$ 908	\$ 268	\$ 1,176

(1) The taxable equivalent adjustment is related to the tax-exempt bond portfolio based on the U.S. federal statutory tax rate of 35% and is included in this presentation.

(2) Rate/volume variance is allocated based on the percentage relationship of changes in volume and changes in rate to the total net change.

(3) Detailed average volume, Interest revenue and Interest expense exclude Discontinued operations. See Note 2 to the Consolidated Financial Statements.

(4) Changes in average rates reflect changes in prevailing local interest rates, including inflationary effects and monetary corrections in certain countries.

(5) Interest expense on Trading account liabilities of ICG is reported as a reduction of Interest revenue. Interest revenue and Interest expense on cash collateral positions are reported in interest on Trading account assets and Trading account liabilities, respectively.

(6) Includes brokerage payables.

MARKET RISK OF TRADING PORTFOLIOS

Trading portfolios include positions resulting from market making activities, hedges of certain available-for-sale (AFS) debt securities, the CVA relating from derivatives counterparties and all associated hedges, fair value option loans, hedges to the loan portfolio and the leverage finance pipeline within capital markets origination within ICG. The market risk of Citi's trading portfolios is monitored using a combination of quantitative and qualitative measures, including but not limited to:

- factor sensitivities;
- value at risk (VAR); and
- stress testing.

Each trading portfolio across Citi's businesses has its own market risk limit framework encompassing these measures and other controls, including trading mandates,

permitted product lists and a new product approval process for complex products.

The following chart of total daily trading-related revenue (loss) captures trading volatility and shows the number of days in which revenues for Citi's trading businesses fell within particular ranges. Trading-related revenues includes trading, net interest and other revenue associated with Citi's trading businesses. It excludes DVA, FVA and CVA adjustments incurred due to changes in the credit quality of counterparties as well as any associated hedges to that CVA. In addition, it excludes fees and other revenue associated with capital markets origination activities.

Trading-related revenues are driven by both customer flows and the changes in valuation of the trading inventory. As shown in the chart, positive trading-related revenue was achieved for 97% of the trading days in 2015.

Daily Trading-Related Revenue (Loss) ⁽¹⁾— Twelve Months ended December 31, 2015

In millions of dollars

Reflects the effects of asymmetrical accounting for economic hedges of certain AFS debt securities. Specifically, (1) the change in the fair value of hedging derivatives is included in Trading-related revenue, while the offsetting change in the fair value of hedged AFS debt securities is included in AOCI and not reflected above.

(2) Occurred on January 15, 2015, principally related to the impact of the Swiss National Bank's announcement removing the minimum exchange rate of Swiss franc per Euro.

Factor Sensitivities

Factor sensitivities are expressed as the change in the value of a position for a defined change in a market risk factor, such as a change in the value of a U.S. Treasury bill for a one basis point change in interest rates. Citi's Market Risk Management, within the Risk organization, works to ensure that factor sensitivities are calculated, monitored and, in most cases, limited for all material risks taken in the trading portfolios.

Value at Risk

VAR estimates, at a 99% confidence level, the potential decline in the value of a position or a portfolio under normal market conditions assuming a one-day holding period. VAR statistics, which are based on historical data, can be materially different across firms due to differences in portfolio composition, differences in VAR methodologies, and differences in model parameters. As a result, Citi believes VAR statistics can be used more effectively as indicators of trends in risk-taking within a firm, rather than as a basis for inferring differences in risk-taking across firms.

Citi uses a single, independently approved Monte Carlo simulation VAR model (see "VAR Model Review and Validation" below), which has been designed to capture material risk sensitivities (such as first- and second-order sensitivities of positions to changes in market prices) of

various asset classes/risk types (such as interest rate, credit spread, foreign exchange, equity and commodity risks).

Citi's VAR includes positions which are measured at fair value; it does not include investment securities classified as AFS or HTM. For information on these securities, see Note 14 to the Consolidated Financial Statements.

Citi believes its VAR model is conservatively calibrated to incorporate fat-tail scaling and the greater of short-term (approximately the most recent month) and long-term (three years) market volatility. The Monte Carlo simulation involves approximately 300,000 market factors, making use of approximately 180,000 time series, with sensitivities updated daily, volatility parameters updated daily to weekly and correlation parameters updated monthly. The conservative features of the VAR calibration contribute an approximate 17% add-on to what would be a VAR estimated under the assumption of stable and perfectly, normally distributed markets.

As set forth in the table below, Citi's average and year-end Trading VAR decreased from 2014 to 2015, mainly due to changes in interest rate and credit spread exposures in the markets and securities services businesses within ICG.

Trading and Credit Portfolio VAR also declined, although the decrease from Trading VAR was partially offset by additional hedging related to lending activities in 2015.

In millions of dollars	December 2015		December 2014	
	31, 2015	Average	31, 2014	Average
Interest rate	\$37	\$44	\$68	N/A
Credit spread	56	69	87	N/A
Covariance adjustment ⁽¹⁾	(25	)(26	)(36	)(N/A
Fully diversified interest rate and credit spread	\$68	\$87	\$119	\$114
Foreign exchange	27	34	27	31
Equity	17	17	17	24
Commodity	17	19	23	16
Covariance adjustment ⁽¹⁾	(53	)(65	)(56	)(73
Total trading VAR—all market risk factors, including general and specific risk (excluding credit portfolios) ⁽²⁾	\$76	\$92	\$130	\$112
Specific risk-only component ⁽³⁾	\$11	\$6	\$10	\$12
Total trading VAR—general market risk factors only (excluding credit portfolios) ⁽²⁾	\$65	\$86	\$120	\$100
Incremental impact of the credit portfolio ⁽⁴⁾	\$22	\$25	\$18	\$21
Total trading and credit portfolio VAR	\$98	\$117	\$148	\$133

Covariance adjustment (also known as diversification benefit) equals the difference between the total VAR and the sum of the VARs tied to each individual risk type. The benefit reflects the fact that the risks within each and across (1) risk types are not perfectly correlated and, consequently, the total VAR on a given day will be lower than the sum of the VARs relating to each individual risk type. The determination of the primary drivers of changes to the covariance adjustment is made by an examination of the impact of both model parameter and position changes.

(2) The total Trading VAR includes mark-to-market and certain fair value option trading positions from ICG and Citi Holdings, with the exception of hedges to the loan portfolio, fair value option loans, and all CVA exposures. Available-for-sale and accrual exposures are not included.

(3) The specific risk-only component represents the level of equity and fixed income issuer-specific risk embedded in VAR.

The credit portfolio is composed of mark-to-market positions associated with non-trading business units including Citi Treasury, the CVA relating to derivative counterparties and all associated CVA hedges. FVA and DVA are not (4) included. The credit portfolio also includes hedges to the loan portfolio, fair value option loans and hedges to the leveraged finance pipeline within capital markets origination within ICG.

The table below provides the range of market factor VARs associated with Citi's total trading VAR, inclusive of specific risk:

In millions of dollars	2015		2014	
	Low	High	Low	High
Interest rate	\$28	\$84	N/A	N/A
Credit spread	56	94	N/A	N/A
Fully diversified interest rate and credit spread	\$65	\$127	\$84	\$158
Foreign exchange	20	54	20	59
Equity	9	35	14	48
Commodity	12	37	11	27
Total trading	\$70	\$140	\$84	\$163
Total trading and credit portfolio	89	158	96	188

Note: No covariance adjustment can be inferred from the above table as the high and low for each market factor will be from different close of business dates.

The following table provides the VAR for ICG, excluding the CVA relating to derivative counterparties, hedges of CVA, fair value option loans and hedges to the loan portfolio:

In millions of dollars	Dec. 31, 2015
Total—all market risk factors, including general and specific risk	\$71
Average—during year	\$85
High—during year	129
Low—during year	65

VAR Model Review and Validation

Generally, Citi's VAR review and model validation process entails reviewing the model framework, major assumptions, and implementation of the mathematical algorithm. In addition, as part of the model validation process, product specific back-testing on portfolios is periodically completed and reviewed with Citi's U.S. banking regulators. Furthermore, Regulatory VAR (as described below) back-testing is performed against buy-and-hold profit and loss on a monthly basis for multiple sub-portfolios across the organization (trading desk level, ICG business segment and Citigroup) and the results are shared with the U.S. banking regulators.

Significant VAR model and assumption changes must be independently validated within Citi's risk management organization. This validation process includes a review by Citi's model validation group and further approval from its model validation review committee, which is composed of senior quantitative risk management officers. In the event of significant model changes, parallel model runs are undertaken prior to implementation. In addition, significant model and assumption changes are subject to the periodic reviews and approval by Citi's U.S. banking regulators. Citi uses the same independently validated VAR model for both Regulatory VAR and Risk Management VAR (i.e., Total trading and Total trading and credit portfolios VARs) and, as such, the model review and oversight process for both purposes is as described above.

Regulatory VAR, which is calculated in accordance with Basel III, differs from Risk Management VAR due to the fact

that certain positions included in Risk Management VAR are not eligible for market risk treatment in Regulatory VAR. The composition of Risk Management VAR is discussed under "Value at Risk" above. The applicability of the VAR model for positions eligible for market risk treatment under U.S. regulatory capital rules is periodically reviewed and approved by Citi's U.S. banking regulators.

In accordance with Basel III, Regulatory VAR includes all trading book covered positions and all foreign exchange and commodity exposures. Pursuant to Basel III, Regulatory VAR excludes positions that fail to meet the intent and ability to trade requirements and are therefore classified as non-trading book and categories of exposures that are specifically excluded as covered positions. Regulatory VAR excludes CVA on derivative instruments and DVA on Citi's own fair value option liabilities. CVA hedges are excluded from Regulatory VAR and included in credit

risk-weighted assets as computed under the Advanced Approaches for determining risk-weighted assets.

Regulatory VAR Back-testing

In accordance with Basel III, Citi is required to perform back-testing to evaluate the effectiveness of its Regulatory VAR model. Regulatory VAR back-testing is the process in which the daily one-day VAR, at a 99% confidence interval, is compared to the buy-and-hold profit and loss (i.e., the profit and loss impact if the portfolio is held constant at the end of the day and re-priced the following day). Buy-and-hold profit and loss represents the daily mark-to-market profit and loss attributable to price movements in covered positions from the close of the previous business day. Buy-and-hold profit and loss excludes realized trading revenue, net interest, fees and commissions, intra-day trading profit and loss, and changes in reserves.

Based on a 99% confidence level, Citi would expect two to three days in any one year where buy-and-hold losses exceeded the Regulatory VAR. Given the conservative calibration of Citi's VAR model (as a result of taking the greater of short- and long-term volatilities and fat-tail scaling of volatilities), Citi would expect fewer exceptions under normal and stable market conditions. Periods of unstable market conditions could increase the number of back-testing exceptions.

The following graph shows the daily buy-and-hold profit and loss associated with Citi's covered positions compared to Citi's one-day Regulatory VAR during 2015. As of December 31, 2015, there was one back-testing exception observed for Citi's Regulatory VAR for the prior 12 months. As previously disclosed, trading losses on January 15, 2015 exceeded the VAR estimate at the Citigroup level following the Swiss National Bank's announcement removing the minimum exchange rate of Swiss franc per Euro.

The difference between the 38% of days with buy-and-hold gains for Regulatory VAR back-testing and the 97% of days with trading, net interest and other revenue associated with Citi's trading businesses shown in the histogram of daily trading-related revenue above reflects, among other things, that a significant portion of Citi's trading-related revenue is not generated from daily price movements on these positions and exposures, as well as differences in the portfolio composition of Regulatory VAR and Risk Management VAR.

Regulatory Trading VAR and Associated Buy-and-Hold Profit and Loss ⁽¹⁾—12 Months ended December 31, 2015
In millions of dollars

Buy-and-hold profit and loss, as defined by the banking regulators under Basel III, represents the daily mark-to-market revenue movement attributable to the trading position from the close of the previous business day.

(1) Buy-and-hold profit and loss excludes realized trading revenue, net interest, intra-day trading profit and loss on new and terminated trades, as well as changes in reserves. Therefore it is not comparable to the trading-related revenue presented in the chart below of Daily Trading-related revenue.

Stress Testing

Citi performs stress testing on a regular basis to estimate the impact of extreme market movements. It is performed on individual positions and trading portfolios, as well as in aggregate, inclusive of multiple trading portfolios. Citi's Market Risk management, after consultations with the businesses, develops both systemic and specific stress scenarios, reviews the output of periodic stress testing exercises, and uses the information to assess the ongoing appropriateness of exposure levels and limits. Citi uses two complementary approaches to market risk stress testing across all major risk factors (i.e., equity, foreign exchange, commodity, interest rate and credit spreads): top-down systemic stresses and bottom-up business specific stresses. Systemic stresses are designed to quantify the potential impact of extreme market movements on an institution-wide basis, and are constructed using both historical periods of market stress and projections of adverse economic scenarios. Business specific stresses are designed to probe the risks of particular portfolios and market segments, especially those risks that are not fully captured in VAR and systemic stresses.

The systemic stress scenarios and business specific stress scenarios at Citi are used in several reports reviewed by senior management and also to calculate internal risk capital for trading market risk. In general, changes in market factors are defined over a one-year horizon. However, for the purpose of calculating internal risk capital, changes in a very limited number of the most liquid market factors are defined over a shorter three-month horizon. The limited set of market factors subject to the shorter three-month time horizon are those that in management's judgment have historically remained very liquid during financial crises, even as the trading liquidity of most other market factors materially decreased.

OPERATIONAL RISK

Operational risk is the risk of loss resulting from inadequate or failed internal processes, systems or human factors, or from external events. It includes the reputation and franchise risk associated with business practices or market conduct in which Citi is involved. Operational risk is inherent in Citi's global business activities, as well as the internal processes that support those business activities, and can result in losses arising from events related to the following, among others:

- fraud, theft and unauthorized activity;
- employment practices and workplace environment;
- clients, products and business practices;
- physical assets and infrastructure; and
- execution, delivery and process management.

Citi manages operational risk consistent with the overall framework described in “Managing Global Risk—Overview” above. The goal is to keep operational risk at appropriate levels relative to the characteristics of Citi's businesses, the markets in which it operates, its capital and liquidity, and the competitive, economic and regulatory environment. To anticipate, mitigate and control operational risk, Citi maintains a system of policies and has established a consistent framework for monitoring, assessing and communicating operational risks and the overall operating effectiveness of the internal control environment across Citigroup. As part of this framework, Citi has established a manager's control assessment process (as described under “Compliance, Conduct and Legal Risk—Compliance Risk” below) to help managers self-assess significant operational risks and key controls and identify and address weaknesses in the design and/or operating effectiveness of internal controls that mitigate significant operational risks. Each major business segment must implement an operational risk process consistent with the requirements of this framework. The process for operational risk management includes the following steps:

- identify and assess key operational risks;
- design controls to mitigate identified risks;
- establish key risk indicators;
- implement a process for early problem recognition and timely escalation;
- produce comprehensive operational risk reporting; and
- ensure that sufficient resources are available to actively improve the operational risk environment and mitigate emerging risks.

As new products and business activities are developed, processes are designed, modified or sourced through alternative means and operational risks are considered.

An Operational Risk Management Committee has been established to provide oversight for operational risk across Citigroup and to provide a forum to assess Citi's operational risk profile and ensure actions are taken so that Citi's operational risk exposure is actively managed consistent with Citi's risk appetite. The Committee seeks to ensure that these actions address the root causes that persistently lead to

operational risk losses and create lasting solutions to minimize these losses. Members include Citi's Chief Risk Officer and Citi's Head of Operational Risk and senior members of their organizations. These members cover multiple dimensions of risk management and include business and regional Chief Risk Officers and senior operational risk managers.

In addition, Risk management, including Operational Risk Management, works proactively with the businesses and other independent control functions to embed a strong operational risk management culture and framework across Citi. Operational Risk Management engages with the businesses and the respective Chief Risk Officers to ensure effective implementation of the Operational Risk Management framework by focusing on (i) identification, analysis and assessment of operational risks; (ii) effective challenge of key control issues and operational risks; and (iii)

anticipation and mitigation of operational risk events.

Information about the businesses' operational risk, historical operational risk losses and the control environment is reported by each major business segment and functional area. The information is summarized and reported to senior management, as well as to the Audit Committee of Citi's Board of Directors.

Operational risk is measured and assessed through risk capital. Projected operational risk losses under stress scenarios are also required as part of the Federal Reserve Board's CCAR process.

COUNTRY RISK

Emerging Markets Exposures

Citi generally defines emerging markets as countries in Latin America, Asia (other than Japan, Australia and New Zealand), Central and Eastern Europe, the Middle East and Africa.

The following table presents Citicorp's principal emerging markets assets as of December 31, 2015. For purposes of the table below, loan amounts are generally based on the domicile of the borrower. For example, a loan to a

Chinese subsidiary of a Switzerland-based corporation will generally be categorized as a loan in China. Trading account assets and investment securities are generally categorized below based on the domicile of the issuer of the security or the underlying reference entity (for additional information on the assets included in the table, see the footnotes to the table below).

As of December 31, 2015	Trading account assets ⁽¹⁾	Investment securities ⁽²⁾	Corporate loans ⁽³⁾	GCB loans	Aggregate ⁽⁴⁾	As of Sept. 30, 2015	As of Dec. 31, 2014	GCB NCL Rate			
									Q'15	3Q'15	4Q'14
Mexico	\$4.5	\$16.5	\$8.0	\$25.5	\$54.5	\$55.1	\$58.1	4.7	%4.7	%5.7	%
Korea	1.5	9.3	3.0	19.7	33.5	34.4	34.8	0.4	0.5	0.8	
India	3.1	8.1	9.1	6.3	26.6	26.7	25.1	0.8	0.6	0.9	
Singapore	—	5.6	5.3	13.5	24.4	25.3	26.6	0.3	0.3	0.2	
Hong Kong	1.6	4.6	7.3	10.7	24.2	24.0	23.1	0.7	0.3	0.5	
Brazil	2.8	2.7	13.5	2.8	21.8	20.9	24.7	9.0	5.4	6.8	
China	2.2	3.4	7.1	4.8	17.5	18.8	19.6	0.9	0.6	0.9	
Taiwan	1.2	0.7	3.5	7.7	13.1	13.6	13.4	0.4	0.3	0.2	
Poland	0.7	4.1	1.5	2.7	9.0	9.1	10.0	(0.7)	0.4	(1.7))
Malaysia	0.4	0.3	1.6	4.6	6.9	6.5	8.3	0.7	0.8	0.7	
Colombia	—	0.4	2.4	1.6	4.4	4.6	4.8	3.4	3.0	3.4	
Thailand	0.2	1.2	0.9	1.9	4.2	4.4	4.5	3.2	2.9	2.8	
UAE	(0.2)	—	2.6	1.6	4.0	3.9	3.8	3.4	2.7	1.9	
Russia ⁽⁵⁾	0.2	0.5	2.4	0.9	4.0	4.7	6.2	3.1	3.4	2.8	
Indonesia	0.1	0.7	1.7	1.2	3.7	3.9	4.4	7.8	6.7	3.3	
Turkey	(0.3)	0.3	2.5	0.7	3.2	3.6	5.6	0.5	(0.3)	(0.1))
Argentina ⁽⁵⁾	0.4	0.4	1.3	1.1	3.2	3.8	2.9	0.4	0.6	1.0	
Philippines	0.1	0.4	0.6	1.0	2.1	2.2	2.5	3.6	3.7	3.8	
South Africa	—	0.8	1.1	—	1.9	2.7	3.3	—	—	—	
Chile	—	—	1.8	—	1.8	1.6	1.1	—	—	—	

Note: Aggregate may not cross-foot due to rounding. Prior periods have been reclassified to conform to current period presentation.

(1) Trading account assets are shown on a net basis and include derivative exposures where the underlying reference entity is located in that country. Does not include counterparty credit exposures.

(2) Investment securities include securities available-for-sale, recorded at fair market value, and securities held-to-maturity, recorded at historical cost. Does not include investments accounted for under the equity method.

- Corporate loans reflect funded loans within ICG, excluding the private bank, net of unearned income. In addition to the funded loans disclosed in the table above, through its ICG businesses (excluding the private bank), Citi had unfunded commitments to corporate customers in the emerging markets of approximately
- (3) \$34 billion as of December 31, 2015 (compared to \$32 billion and \$33 billion as of September 30, 2015 and December 31, 2014, respectively); no single country accounted for more than \$4 billion of this amount. For information on private bank loans, see the narrative to the table below.
- (4) Aggregate of Trading account assets, Investment securities, Corporate loans and GCB loans, based on the methodologies described above.
- (5) For additional information on Citi's exposures in Russia and Argentina, see below.

Emerging Markets Trading Account Assets and Investment Securities

In the ordinary course of business, Citi holds securities in its trading accounts and investment accounts, including those above. Trading account assets are marked to market daily, with asset levels varying as Citi maintains inventory consistent with customer needs. Investment securities are recorded at either fair value or historical cost, based on the underlying accounting treatment, and are predominantly held as part of the local entity asset and liability management program or to comply with local regulatory requirements. In the markets in the table above, approximately 99% of Citi's investment securities were related to sovereign issuers as of December 31, 2015.

Emerging Markets Consumer Lending

GCB's strategy within the emerging markets is consistent with GCB's overall strategy, which is to leverage its global footprint to serve its target clients. The retail bank seeks to be the preeminent bank for the emerging affluent and affluent consumers in large urban centers. In credit cards and in certain retail markets, Citi serves customers in a somewhat broader set of segments and geographies. Commercial banking generally serves small- and middle-market enterprises operating in GCB's geographic markets, focused on clients that value Citi's global capabilities. Overall, Citi believes that its customers are more resilient than the overall market under a wide range of economic conditions. Citi's consumer business has a well-established risk appetite framework across geographies and products that reflects the business strategy and activities and establishes boundaries around the key risks that arise from the strategy and activities.

As of December 31, 2015, GCB had approximately \$110 billion of consumer loans outstanding to borrowers in the emerging markets, or approximately 38% of GCB's total loans, largely unchanged from September 30, 2015 and compared to \$118 billion (41%) as of December 31, 2014. Of the approximate \$110 billion as of December 31, 2015, the five largest emerging markets—Mexico, Korea, Singapore, Hong Kong and Taiwan—comprised approximately 27% of GCB's total loans. Within the emerging markets, 30% of Citi's GCB loans were mortgages, 26% were commercial markets loans, 24% were personal loans and 20% were credit card loans, each as of December 31, 2015.

Overall consumer credit quality remained generally stable in the fourth quarter of 2015, as net credit losses in the emerging markets were 1.9% of average loans, compared to 1.8% and 2.2% in the third quarter of 2015 and fourth quarter of 2014, respectively, consistent with Citi's target market strategy and risk appetite framework. The increase in net credit losses in certain emerging market countries in Asia, such as Hong Kong and Indonesia, primarily related to Citi's commercial banking business in such countries and was primarily due to the impact of lower commodity prices as well as the slowdown in growth in the region. The increase in net credit losses in Brazil also related to the commercial banking business and largely related to a wind-down portfolio in Brazil, where the losses were mostly offset by the release of previously-established loan loss reserves.

Emerging Markets Corporate Lending

Consistent with ICG's overall strategy, Citi's corporate clients in the emerging markets are typically large, multinational corporations that value Citi's global network. Citi aims to establish relationships with these clients that encompass multiple products, consistent with client needs, including cash management and trade services, foreign exchange, lending, capital markets and M&A advisory. Citi believes that its target corporate segment is more resilient under a wide range of economic conditions, and that its relationship-based approach to client service enables it to effectively manage the risks inherent in such relationships. Citi has a well-established risk appetite framework around its corporate lending activities, including risk-based limits and approval authorities and portfolio concentration boundaries.

As of December 31, 2015, corporate loans (excluding the private bank) were approximately \$93 billion in the emerging markets, representing approximately 43% of total corporate loans outstanding, compared to \$97 billion (43%) and \$99 billion (47%) as of September 30, 2015 and December 31, 2014, respectively. No single emerging markets country accounted for more than 6% of Citi's corporate loans as of the end of the fourth quarter of 2015. As of December 31, 2015, approximately 75% of Citi's emerging markets corporate credit portfolio (excluding the private bank), including loans and unfunded lending commitments, was rated investment grade, which Citi considers to be ratings of BBB or better according to its internal risk measurement system and methodology (for additional

information on Citi's internal risk measurement system for corporate credit, see "Corporate Credit" above). The majority of the remainder was rated BB or B according to Citi's internal risk measurement system and methodology.

The private bank, which is part of ICG and primarily serves high-net-worth individuals, had approximately \$17 billion of loans in the emerging markets as of December 31, 2015, representing approximately 25% of the business's total loans outstanding, unchanged from September 30, 2015 and compared to \$17 billion (27%) as of December 31, 2014. Private bank loans are typically secured by liquid collateral or real estate and, consistent with the rest of the ICG loan portfolio, the business has a well-established risk appetite framework around its lending activities, including risk-based limits and approval authorities and portfolio concentration boundaries.

Overall ICG net credit losses in the emerging markets were 0.1% of average loans in the fourth quarter of 2015, compared to 0.0% and 0.4% in the third quarter of 2015 and fourth quarter of 2014, respectively. The ratio of non-accrual ICG loans to total loans in the emerging markets remained stable at 0.4% as of December 31, 2015.

Argentina

As of December 31, 2015, Citi's net investment in its Argentine operations was approximately \$747 million, compared to \$917 million at September 30, 2015 and \$780 million at December 31, 2014.

Citi uses the Argentine peso as the functional currency in Argentina and translates its financial statements into U.S. dollars using the official exchange rate as published by the Central Bank of Argentina. Over the last several years, the Argentine government has imposed strict foreign exchange controls which have limited Citi's ability to access U.S. dollars and other foreign currencies, repatriate capital and hedge its currency risk, among other impacts. In the latter part of 2015, however, Argentina elected a new president and the Argentine government took steps to loosen some of these foreign exchange controls. While these actions were encouraging, they did result in a devaluation of the Argentine peso to 13 pesos per one U.S. dollar at December 31, 2015, compared to 9.4 pesos per one U.S. dollar at September 30, 2015 and 8.6 pesos per one U.S. dollar at December 31, 2014.

The impact of devaluations of the Argentine peso on Citi's net investment in Argentina is reported as a translation loss in stockholders' equity offset, to the extent hedged, by:

gains or losses recorded in stockholders' equity on net investment hedges that have been designated as, and qualify for, hedge accounting under ASC 815 Derivatives and Hedging; and

gains or losses recorded in earnings for its U.S. dollar-denominated monetary assets or currency futures held in Argentina that do not qualify as net investment hedges under ASC 815.

At December 31, 2015, Citi had cumulative translation losses related to its investment in Argentina, net of qualifying net investment hedges, of approximately \$1.88 billion (pretax), which were recorded in stockholders' equity. This compared to \$1.66 billion (pretax) as of September 30, 2015 and \$1.51 billion (pretax) as of December 31, 2014. The cumulative translation losses would not be reclassified into earnings unless realized upon sale or liquidation of substantially all of Citi's Argentine operations.

As noted above, Citi hedges currency risk in its net investment in Argentina to the extent possible and prudent. As of December 31, 2015, Citi's total hedges against its net investment in Argentina were approximately \$821 million (compared to \$972 million as of September 30, 2015 and \$810 million as of December 31, 2014). Of this amount, approximately \$567 million consisted of foreign currency forwards that were recorded as net investment hedges under ASC 815 (compared to approximately \$562 million as of September 30, 2015 and \$420 million as of December 31, 2014). The remaining hedges of approximately \$254 million as of December 31, 2015 (compared to \$410 million as of September 30, 2015 and \$390 million as of December 31, 2014) were net U.S. dollar-denominated assets and foreign currency futures in Citi Argentina that do not qualify for hedge accounting under ASC 815.

Although Citi currently uses the Argentine peso as the functional currency for its operations in Argentina, an increase in inflation resulting in a cumulative three-year inflation rate of 100% or more would result in a change in the functional currency to the U.S. dollar. Citi bases its evaluation of the cumulative three-year inflation rate on the official inflation statistics published by INDEC, the Argentine government's statistics agency. The cumulative three-year inflation rate as of November 30, 2015, based on statistics published by INDEC, was approximately 57% (compared to 52% as of December 31, 2014). While a change in the functional currency to the U.S. dollar would not result in any immediate gains or losses to Citi, it would result in future devaluations of the Argentine peso being recorded in earnings for Citi's Argentine peso-denominated assets and liabilities.

As of December 31, 2015, Citi had total third-party assets of approximately \$4.4 billion in Citi Argentina (unchanged from September 30, 2015 and compared to \$4.1 billion at December 31, 2014), primarily composed of corporate and consumer loans and cash on deposit with and short-term paper issued by the Central Bank of Argentina. A significant portion of these assets was funded with local deposits. Included in the total assets were U.S. dollar-denominated assets of approximately \$918 million, compared to approximately \$562 million at September 30, 2015 and \$550 million at December 31, 2014. The sequential increase in U.S. dollar-denominated assets was largely due to the Argentine government's loosening of foreign exchange controls toward the end of 2015, as referenced above. (For additional information on Citi's exposures related to Argentina, see "Emerging Markets Exposures" above.)

In addition to these foreign exchange and other economic risks, as widely reported, Argentina continues to be engaged in litigation in the U.S. with certain “holdout” bond investors who did not accept restructured bonds in the restructuring of Argentine debt after Argentina defaulted on its sovereign obligations in 2001. Based on U.S. court rulings to date, Argentina has been ordered to negotiate a settlement with “holdout” bond investors and, absent a negotiated settlement, not pay interest on certain of its restructured bonds unless it simultaneously pays all amounts owed to the “holdout” investors that are the subject of the litigation. Although Argentina has been in technical default of the U.S. court’s ruling since mid-2014, Argentina’s new president has announced that it will be a priority for his administration to attempt to settle the dispute, and in February 2016, Argentina restarted negotiations with its creditors, including the “holdout” investors.

Citi Argentina acted as a custodian in Argentina for certain of the restructured bonds that are part of the “holdout” bond litigation; specifically, U.S.-dollar-denominated restructured bonds governed by Argentine law and payable in Argentina. In 2015, the U.S. court overseeing the Argentina litigation ruled that Citi Argentina’s processing of interest payments on these bonds, as custodian, was prohibited by the court’s order. As a result, Citi announced its intention to exit its custody business in

Argentina, which such exit is not expected to have a material impact on Citi Argentina's results of operations. Upon such announcement, the prior Argentine government took a number of adverse actions against Citi Argentina, including filing a lawsuit against Citi Argentina and suspending certain of its activities. While the new government has, to date, indicated a willingness to settle these matters, it remains uncertain as to when these matters will be resolved and what impact, if any, such resolution will have on Citi or its franchise in Argentina.

Venezuela

The Venezuelan government operates restrictive foreign exchange controls. These exchange controls have limited Citi's ability to obtain U.S. dollars in Venezuela; Citi has not been able to acquire U.S. dollars from the Venezuelan government since 2008, other than for its customers' needs.

As of December 31, 2015, the Venezuelan government operated three separate official foreign exchange rates: \

- the preferential foreign exchange rate offered by the National Center for Foreign Trade (CENCOEX), fixed at 6.3 bolivars to one U.S. dollar;

- the SICAD rate, which was 13.5 bolivars to one U.S. dollar;
- and

- the SIMADI rate, which was 199 bolivars to one U.S. dollar.

Citi uses the U.S. dollar as the functional currency for its operations in Venezuela. As of December 31, 2015, Citi uses the SICAD rate to remeasure its net bolivar-denominated monetary assets as the SICAD rate is the only rate at which Citi is legally eligible to acquire U.S. dollars from CENCOEX, despite the limited availability of U.S. dollars and although the SICAD rate may not necessarily be reflective of economic reality. Re-measurement of Citi's bolivar-denominated assets and liabilities due to changes in the exchange rate is recorded in earnings. Citi has been unable to hedge the currency risk in its net investment in Venezuela due to the lack of effective market hedging mechanisms.

At December 31, 2015, Citi's net investment in its Venezuelan operations was approximately \$200 million (compared to \$187 million at September 30, 2015 and \$180 million at December 31, 2014), which included net monetary assets denominated in Venezuelan bolivars of approximately \$177 million (compared to approximately \$160 million at September 30, 2015 and \$140 million at December 31, 2014). Total third-party assets of Citi Venezuela were approximately \$1.0 billion at December 31, 2015 (unchanged from September 30, 2015 and compared to \$0.9 billion at December 31, 2014), primarily composed of cash on deposit with the Central Bank of Venezuela, corporate and consumer loans, and government bonds. A significant portion of these assets was funded with local deposits.

On February 17, 2016, the Venezuelan government announced changes to its foreign exchange controls. Based on the announcement, the CENCOEX rate would increase to 10 bolivars per U.S. dollar, the SICAD rate would no longer

exist and the SIMADI rate is expected to become a free floating rate of at least 202 bolivars per U.S. dollar at inception.

Based on this announcement, Citi expects to begin using the SIMADI rate in the first quarter of 2016 to remeasure its net bolivar-denominated monetary assets, despite the possibly limited availability of U.S. dollars (notwithstanding the fact that it has been described as a free floating rate) and although the new SIMADI rate may not necessarily be reflective of economic reality. At the expected minimum new SIMADI rate of 202 bolivars per U.S. dollar, Citi estimates that it will incur an approximate \$172 million foreign currency loss in the first quarter of 2016, which could increase if the bolivar continues to devalue in the new SIMADI market. Additionally, Citi expects its revenues and expenses will be translated at the SIMADI rate beginning in the first quarter of 2016. Because the new foreign exchange control rules have not yet been officially published and are thus not yet effective, however, the impact to Citi's results of operations as a result of the February 17th announcement is not yet certain.

Russia

During 2015, political events led to the imposition of international sanctions against Russia (as well as Russian entities, business sectors, individuals or otherwise). These ongoing sanctions, coupled with lower oil and other commodity prices, particularly during the second half of 2015, have had a significant impact on Russia's economy, and could continue to do so. During 2015, the Russian ruble depreciated by 22% against the U.S. dollar.

Citibank operates in Russia through a subsidiary, which uses the Russian ruble as its functional currency. Citibank's net investment in Russia was approximately \$0.8 billion at December 31, 2015, compared to \$0.9 billion at September 30, 2015 and \$1.1 billion at December 31, 2014. As of December 31, 2015, substantially all of Citibank's net investment was hedged (subject to related tax adjustments) using forward foreign exchange contracts. Total third-party assets of the Russian Citibank subsidiary were approximately \$5.0 billion as of December 31, 2015, unchanged from September 30, 2015 and compared to \$6.1 billion at December 31, 2014. These assets were primarily composed of corporate and consumer loans, Russian government debt securities, and cash on deposit with the Central Bank of Russia. The large majority of these assets were funded by local deposits. (For additional information on Citi's exposures related to Russia, see "Emerging Markets Exposures" above.)

FFIEC—Cross-Border Claims on Third Parties and Local Country Assets

Citi's cross-border disclosures are based on the country exposure bank regulatory reporting guidelines of the Federal Financial Institutions Examination Council (FFIEC), as revised in December 2013. The following summarizes some of the FFIEC key reporting guidelines:

- Amounts are based on the domicile of the ultimate obligor, counterparty, collateral, issuer or guarantor, as applicable. Amounts do not consider the benefit of collateral received for securities financing transactions (i.e., repurchase agreements, reverse repurchase agreements and securities loaned and borrowed) and are reported based on notional amounts.
- Netting of derivatives receivables and payables, reported at fair value, is permitted, but only under a legally binding netting agreement with the same specific counterparty, and does not include the benefit of margin received or hedges.
- The netting of long and short positions for AFS securities and trading portfolios is not permitted.
- Credit default swaps (CDS) are included based on the gross notional amount sold and purchased and do not include any offsetting CDS on the same underlying entity.
- Loans are reported without the benefit of hedges.

Given the requirements noted above, Citi's FFIEC cross-border exposures and total outstandings tend to fluctuate, in some cases, significantly, from period to period. As an example, because total outstandings under FFIEC guidelines do not include the benefit of margin or hedges, market volatility in interest rates, foreign exchange rates and credit spreads may cause significant fluctuations in the level of total outstandings, all else being equal.

The tables below set forth each country whose total outstandings exceeded 0.75% of total Citigroup assets:

December 31, 2015

Cross-Border Claims on Third Parties and Local Country Assets

In billions of U.S. dollars	Banks (a)	Public (a)	NBFIs ⁽¹⁾ (a)	Other (corporate and households) (a)	Trading assets ⁽²⁾ in (a)	Short-term (included) (a)	Total (included) (sum of (a))	Commitment ⁽³⁾ and guarantees ⁽⁴⁾	Credit derivatives purchased ⁽⁵⁾	Credit derivatives sold ⁽⁵⁾
United Kingdom	\$25.1	\$20.4	\$56.2	\$19.3	\$12.0	\$57.8	\$121.0	\$23.9	\$85.5	\$85.2
Mexico	7.6	22.5	6.7	34.9	6.5	34.5	71.7	17.9	7.1	6.5
Cayman Islands	0.1	—	59.0	2.1	1.5	39.8	61.2	2.5	—	—
Germany	11.0	18.8	8.8	7.0	5.3	17.2	45.6	10.5	66.3	66.3
France	20.4	3.7	17.3	3.3	3.6	27.4	44.7	11.0	71.3	71.1
Korea	1.1	17.5	0.8	23.4	1.7	34.1	42.8	12.8	11.6	9.7
Japan	11.4	18.8	4.1	2.5	6.3	26.7	36.8	3.2	27.5	27.2
China	9.5	10.7	3.5	11.4	5.3	26.4	35.1	4.1	11.8	12.5
India	6.4	12.7	3.5	12.4	5.8	24.4	35.0	7.7	2.2	1.8
Singapore	2.3	12.7	2.1	14.7	0.3	22.4	31.8	13.0	1.6	1.5
Australia	6.4	6.3	3.2	15.4	4.1	9.1	31.3	11.2	25.1	24.7
Netherlands	5.1	10.2	8.3	6.7	2.6	12.7	30.3	8.1	27.6	27.5
Brazil	4.5	9.0	1.1	14.2	3.6	17.7	28.8	4.8	12.1	10.2
Hong Kong	1.3	7.8	3.4	15.6	3.2	19.5	28.1	12.8	2.7	1.9
Switzerland	5.3	16.1	1.5	4.5	0.6	19.8	27.4	5.3	21.9	22.1
Canada	5.2	4.2	5.8	6.0	2.1	9.1	21.2	12.8	7.1	8.0
Taiwan	2.0	5.6	2.1	9.8	1.4	11.9	19.5	12.5	0.1	0.1
Italy	2.8	11.3	0.6	1.5	6.1	8.0	16.2	3.0	69.3	67.0

December 31, 2014

Cross-Border Claims on Third Parties and Local Country Assets

In billions of U.S. dollars	Banks (a)	Public (a)	NBFIs ⁽¹⁾ (a)	Other (corporate and households) (a)	Trading assets ⁽²⁾ in (a)	Short-term (included) (a)	Total (included) (sum of (a))	Commitment ⁽³⁾ and guarantees ⁽⁴⁾	Credit derivatives purchased ⁽⁵⁾	Credit derivatives sold ⁽⁵⁾
United Kingdom	\$23.7	\$17.7	\$47.7	\$28.8	\$12.8	\$59.1	\$117.9	\$19.4	\$104.0	\$105.5
Mexico	7.9	29.7	6.5	37.3	8.9	41.4	81.4	21.4	6.8	6.3
Cayman Islands	0.1	—	46.0	2.5	1.9	35.5	48.6	2.3	—	—
Germany	12.3	17.3	5.9	6.2	7.0	15.7	41.7	10.8	80.0	81.0
France	23.1	3.5	16.6	6.3	7.0	29.8	49.5	12.5	87.0	88.0
Korea	1.0	18.5	0.8	27.7	2.1	39.1	48.0	14.9	11.4	9.2
Japan	12.8	32.0	9.5	4.7	7.0	42.9	59.0	23.9	22.5	21.7
China	8.9	10.5	2.2	13.3	4.8	24.1	34.9	3.5	11.5	12.0
India	5.7	11.4	2.7	15.1	5.8	23.1	34.9	8.3	1.8	1.5
Singapore	2.5	12.3	1.6	17.3	0.7	20.1	33.7	10.7	1.4	1.3
Australia	8.0	5.3	3.6	16.9	6.6	12.7	33.8	10.8	12.1	11.7
Netherlands	9.5	7.6	8.4	6.9	2.3	11.3	32.4	7.3	30.4	30.6

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Brazil	5.2	11.5	1.3	14.5	4.6	20.5	32.5	5.6	11.8	10.2
Hong Kong	1.1	8.0	2.4	16.6	4.5	17.1	28.1	12.2	2.6	1.9
Switzerland	5.0	13.8	0.8	4.0	0.5	16.2	23.6	4.8	25.9	26.4
Canada	6.5	4.5	6.1	7.3	4.8	11.3	24.4	13.7	6.7	7.1
Taiwan	1.9	6.9	1.1	9.8	1.7	13.3	19.7	13.3	0.1	—
Italy	2.0	12.0	0.8	0.9	4.5	5.9	15.7	3.5	71.3	68.2

(1) Non-bank financial institutions.

(2) Included in total outstanding.

Total outstanding includes cross-border claims on third parties, as well as local country assets. Cross-border claims

(3) on third parties include cross-border loans, securities, deposits with banks and other monetary assets, as well as net revaluation gains on foreign exchange and derivative products.

Commitments (not included in total outstanding) include legally binding cross-border letters of credit and other (4) commitments and contingencies as defined by the FFIEC guidelines. The FFIEC definition of commitments includes commitments to local residents to be funded with local currency liabilities originated within the country. (5) CDS are not included in total outstanding.

COMPLIANCE, CONDUCT AND LEGAL RISK

COMPLIANCE RISK

Compliance Risk Appetite Framework

Citi's compliance risk appetite framework outlines Citi's compliance risk appetite, how Citi manages its adherence to its compliance risk appetite and how Citi evaluates the effectiveness of its controls for managing compliance risks.

This framework is comprised of three pillars:

Setting risk appetite: Citi establishes its compliance risk appetite by setting limits on the types of business in which Citi will engage, the products and services Citi will offer, the types of customers which Citi will service, the counterparties with which Citi will deal, and the locations where Citi will do business. These limits are guided by Citi's mission and value proposition and the principle of responsible finance, Citi's adherence to relevant standards of conduct, as well as to relevant and applicable laws, rules, regulations, and Citi's internal policies.

Adhering to risk appetite: Citi manages adherence to its compliance risk appetite through the execution of its compliance program, which includes governance arrangements, a policy framework, customer onboarding and maintenance processes, product development processes, transaction and communication surveillance processes, conduct- and culture-related programs, monitoring regulatory changes, and new products, services, and complex transactions approval processes. At Citi, it is the responsibility of each employee to escalate breaches of the compliance risk appetite in a timely manner.

Evaluating the effectiveness of risk appetite controls: Each business and Compliance evaluate the effectiveness of controls for managing compliance risk through the manager's control assessment (MCA) process—a process through which managers at Citi identify, monitor, measure, report on, and manage risks. Citi also relies on compliance risk assessments; a policy framework; compliance testing and monitoring processes; compliance metrics related to key operating risks, key risk indicators, and control-effectiveness indicators; and Internal Audit examinations and reports.

Compliance Program

Compliance aims to operate Citi's compliance risk appetite—and thus minimize, mitigate or manage compliance risks—through Citi's compliance program. To achieve this mission, Compliance seeks to:

Understand the regulatory environment, requirements and expectations to which Citi's activities are subject.

Compliance coordinates with Legal and other independent control functions, as appropriate, to identify, communicate and document key regulatory requirements.

Assess the compliance risks of business activities and the state of mitigating controls, including the risks and controls in legal entities in which activity is conducted. To

facilitate the identification and assessment of compliance risk, Compliance works with the businesses and other independent control functions to review significant compliance and regulatory issues and the results of testing, monitoring, and internal and external exams and audits.

- Define Citi's appetite, in conjunction with Citigroup's Board of Directors and senior management, for prudent compliance and regulatory risk consistent with its culture of compliance, control and responsible finance. As noted above, Citi has developed a compliance risk appetite framework that is designed to minimize, mitigate or manage compliance risk.

Develop controls and execute programs reasonably designed to promote conduct that is consistent with Citi's compliance risk appetite and promptly detect and mitigate behavior that is inconsistent with this appetite. Compliance has product-related compliance functions, namely the corporate compliance group and compliance programs for Global Consumer Banking and the Institutional Clients Group. Compliance also has regional programs together with thematic groups and programs, such as the conduct, governance and emerging risk management group and programs that focus on anti-bribery and corruption, ethics, privacy and sanctions. Each of these functions, programs and groups aims to mitigate Citi's exposure to conduct that is inconsistent with Citi's compliance risk appetite.

Detect, report on, escalate and remediate key compliance and franchise risks and control issues; test controls for design and operating effectiveness, promptly address issues, and track remediation efforts. Compliance designs and implements policies, standards, procedures, guidelines, surveillance reports and other solutions for use by the business and Compliance to promptly detect, address and remediate issues, test controls for design and operating effectiveness, and track remediation efforts.

Engage with the Citigroup Board, business management, operating committees and Citi's regulators to foster effective global governance. Compliance provides regular reports on emerging risks and other issues and their implications for Citi, as well as the performance of the compliance program, to the Citigroup Board of Directors, including the Audit and Ethics and Culture Committees, as well as other committees of the Board. Compliance also engages with business management on an ongoing basis through various mechanisms, including governance committees, and supports and advises the businesses and other global functions in managing regulatory relationships.

Advise and train Citi personnel across businesses, functions, regions and legal entities in how to comply with laws, regulations and other relevant standards of conduct. Compliance helps promote a strong culture of compliance and control by increasing awareness and capability across Citi on key compliance issues through training and communication programs. A fundamental element of Citi's culture is the requirement that Citi conduct itself in accordance with the highest standards of ethical behavior.

Compliance plays a key role in developing company-wide initiatives designed to further embed ethics in Citi's culture, such as an interactive course on ethics and leadership for employees, which included training on using an ethical decision-making framework to challenge decisions by Citi's businesses.

Enhance the compliance program. Compliance fulfills its obligation to enhance the compliance program in part by using results from its annual compliance risk assessment to shape annual and multi-year program enhancements.

Volcker Compliance Program

The Volcker rule required Citi to develop and provide for an enhanced compliance program reasonably designed to ensure and monitor compliance with the rule's prohibitions and restrictions on proprietary trading and covered fund activities and investments. Citi's Volcker rule office, which reports to business management, has responsibility for overall coordination and monitoring under its compliance program, including project management and process support, and providing assistance in coordinating engagement with and among Citi's second line of defense. For additional information, see "Risk Factors—Regulatory Risks" and "—Compliance, Conduct and Legal Risks" above.

CONDUCT RISK

Citi manages its exposure to conduct risk through the three lines of defense, as discussed above. Each employee in each line of defense is guided by Citi's mission and value proposition and the principle of responsible finance. Citi's leadership standards, which are aligned with Citi's mission and value proposition, outline Citi's expectations of employees' behavior, and employees' performance is evaluated against those standards. Citi's businesses and functions are responsible for managing their conduct risks. Compliance advises Citi's businesses and other functions on conduct risks and associated controls. Internal Audit, among other things, assesses the adequacy and effectiveness of Citi's management of and controls for conduct risk.

In 2015, Citi issued a conduct risk policy to further the objectives of its Compliance-led conduct risk program, which was established in 2014 to enhance Citi's culture of compliance and control through the management, minimization, and mitigation of Citi's exposure to conduct risk. Citi uses the MCA process to assess the design and operation of controls that are utilized to manage the institution's conduct risks. Citi also manages its conduct risk through other initiatives, including various culture-related efforts.

LEGAL RISK

Citi views legal risk as qualitative in nature because it cannot be reliably estimated or measured based on forecasts rather than actual results using statistical methods and does not lend itself to an appetite expressed through a numerical limit. As such, Citi seeks to manage this risk in accordance with its qualitative risk appetite principle, which generally state that activities in which Citi engages and the risks those activities generate must be consistent with Citi's underlying

commitment to the principle of responsible finance and managed with a goal to eliminate, minimize or mitigate this risk, as practicable. To accomplish this goal, legal risk is managed in accordance with the overall framework described in greater detail in "Managing Global Risk—Overview" above.

REPUTATIONAL RISK

Citi's reputation is a vital asset in building trust with its stakeholders, and Citi is diligent in communicating its corporate values, including the importance of protecting Citi's reputation, to its employees, customers and investors. The responsibility for maintaining Citi's reputation is shared by all employees, who are guided by Citi's Code of Conduct. Employees are required to exercise sound judgment and common sense in every action they take and issues that present potential franchise, reputational and/or systemic risks are to be appropriately escalated. The business practices committees for each of Citi's businesses and regions are part of the governance infrastructure Citi has in place to properly review business activities, sales practices, product design, perceived conflicts of interest and other potential franchise or reputational risks that arise in these businesses and regions. These committees may also raise potential franchise, reputational or systemic risks for due consideration by the business practices committee at the corporate level. All of these committees, which are composed of Citi's most senior executives, provide the guidance

necessary for Citi's business practices to meet the highest standards of professionalism, integrity and ethical behavior consistent with Citi's mission and value proposition.

SIGNIFICANT ACCOUNTING POLICIES AND SIGNIFICANT ESTIMATES

Note 1 to the Consolidated Financial Statements contains a summary of Citigroup's significant accounting policies, including a discussion of recently issued accounting pronouncements. These policies, as well as estimates made by management, are integral to the presentation of Citi's results of operations and financial condition. While all of these policies require a certain level of management judgment and estimates, this section highlights and discusses the significant accounting policies that require management to make highly difficult, complex or subjective judgments and estimates at times regarding matters that are inherently uncertain and susceptible to change (see also "Risk Factors—Operational Risks" above). Management has discussed each of these significant accounting policies, the related estimates, and its judgments with the Audit Committee of the Citigroup Board of Directors.

Valuations of Financial Instruments

Citigroup holds debt and equity securities, derivatives, retained interests in securitizations, investments in private equity and other financial instruments. Substantially all of these assets and liabilities are reflected at fair value on Citi's Consolidated Balance Sheet.

Citi purchases securities under agreements to resell (reverse repos) and sells securities under agreements to repurchase (repos), a majority of which are carried at fair value. In addition, certain loans, short-term borrowings, long-term debt and deposits, as well as certain securities borrowed and loaned positions that are collateralized with cash, are carried at fair value. Citigroup holds its investments, trading assets and liabilities, and resale and repurchase agreements on the Consolidated Balance Sheet to meet customer needs and to manage liquidity needs, interest rate risks and private equity investing.

When available, Citi generally uses quoted market prices to determine fair value and classifies such items within Level 1 of the fair value hierarchy established under ASC 820-10, Fair Value Measurement. If quoted market prices are not available, fair value is based upon internally developed valuation models that use, where possible, current market-based or independently sourced market parameters, such as interest rates, currency rates and option volatilities. Such models are often based on a discounted cash flow analysis. In addition, items valued using such internally generated valuation techniques are classified according to the lowest level input or value driver that is significant to the valuation. Thus, an item may be classified under the fair value hierarchy as Level 3 even though there may be some significant inputs that are readily observable.

The credit crisis caused some markets to become illiquid, thus reducing the availability of certain observable data used by Citi's valuation techniques. This illiquidity, in certain markets, continued through 2015. When or if liquidity returns to these markets, the valuations will revert to using the related observable inputs in verifying internally calculated values.

Citi is required to exercise subjective judgments relating to the applicability and functionality of internal valuation

models, the significance of inputs or value drivers to the valuation of an instrument, and the degree of illiquidity and subsequent lack of observability in certain markets. These judgments have the potential to impact the Company's financial performance for instruments where the changes in fair value are recognized in either the Consolidated Statement of Income or in Accumulated other comprehensive income (loss) (AOCI).

Moreover, for certain investments, decreases in fair value are only recognized in earnings in the Consolidated Statement of Income if such decreases are judged to be an other-than-temporary impairment (OTTI). Adjudicating the temporary nature of fair value impairments is also inherently judgmental.

The fair value of financial instruments incorporates the effects of Citi's own credit risk and the market view of counterparty credit risk, the quantification of which is also complex and judgmental. For additional information on Citi's fair value analysis, see Notes 1, 6, 25 and 26 to the Consolidated Financial Statements.

Allowance for Credit Losses

Management provides reserves for an estimate of probable losses inherent in the funded loan portfolio and in unfunded loan commitments and standby letters of credit on the Consolidated Balance Sheet in the Allowance for loan losses and in Other liabilities, respectively.

Estimates of these probable losses are based upon (i) Citigroup's internal system of credit-risk ratings, which are analogous to the risk ratings of the major credit rating agencies; and (ii) historical default and loss data, including rating agency information regarding default rates from 1983 to 2014, and internal data dating to the early 1970s on severity of losses in the event of default. Adjustments may be made to this data, including (i) statistically calculated estimates to cover the historical fluctuation of the default rates over the credit cycle, the historical variability of loss severity among defaulted loans, and the degree to which there are large obligor concentrations in the global portfolio; and (ii) adjustments made for specifically known items, such as current environmental factors and credit trends.

In addition, representatives from both the risk management and finance staffs who cover business areas with delinquency-managed portfolios containing smaller balance homogeneous loans present their recommended reserve balances based upon leading credit indicators, including loan delinquencies and changes in portfolio size, as well as economic trends, including housing prices, unemployment and GDP. This methodology is applied separately for each individual product within each geographic region in which these portfolios exist.

This evaluation process is subject to numerous estimates and judgments. The frequency of default, risk ratings, loss recovery rates, the size and diversity of individual large credits, and the ability of borrowers with foreign currency obligations to obtain the foreign currency necessary for orderly debt servicing, among other things, are all taken into account during this review. Changes in these estimates could

have a direct impact on Citi's credit costs and the allowance in any period.

For a further description of the loan loss reserve and related accounts, see Notes 1 and 16 to the Consolidated Financial Statements.

Goodwill

Citi tests goodwill for impairment annually on July 1 (the annual test) and between annual tests (the interim test) if an event occurs or circumstances change that would more-likely-than-not reduce the fair value of a reporting unit below its carrying amount, such as a significant adverse change in the business climate, a decision to sell or dispose of all or a significant portion of a reporting unit, or a significant decline in Citi's stock price. During 2015, interim tests were performed, which resulted in \$31 million of total goodwill impairment recorded in Operating expenses as a result of reorganization and disposal of a significant portion of a reporting unit described in Note 17 to the Consolidated Financial Statements.

As of December 31, 2015, Citigroup consists of the following business segments: Global Consumer Banking, Institutional Clients Group, Corporate/Other and Citi Holdings. Goodwill impairment testing is performed at the level below the business segment (referred to as a reporting unit). Goodwill is allocated to Citi's 11 reporting units at the date the goodwill is recorded. Once goodwill has been allocated to the reporting units, it generally no longer retains its identification with a particular acquisition, but instead becomes identified with the reporting unit as a whole. As a result, all of the fair value of each reporting unit is available to support the allocated goodwill.

The carrying value used in the impairment test for the 11 reporting units and Corporate/Other (together the "components") is generally derived by allocating Citigroup's total stockholders' equity to each component as follows: First, Citigroup's total Tangible Common Equity (TCE) is allocated to each component based on its Basel III risk-weighted assets and adding back any specifically identified Basel III capital deductions for each component. Second, once total Citigroup's TCE is allocated to each component, the reported goodwill and intangibles associated with each reporting unit are added to their respective carrying amounts. Lastly, any remaining stockholders' equity is allocated to each component based on its relative allocated TCE. Thus, the combined equity allocated to each component is equal to Citigroup's total stockholders' equity.

Goodwill impairment testing involves management judgment, requiring an assessment of whether the carrying value of the reporting unit can be supported by the fair value of the individual reporting unit using widely accepted valuation techniques, such as the market approach (earnings multiples and/or transaction multiples) and/or the income approach (discounted cash flow (DCF) method). In applying these methodologies, Citi utilizes a number of factors, including actual operating results, future business plans, economic projections, and market data. Citi prepares a formal three-year plan for its businesses on an annual basis. These projections incorporate certain external economic projections

developed at the point in time the plan is developed. For the purpose of performing any impairment test, the most recent three-year forecast available is updated by Citi to reflect current economic conditions as of the testing date. Citi uses the updated long-range financial forecasts as a basis for its annual goodwill impairment test. Management may engage an independent valuation specialist to assist in Citi's valuation process.

Similar to the prior year, Citigroup engaged an independent valuation specialist in 2015 to assist in Citi's valuation for most of the reporting units employing both the market approach and DCF method. Citi believes that the DCF method, using management projections for the selected reporting units and an appropriate risk-adjusted discount rate, is most reflective of a market participant's view of fair values given current market conditions. For reporting units where both methods were utilized in 2015, the resulting fair values were relatively consistent and appropriate weighting was given to outputs from both methods.

The DCF method used at the time of each impairment test used discount rates that Citi believes adequately reflected the risk and uncertainty in the financial markets in the internally generated cash flow projections. The DCF method employs a capital asset pricing model in estimating the discount rate. Citi continues to value the remaining reporting units where it believes the risk of impairment to be low, using primarily the market approach.

Since none of the Company's reporting units are publicly traded, individual reporting unit fair-value determinations cannot be directly correlated to Citigroup's common stock price. The sum of the fair values of the reporting units at July 1, 2015 exceeded the overall market capitalization of Citi as of July 1, 2015. However, Citi believes that it is not meaningful to reconcile the sum of the fair values of the Company's reporting units to its market capitalization due to several factors. The market capitalization of Citigroup reflects the execution risk in a transaction involving Citigroup due to its size. However, the individual reporting units' fair values are not subject to the same level of execution risk or a business model that is perceived to be as complex.

See Note 17 to the Consolidated Financial Statements for additional information on goodwill, including the changes in the goodwill balance year-over-year and the reporting unit goodwill balances as of December 31, 2015.

Income Taxes

Overview

Citi is subject to the income tax laws of the U.S., its states and local municipalities and the foreign jurisdictions in which Citi operates. These tax laws are complex and are subject to differing interpretations by the taxpayer and the relevant governmental taxing authorities. Disputes over interpretations of the tax laws may be subject to review and adjudication by the court systems of the various tax jurisdictions or may be settled with the taxing authority upon audit.

In establishing a provision for income tax expense, Citi must make judgments and interpretations about the application of these inherently complex tax laws. Citi must also make

estimates about when in the future certain items will affect taxable income in the various tax jurisdictions, both domestic and foreign. Deferred taxes are recorded for the future consequences of events that have been recognized in the financial statements or tax returns, based upon enacted tax laws and rates. Deferred tax assets (DTAs) are recognized subject to management's judgment that realization is more-likely-than-not.

DTAs

At December 31, 2015, Citi had recorded net DTAs of \$47.8 billion. In the fourth quarter of 2015, Citi's DTAs increased \$600 million, driven by movements in AOCI, partially offset by earnings. On a full-year basis, Citi's DTAs decreased \$1.5 billion from \$49.3 billion at December 31, 2014. The decrease in total DTAs year-over-year was primarily due to the earnings in Citicorp and Citi Holdings partially offset by an increase in AOCI.

Foreign tax credits (FTCs) comprised approximately \$15.9 billion of Citi's DTAs as of December 31, 2015, compared to approximately \$17.6 billion as of December 31, 2014. The decrease in FTCs year-over-year was due to the generation of U.S. taxable income and represented \$1.7 billion of the \$1.5 billion decrease in Citi's overall DTAs noted above, partially offset by the increase in the AOCI-related DTAs. The FTCs carry-forward periods represent the most time-sensitive component of Citi's DTAs. Accordingly, in 2016, Citi will continue to prioritize reducing the FTC carry-forward component of the DTAs. Secondly, Citi's actions will focus on reducing other DTA components and, thereby, reduce the total DTAs. Citi's DTAs will decline primarily as additional domestic GAAP taxable income is generated.

While Citi's net total DTAs decreased year-over-year, the time remaining for utilization has shortened, given the passage of time, particularly with respect to the FTCs component of the DTAs. Although realization is not assured, Citi believes that the realization of the recognized net DTAs of \$47.8 billion at December 31, 2015 is more-likely-than-not based upon management's expectations as to future taxable income in the jurisdictions in which the DTAs arise as well as available tax planning strategies (as defined in ASC 740, Income Taxes) that would be implemented, if necessary, to prevent a carry-forward from expiring.

Citi has concluded that it has the necessary positive evidence to support the full realization of its DTAs. Specifically, Citi forecasts sufficient U.S. taxable income in the carry-forward periods, exclusive of ASC 740 tax planning strategies. Citi's forecasted taxable income, which will continue to be subject to overall market and global economic conditions, incorporates geographic business forecasts and taxable income adjustments to those forecasts (e.g., U.S. tax exempt income, loan loss reserves deductible for U.S. tax reporting in subsequent years), and actions intended to optimize its U.S. taxable earnings. In general, Citi would need to generate approximately \$59 billion of U.S. taxable income during the FTCs carry-forward periods to prevent Citi's FTCs from expiring.

In addition to its forecasted U.S. taxable income, Citi has tax planning strategies available to it under ASC 740 that

would be implemented, if necessary, to prevent a carry-forward from expiring. These strategies include: (i) repatriating low-taxed foreign source earnings for which an assertion that the earnings have been indefinitely reinvested has not been made; (ii) accelerating U.S. taxable income into, or deferring U.S. tax deductions out of, the latter years of the carry-forward period (e.g., selling appreciated assets, electing straight-line depreciation); (iii) accelerating deductible temporary differences outside the U.S.; and (iv) selling certain assets that produce tax-exempt income, while purchasing assets that produce fully taxable income. In addition, the sale or restructuring of certain businesses can produce significant U.S. taxable income within the relevant carry-forward periods.

Based upon the foregoing discussion, Citi believes the U.S. federal and New York state and city net operating loss carry-forward period of 20 years provides enough time to fully utilize the DTAs pertaining to the existing net operating loss carry-forwards and any net operating loss that would be created by the reversal of the future net deductions that have not yet been taken on a tax return.

With respect to the FTCs component of the DTAs, the carry-forward period is 10 years. Citi believes that it will generate sufficient U.S. taxable income within the 10-year carry-forward period to be able to fully utilize the FTCs, in addition to any FTCs produced in such period, which must be used prior to any carry-forward utilization.

For additional information on Citi's income taxes, including its income tax provision, tax assets and liabilities, and a tabular summary of Citi's net DTAs balance as of December 31, 2015 (including the FTCs and applicable expiration

dates of the FTCs), see Note 9 to the Consolidated Financial Statements.

Litigation Accruals

See the discussion in Note 28 to the Consolidated Financial Statements for information regarding Citi's policies on establishing accruals for litigation and regulatory contingencies.

Accounting Changes and Future Application of Accounting Standards

See Note 1 to the Consolidated Financial Statements for a discussion of "Accounting Changes" and the "Future Application of Accounting Standards."

DISCLOSURE CONTROLS AND PROCEDURES

Citi's disclosure controls and procedures are designed to ensure that information required to be disclosed under the Securities Exchange Act of 1934, as amended, is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, including without limitation that information required to be disclosed by Citi in its SEC filings is accumulated and communicated to management, including the Chief Executive Officer (CEO) and Chief Financial Officer (CFO) as appropriate to allow for timely decisions regarding required disclosure. Citi's Disclosure Committee assists the CEO and CFO in their responsibilities to design, establish, maintain and evaluate the effectiveness of Citi's disclosure controls and procedures. The Disclosure Committee is responsible for, among other things, the oversight, maintenance and implementation of the disclosure controls and procedures, subject to the supervision and oversight of the CEO and CFO.

Citi's management, with the participation of its CEO and CFO, has evaluated the effectiveness of Citigroup's disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934) as of December 31, 2015 and, based on that evaluation, the CEO and CFO have concluded that at that date Citigroup's disclosure controls and procedures were effective.

MANAGEMENT'S ANNUAL REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Citi's management is responsible for establishing and maintaining adequate internal control over financial reporting. Citi's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external reporting purposes in accordance with U.S. generally accepted accounting principles. Citi'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 Citi's assets; (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 Citi's receipts and expenditures are made only in accordance with authorizations of Citi's management and directors; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of Citi's assets that could have a material effect on its financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect all 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. In addition, given Citi's large size, complex operations and global footprint, lapses or deficiencies in internal controls may occur from time to time.

Citi management assessed the effectiveness of Citigroup's internal control over financial reporting as of December 31, 2015 based on the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework (2013). Based on this assessment, management believes that, as of December 31, 2015, Citi's internal control over financial reporting was effective. In addition, there were no changes in Citi's internal control over financial reporting during the fiscal quarter ended December 31, 2015 that materially affected, or are reasonably likely to materially affect, Citi's internal control over financial reporting.

The effectiveness of Citi's internal control over financial reporting as of December 31, 2015 has been audited by KPMG LLP, Citi's independent registered public accounting firm, as stated in their report below, which expressed an unqualified opinion on the effectiveness of Citi's internal control over financial reporting as of December 31, 2015.

FORWARD-LOOKING STATEMENTS

Certain statements in this Form 10-K, including but not limited to statements included within the Management's Discussion and Analysis of Financial Condition and Results of Operations, are "forward-looking statements" within the meaning of the U.S. Private Securities Litigation Reform Act of 1995. In addition, Citigroup also may make forward-looking statements in its other documents filed or furnished with the SEC, and its management may make forward-looking statements orally to analysts, investors, representatives of the media and others.

Generally, forward-looking statements are not based on historical facts but instead represent Citigroup's and its management's beliefs regarding future events. Such statements may be identified by words such as believe, expect, anticipate, intend, estimate, may increase, may fluctuate, and similar expressions or future or conditional verbs such as will, should, would and could.

Such statements are based on management's current expectations and are subject to risks, uncertainties and changes in circumstances. Actual results and capital and other financial conditions may differ materially from those included in these statements due to a variety of factors, including without limitation the precautionary statements included within each individual business's discussion and analysis of its results of operations and the factors listed and described under "Risk Factors" above.

Any forward-looking statements made by or on behalf of Citigroup speak only as to the date they are made, and Citi does not undertake to update forward-looking statements to reflect the impact of circumstances or events that arise after the date the forward-looking statements were made.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM—
INTERNAL CONTROL OVER FINANCIAL REPORTING

The Board of Directors and Stockholders
Citigroup Inc.:

We have audited Citigroup Inc. and subsidiaries' (the "Company" or "Citigroup") internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible 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 annual report on internal control over financial reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit 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 audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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 (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (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 company are being made only in accordance with authorizations of management and directors of the company; and (3) 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.

In our opinion, Citigroup maintained, in all material respects, effective internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet of Citigroup as of December 31, 2015 and 2014, and the related consolidated statements of income, comprehensive income, changes in stockholders' equity and cash flows for each of the years in the three-year period ended December 31, 2015, and our report dated February 26, 2016 expressed an unqualified opinion on those consolidated financial statements.

/s/ KPMG LLP
New York, New York
February 26, 2016

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REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM—
CONSOLIDATED FINANCIAL STATEMENTS

The Board of Directors and Stockholders
Citigroup Inc.:

We have audited the accompanying consolidated balance sheet of Citigroup Inc. and subsidiaries (the “Company” or “Citigroup”) as of December 31, 2015 and 2014, and the related consolidated statements of income, comprehensive income, changes in stockholders’ equity and cash flows for each of the years in the three-year period ended December 31, 2015. These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on these consolidated financial statements based on our 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 audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Citigroup as of December 31, 2015 and 2014, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2015, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), Citigroup’s internal control over financial reporting as of December 31, 2015, based on criteria established in Internal Control-Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated February 26, 2016 expressed an unqualified opinion on the effectiveness of the Company’s internal control over financial reporting.

/s/ KPMG LLP
New York, New York
February 26, 2016

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CONSOLIDATED FINANCIAL STATEMENTS
CONSOLIDATED STATEMENT OF INCOME

Citigroup Inc. and Subsidiaries

In millions of dollars, except per share amounts Revenues ⁽¹⁾	Years ended December 31,		
	2015	2014	2013
Interest revenue	\$58,551	\$61,683	\$62,970
Interest expense	11,921	13,690	16,177
Net interest revenue	\$46,630	\$47,993	\$46,793
Commissions and fees	\$11,848	\$13,032	\$12,941
Principal transactions	6,008	6,698	7,302
Administration and other fiduciary fees	3,648	4,013	4,089
Realized gains on sales of investments, net	682	570	748
Other-than-temporary impairment losses on investments			
Gross impairment losses	(265	)(432	)(633
Less: Impairments recognized in AOCI	—	8	98
Net impairment (losses) recognized in earnings	\$(265	)(424	)(535
Insurance premiums	\$1,845	\$2,110	\$2,280
Other revenue	5,958	3,227	3,106
Total non-interest revenues	\$29,724	\$29,226	\$29,931
Total revenues, net of interest expense	\$76,354	\$77,219	\$76,724
Provisions for credit losses and for benefits and claims			
Provision for loan losses	\$7,108	\$6,828	\$7,604
Policyholder benefits and claims	731	801	830
Provision (release) for unfunded lending commitments	74	(162	)80
Total provisions for credit losses and for benefits and claims	\$7,913	\$7,467	\$8,514
Operating expenses ⁽¹⁾			
Compensation and benefits	\$21,769	\$23,959	\$23,967
Premises and equipment	2,878	3,178	3,165
Technology/communication	6,581	6,436	6,136
Advertising and marketing	1,547	1,844	1,888
Other operating	10,840	19,634	13,252
Total operating expenses	\$43,615	\$55,051	\$48,408
Income from continuing operations before income taxes	\$24,826	\$14,701	\$19,802
Provision for income taxes	7,440	7,197	6,186
Income from continuing operations	\$17,386	\$7,504	\$13,616
Discontinued operations			
Income (loss) from discontinued operations	\$(83	)\$10	\$(242
Gain on sale	—	—	268
Provision (benefit) for income taxes	(29	)12	(244
Income (loss) from discontinued operations, net of taxes	\$(54	)(2	)\$270
Net income before attribution of noncontrolling interests	\$17,332	\$7,502	\$13,886
Noncontrolling interests	90	192	227

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Citigroup's net income	\$17,242	\$7,310	\$13,659
Basic earnings per share ⁽²⁾			
Income from continuing operations	\$5.43	\$2.21	\$4.26
Income (loss) from discontinued operations, net of taxes	(0.02)	)—	0.09
Net income	\$5.41	\$2.21	\$4.35
Weighted average common shares outstanding	3,004.0	3,031.6	3,035.8

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Diluted earnings per share ⁽²⁾			
Income from continuing operations	\$5.42	\$2.20	\$4.25
Income (loss) from discontinued operations, net of taxes	(0.02)	)—	0.09
Net income	\$5.40	\$2.20	\$4.34
Adjusted weighted average common shares outstanding	3,007.7	3,037.0	3,041.6

(1) Certain prior-period revenue and expense lines and totals were reclassified to conform to the current period's presentation. See Note 3 to the Consolidated Financial Statements.

(2) Due to rounding, earnings per share on continuing operations and discontinued operations may not sum to earnings per share on net income.

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

CONSOLIDATED STATEMENT OF COMPREHENSIVE
INCOME

	Citigroup Inc. and Subsidiaries		
	Years ended December 31,		
In millions of dollars	2015	2014	2013
Net income before attribution of noncontrolling interests	\$17,332	\$7,502	\$13,886
Add: Citigroup's other comprehensive income (loss)			
Net change in unrealized gains and losses on investment securities, net of taxes	\$(964)	)\$1,697	\$(2,237)
Net change in cash flow hedges, net of taxes	292	336	1,048
Benefit plans liability adjustment, net of taxes ⁽¹⁾	43	(1,170)	)1,281
Net change in foreign currency translation adjustment, net of taxes and hedges	(5,499)	) (4,946)	) (2,329)
Citigroup's total other comprehensive income (loss)	\$(6,128)	) \$(4,083)	) \$(2,237)
Total comprehensive income before attribution of noncontrolling interests	\$11,204	\$3,419	\$11,649
Less: Net income attributable to noncontrolling interests	90	192	227
Citigroup's comprehensive income	\$11,114	\$3,227	\$11,422

(1) Reflects adjustments based on the actuarial valuations of the Company's pension and postretirement plans, including changes in the mortality assumptions at December 31, 2014, and amortization of amounts previously recognized in Accumulated other comprehensive income (loss). See Note 8 to the Consolidated Financial Statements.

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

CONSOLIDATED BALANCE SHEET

Citigroup Inc. and Subsidiaries

In millions of dollars	December 31,	
	2015	2014
Assets		
Cash and due from banks (including segregated cash and other deposits)	\$20,900	\$32,108
Deposits with banks	112,197	128,089
Federal funds sold and securities borrowed or purchased under agreements to resell (including \$137,964 and \$144,191 as of December 31, 2015 and December 31, 2014, respectively, at fair value)	219,675	242,570
Brokerage receivables	27,683	28,419
Trading account assets (including \$92,123 and \$106,217 pledged to creditors at December 31, 2015 and December 31, 2014, respectively)	249,956	296,786
Investments:		
Available for sale (including \$10,698 and \$13,808 pledged to creditors as of December 31, 2015 and December 31, 2014, respectively)	299,136	300,143
Held to maturity (including \$3,630 and \$2,974 pledged to creditors as of December 31, 2015 and December 31, 2014, respectively)	36,215	23,921
Non-marketable equity securities (including \$2,088 and \$2,758 at fair value as of December 31, 2015 and December 31, 2014, respectively)	7,604	9,379
Total investments	\$342,955	\$333,443
Loans:		
Consumer (including \$34 and \$43 as of December 31, 2015 and December 31, 2014, respectively, at fair value)	329,783	369,970
Corporate (including \$4,971 and \$5,858 as of December 31, 2015 and December 31, 2014, respectively, at fair value)	287,834	274,665
Loans, net of unearned income	\$617,617	\$644,635
Allowance for loan losses	(12,626)	(15,994)
Total loans, net	\$604,991	\$628,641
Goodwill	22,349	23,592
Intangible assets (other than MSRs)	3,721	4,566
Mortgage servicing rights (MSRs)	1,781	1,845
Other assets (including \$6,121 and \$7,762 as of December 31, 2015 and December 31, 2014, respectively, at fair value)	125,002	122,122
Total assets	\$1,731,210	\$1,842,181

The following table presents certain assets of consolidated variable interest entities (VIEs), which are included in the Consolidated Balance Sheet above. The assets in the table below include those assets that can only be used to settle obligations of consolidated VIEs, presented on the following page, and are in excess of those obligations. Additionally, the assets in the table below include third-party assets of consolidated VIEs only and exclude intercompany balances that eliminate in consolidation.

In millions of dollars	December 31,	
	2015	2014
Assets of consolidated VIEs to be used to settle obligations of consolidated VIEs		
Cash and due from banks	\$153	\$300
Trading account assets	583	671
Investments	5,263	8,014
Loans, net of unearned income		
Consumer	58,772	66,383
Corporate	22,008	29,596

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Loans, net of unearned income	\$80,780	\$95,979	
Allowance for loan losses	(2,135) (2,793)
Total loans, net	\$78,645	\$93,186	
Other assets	150	619	
Total assets of consolidated VIEs to be used to settle obligations of consolidated VIEs	\$84,794	\$102,790	

Statement continues on the next page.

CONSOLIDATED BALANCE SHEET
(Continued)

Citigroup Inc. and Subsidiaries

In millions of dollars, except shares and per share amounts	December 31,	
	2015	2014
Liabilities		
Non-interest-bearing deposits in U.S. offices	\$ 139,249	\$ 128,958
Interest-bearing deposits in U.S. offices (including \$923 and \$994 as of December 31, 2015 and December 31, 2014, respectively, at fair value)	280,234	284,978
Non-interest-bearing deposits in offices outside the U.S.	71,577	70,925
Interest-bearing deposits in offices outside the U.S. (including \$667 and \$690 as of December 31, 2015 and December 31, 2014, respectively, at fair value)	416,827	414,471
Total deposits	\$ 907,887	\$ 899,332
Federal funds purchased and securities loaned or sold under agreements to repurchase (including \$36,843 and \$36,725 as of December 31, 2015 and December 31, 2014, respectively, at fair value)	146,496	173,438
Brokerage payables	53,722	52,180
Trading account liabilities	117,512	139,036
Short-term borrowings (including \$1,207 and \$1,496 as of December 31, 2015 and December 31, 2014, respectively, at fair value)	21,079	58,335
Long-term debt (including \$25,293 and \$26,180 as of December 31, 2015 and December 31, 2014, respectively, at fair value)	201,275	223,080
Other liabilities (including \$1,624 and \$1,776 as of December 31, 2015 and December 31, 2014, respectively, at fair value)	60,147	85,084
Total liabilities	\$ 1,508,118	\$ 1,630,485
Stockholders' equity		
Preferred stock (\$1.00 par value; authorized shares: 30 million), issued shares: 668,720 as of December 31, 2015 and 418,720 as of December 31, 2014, at aggregate liquidation value	\$ 16,718	\$ 10,468
Common stock (\$0.01 par value; authorized shares: 6 billion), issued shares: 3,099,482,042 as of December 31, 2015 and 3,082,037,568 as of December 31, 2014	31	31
Additional paid-in capital	108,288	107,979
Retained earnings	133,841	117,852
Treasury stock, at cost: December 31, 2015—146,203,311 shares and December 31, 2014—58,119,993 shares	(7,677)	(2,929)
Accumulated other comprehensive income (loss)	(29,344)	(23,216)
Total Citigroup stockholders' equity	\$ 221,857	\$ 210,185
Noncontrolling interest	1,235	1,511
Total equity	\$ 223,092	\$ 211,696
Total liabilities and equity	\$ 1,731,210	\$ 1,842,181

The following table presents certain liabilities of consolidated VIEs, which are included in the Consolidated Balance Sheet above. The liabilities in the table below include third-party liabilities of consolidated VIEs only and exclude intercompany balances that eliminate in consolidation. The liabilities also exclude amounts where creditors or beneficial interest holders have recourse to the general credit of Citigroup.

In millions of dollars	December 31,	
	2015	2014
Liabilities of consolidated VIEs for which creditors or beneficial interest holders do not have recourse to the general credit of Citigroup		

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Short-term borrowings	\$ 11,965	\$ 20,254
Long-term debt	31,273	40,078
Other liabilities	2,099	901
Total liabilities of consolidated VIEs for which creditors or beneficial interest holders do not have recourse to the general credit of Citigroup	\$ 45,337	\$ 61,233

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

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CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY Citigroup Inc. and Subsidiaries

In millions of dollars, except shares in thousands	Years ended December 31,			Shares		
	2015	2014	2013	2015	2014	2013
Preferred stock at aggregate liquidation value						
Balance, beginning of year	\$10,468	\$6,738	\$2,562	419	270	102
Issuance of new preferred stock	6,250	3,730	4,270	250	149	171
Redemption of preferred stock	—	—	(94)	—	—	(3)
Balance, end of period	\$16,718	\$10,468	\$6,738	669	419	270
Common stock and additional paid-in capital						
Balance, beginning of year	\$108,010	\$107,224	\$106,421	3,082,038	3,062,099	3,043,153
Employee benefit plans	357	798	878	17,438	19,928	18,930
Preferred stock issuance expense	(23)	(31)	(78)	—	—	—
Other	(25)	19	3	6	11	16
Balance, end of period	\$108,319	\$108,010	\$107,224	3,099,482	3,082,038	3,062,099
Retained earnings						
Balance, beginning of year	\$117,852	\$110,821	\$97,809			
Adjustment to opening balance, net of taxes ⁽¹⁾	—	—	(332)			
Adjusted balance, beginning of period	\$117,852	\$110,821	\$97,477			
Citigroup's net income	17,242	7,310	13,659			
Common dividends ⁽²⁾	(484)	(122)	(120)			
Preferred dividends	(769)	(511)	(194)			
Tax benefit	—	353	—			
Other	—	1	(1)			
Balance, end of period	\$133,841	\$117,852	\$110,821			
Treasury stock, at cost						
Balance, beginning of year	\$(2,929)	\$(1,658)	\$(847)	(58,119)	(32,856)	(14,269)
Employee benefit plans ⁽³⁾	704	(39)	26	13,318	(483)	(1,629)
Treasury stock acquired ⁽⁴⁾	(5,452)	(1,232)	(837)	(101,402)	(24,780)	(16,958)
Balance, end of period	\$(7,677)	\$(2,929)	\$(1,658)	(146,203)	(58,119)	(32,856)
Citigroup's accumulated other comprehensive income (loss)						
Balance, beginning of year	\$(23,216)	\$(19,133)	\$(16,896)			
Citigroup's total other comprehensive income (loss)	(6,128)	(4,083)	(2,237)			
Balance, end of period	\$(29,344)	\$(23,216)	\$(19,133)			
Total Citigroup common stockholders' equity	\$205,139	\$199,717	\$197,254	2,953,279	3,023,919	3,029,243
Total Citigroup stockholders' equity	\$221,857	\$210,185	\$203,992			
Noncontrolling interests						
Balance, beginning of year	\$1,511	\$1,794	\$1,948			
Initial origination of a noncontrolling interest	—	—	6			
Transactions between noncontrolling-interest shareholders and the related consolidated subsidiary	—	—	(2)			
Transactions between Citigroup and the noncontrolling-interest shareholders	(164)	(96)	(118)			
Net income attributable to noncontrolling-interest shareholders	90	192	227			
	(78)	(91)	(63)			

Dividends paid to noncontrolling-interest shareholders			
Other comprehensive income (loss) attributable to noncontrolling-interest shareholders	(83	)(106	)(17
Other	(41	)(182	)(187
Net change in noncontrolling interests	\$(276	)\$ (283	)\$ (154
Balance, end of period	\$1,235	\$1,511	\$1,794
Total equity	\$223,092	\$211,696	\$205,786

- Citi adopted ASU 2014-01 Investments-Equity Method and Joint Ventures (Topic 323): Accounting for Investments in Affordable Housing, in the first quarter of 2015 on a retrospective basis. This adjustment to opening
- (1) Retained earnings represents the impact to periods prior to January 1, 2013 and is shown as an adjustment to the opening balance since 2013 is the earliest period presented in this statement. See Note 1 to the Consolidated Financial Statements for additional information.
 - (2) Common dividends declared were \$0.01 per share in the first quarter and \$0.05 both in the second, third and fourth quarters of 2015 and \$0.01 per share in each quarter of 2014.
Includes treasury stock related to (i) certain activity on employee stock option program exercises where the
 - (3) employee delivers existing shares to cover the option exercise, or (ii) under Citi's employee restricted or deferred stock programs where shares are withheld to satisfy tax requirements.
 - (4) For the twelve months ended December 31, 2015, 2014 and 2013, primarily consists of open market purchases under Citi's Board of Directors-approved common stock repurchase program.

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

CONSOLIDATED STATEMENT OF CASH FLOWS

	Citigroup Inc. and Subsidiaries		
	Years ended December 31,		
In millions of dollars	2015	2014	2013
Cash flows from operating activities of continuing operations			
Net income before attribution of noncontrolling interests	\$17,332	\$7,502	\$13,886
Net income attributable to noncontrolling interests	90	192	227
Citigroup's net income	\$17,242	\$7,310	\$13,659
Loss from discontinued operations, net of taxes	(54)	)(2)	)(90)
Gain on sale, net of taxes	—	—	360
Income from continuing operations—excluding noncontrolling interests	\$17,296	\$7,312	\$13,389
Adjustments to reconcile net income to net cash provided by operating activities of continuing operations			
Gains on significant disposals ⁽¹⁾	(3,210)	)(452))—
Amortization of deferred policy acquisition costs and present value of future profits	191	210	194
Additions to deferred policy acquisition costs	(62)	)(64)	)(54)
Depreciation and amortization	3,506	3,589	3,303
Deferred tax provision	2,794	3,347	2,699
Provision for loan losses	7,108	6,828	7,604
Realized gains from sales of investments	(682)	)(570)	)(748)
Net impairment losses on investments, goodwill and intangible assets	318	426	535
Change in trading account assets	46,830	(10,858)	)35,001
Change in trading account liabilities	(21,524)	)30,274	(6,787)
Change in brokerage receivables net of brokerage payables	2,278	(4,272)	)(6,490)
Change in loans held-for-sale (HFS)	(7,207)	)(1,144)	)4,321
Change in other assets	(32)	)(1,690)	)13,028
Change in other liabilities	(1,135)	)7,973	(7,880)
Other, net	(6,732)	)5,434	5,129
Total adjustments	\$22,441	\$39,031	\$49,855
Net cash provided by operating activities of continuing operations	\$39,737	\$46,343	\$63,244
Cash flows from investing activities of continuing operations			
Change in deposits with banks	\$15,488	\$40,916	\$(66,871)
Change in federal funds sold and securities borrowed or purchased under agreements to resell	22,895	14,467	4,274
Change in loans	1,353	1,170	(30,198)
Proceeds from sales and securitizations of loans	9,610	4,752	9,123
Purchases of investments	(242,362)	)(258,992)	)(220,823)
Proceeds from sales of investments	141,470	135,824	131,100
Proceeds from maturities of investments	82,047	94,117	84,831
Proceeds from significant disposals ⁽¹⁾	5,932	346	—
Payments due to transfers of net liabilities associated with significant disposals ⁽¹⁾⁽²⁾	(18,929)	)(1,255))—
Capital expenditures on premises and equipment and capitalized software	(3,198)	)(3,386)	)(3,490)
Proceeds from sales of premises and equipment, subsidiaries and affiliates, and repossessed assets	577	623	716
Net cash provided by (used in) investing activities of continuing operations	\$14,883	\$28,582	\$(91,338)
Cash flows from financing activities of continuing operations			
Dividends paid	\$(1,253))\$(633))\$(314)
Issuance of preferred stock	6,227	3,699	4,192

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Redemption of preferred stock	—	—	(94)
Treasury stock acquired	(5,452)(1,232)(837)
Stock tendered for payment of withholding taxes	(428)(508)(452)
Change in federal funds purchased and securities loaned or sold under agreements to repurchase	(26,942)(30,074)(7,724)

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Issuance of long-term debt	44,619	66,836	54,405
Payments and redemptions of long-term debt	(52,843)	(58,923)	(63,994)
Change in deposits	8,555	(48,336)	37,713
Change in short-term borrowings	(37,256)	(1,099)	199
Net cash provided by (used in) financing activities of continuing operations	\$(64,773)	\$(70,270)	\$23,094
Effect of exchange rate changes on cash and cash equivalents	\$(1,055)	\$(2,432)	\$(1,558)
Discontinued operations			
Net cash used in discontinued operations	\$—	\$—	\$(10)
Change in cash and due from banks	\$(11,208)	\$2,223	\$(6,568)
Cash and due from banks at beginning of period	32,108	29,885	36,453
Cash and due from banks at end of period	\$20,900	\$32,108	\$29,885
Supplemental disclosure of cash flow information for continuing operations			
Cash paid during the year for income taxes	\$4,978	\$4,632	\$4,495
Cash paid during the year for interest	12,031	14,001	15,655
Non-cash investing activities			
Change in loans due to consolidation/deconsolidation of VIEs	\$—	\$(374)	\$6,718
Decrease in net loans associated with significant disposals reclassified to HFS	(9,063)	—	—
Decrease in investments associated with significant disposals reclassified to HFS	(1,402)	—	—
Decrease in goodwill and intangible assets associated with significant disposals reclassified to HFS	(223)	—	—
Decrease in deposits with banks with significant disposals reclassified to HFS	(404)	—	—
Transfers to loans HFS from loans	28,600	15,100	17,300
Transfers to OREO and other repossessed assets	276	321	325
Non-cash financing activities			
Decrease in long-term debt associated with significant disposals reclassified to HFS	\$(4,673)	\$—	\$—
Decrease in deposits associated with reclassification to HFS	—	(20,605)	—
Increase in short-term borrowings due to consolidation of VIEs	—	500	6,718
Decrease in long-term debt due to deconsolidation of VIEs	—	(864)	—

(1) See Note 1 to the Consolidated Financial Statements for the adoption of ASU No. 2014-08 in the second quarter of 2014 and Note 2 for further information on significant disposals.

(2) The payments associated with significant disposals result primarily from the sale of deposit liabilities.

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

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Throughout these Notes, “Citigroup,” “Citi” and the “Company” refer to Citigroup Inc. and its consolidated subsidiaries. Certain reclassifications have been made to the prior periods’ financial statements and notes to conform to the current period’s presentation.

Principles of Consolidation

The Consolidated Financial Statements include the accounts of Citigroup and its subsidiaries prepared in accordance with U.S. Generally Accepted Accounting Principles (GAAP). The Company consolidates subsidiaries in which it holds, directly or indirectly, more than 50% of the voting rights or where it exercises control. Entities where the Company holds 20% to 50% of the voting rights and/or has the ability to exercise significant influence, other than investments of designated venture capital subsidiaries or investments accounted for at fair value under the fair value option, are accounted for under the equity method, and the pro rata share of their income (loss) is included in Other revenue. Income from investments in less than 20% owned companies is recognized when dividends are received. As discussed in more detail in Note 22 to the Consolidated Financial Statements, Citigroup also consolidates entities deemed to be variable interest entities when Citigroup is determined to be the primary beneficiary. Gains and losses on the disposition of branches, subsidiaries, affiliates, buildings, and other investments are included in Other revenue.

Citibank

Citibank, N.A. (Citibank) is a commercial bank and wholly owned subsidiary of Citigroup. Citibank’s principal offerings include: consumer finance, mortgage lending and retail banking (including commercial banking) products and services; investment banking, cash management and trade finance; and private banking products and services.

Variable Interest Entities

An entity is referred to as a variable interest entity (VIE) if it meets the criteria outlined in Accounting Standards Codification (ASC) Topic 810, Consolidation, which are: (i) the entity has equity that is insufficient to permit the entity to finance its activities without additional subordinated financial support from other parties; or (ii) the entity has equity investors that cannot make significant decisions about the entity’s operations or that do not absorb their proportionate share of the entity’s expected losses or expected returns.

The Company consolidates a VIE when it has both the power to direct the activities that most significantly impact the VIE’s economic performance and a right to receive benefits or the obligation to absorb losses of the entity that could be potentially significant to the VIE (that is, Citi is the primary beneficiary).

In addition to variable interests held in consolidated VIEs, the Company has variable interests in other VIEs that are not consolidated because the Company is not the primary beneficiary. These include multi-seller finance companies, certain collateralized loan obligations (CLOs), many structured finance transactions and various investment funds. However, these VIEs and all other unconsolidated VIEs are monitored by the Company to assess whether any events have occurred to cause its primary beneficiary status to change. These events include:

- purchases or sales of variable interests by Citigroup or an unrelated third party, which cause Citigroup’s overall variable interest ownership to change;
- changes in contractual arrangements that reallocate expected losses and residual returns among the variable interest holders;
- changes in the party that has power to direct the activities of a VIE that most significantly impact the entity’s economic performance; and
- providing financial support to an entity that results in an implicit variable interest.

All other entities not deemed to be VIEs with which the Company has involvement are evaluated for consolidation under other subtopics of ASC 810.

Foreign Currency Translation

Assets and liabilities of Citi's foreign operations are translated from their respective functional currencies into U.S. dollars using period-end spot foreign-exchange rates. The effects of those translation adjustments are reported in Accumulated other comprehensive income (loss), a component of stockholders' equity, along with any related hedge and tax effects, until realized upon sale or substantial liquidation of the foreign operation. Revenues and expenses of Citi's foreign operations are translated monthly from their respective functional currencies into U.S. dollars at amounts that approximate weighted average exchange rates.

For transactions whose terms are denominated in a currency other than the functional currency, including transactions denominated in the local currencies of foreign operations with the U.S. dollar as their functional currency, the effects of changes in exchange rates are primarily included in Principal transactions, along with the related effects of any economic hedges. Instruments used to hedge foreign currency exposures include foreign currency forward, option and swap contracts and in certain instances, designated issues of non-U.S. dollar debt. Foreign operations in countries with highly inflationary economies designate the U.S. dollar as their functional currency, with the effects of changes in exchange rates primarily included in Other revenue.

Investment Securities

Investments include fixed income and equity securities. Fixed income instruments include bonds, notes and redeemable preferred stocks, as well as certain loan-backed and structured securities that are subject to prepayment risk. Equity securities include common and nonredeemable preferred stock.

Investment securities are classified and accounted for as follows:

Fixed income securities classified as “held-to-maturity” are securities that the Company has both the ability and the intent to hold until maturity and are carried at amortized cost. Interest income on such securities is included in Interest revenue.

Fixed income securities and marketable equity securities classified as “available-for-sale” are carried at fair value with changes in fair value reported in Accumulated other comprehensive income (loss), a component of Stockholders’ equity, net of applicable income taxes and hedges. Realized gains and losses on sales are included in income primarily on a specific identification cost basis. Interest and dividend income on such securities is included in Interest revenue. Certain investments in non-marketable equity securities and certain investments that would otherwise have been accounted for using the equity method are carried at fair value, since the Company has elected to apply fair value accounting. Changes in fair value of such investments are recorded in earnings.

Certain non-marketable equity securities are carried at cost and are periodically assessed for other-than-temporary impairment, as described in Note 14 to the Consolidated Financial Statements.

For investments in fixed income securities classified as held-to-maturity or available-for-sale, the accrual of interest income is suspended for investments that are in default or for which it is likely that future interest payments will not be made as scheduled.

Investment securities are subject to evaluation for other-than-temporary impairment as described in Note 14 to the Consolidated Financial Statements.

The Company uses a number of valuation techniques for investments carried at fair value, which are described in Note 25 to the Consolidated Financial Statements. Realized gains and losses on sales of investments are included in earnings.

Trading Account Assets and Liabilities

Trading account assets include debt and marketable equity securities, derivatives in a receivable position, residual interests in securitizations and physical commodities inventory. In addition, as described in Note 26 to the Consolidated Financial Statements, certain assets that Citigroup has elected to carry at fair value under the fair value option, such as loans and purchased guarantees, are also included in Trading account assets.

Trading account liabilities include securities sold, not yet purchased (short positions) and derivatives in a net payable position, as well as certain liabilities that Citigroup has elected to carry at fair value (as described in Note 26 to the Consolidated Financial Statements).

Other than physical commodities inventory, all trading account assets and liabilities are carried at fair value. Revenues generated from trading assets and trading liabilities are generally reported in Principal transactions and include realized gains and losses as well as unrealized gains and losses resulting from changes in the fair value of such instruments. Interest income on trading assets is recorded in Interest revenue reduced by interest expense on trading liabilities.

Physical commodities inventory is carried at the lower of cost or market with related losses reported in Principal transactions. Realized gains and losses on sales of commodities inventory are included in Principal transactions. Investments in unallocated precious metals accounts (gold, silver, platinum and palladium) are accounted for as hybrid instruments containing a debt host contract and an embedded non-financial derivative instrument indexed to the price of the relevant precious metal. The embedded derivative instrument is separated from the debt host contract and accounted for at fair value. The debt host contract is accounted for at fair value under the fair value option, as described in Note 26 to the Consolidated Financial Statements.

Derivatives used for trading purposes include interest rate, currency, equity, credit, and commodity swap agreements, options, caps and floors, warrants, and financial and commodity futures and forward contracts. Derivative asset and liability positions are presented net by counterparty on the Consolidated Balance Sheet when a valid master netting agreement exists and the other conditions set out in ASC 210-20, Balance Sheet—Offsetting, are met. See Note 23 to the Consolidated Financial Statements.

The Company uses a number of techniques to determine the fair value of trading assets and liabilities, which are described in Note 25 to the Consolidated Financial Statements.

Securities Borrowed and Securities Loaned

Securities borrowing and lending transactions do not constitute a sale of the underlying securities for accounting purposes and are treated as collateralized financing transactions. Such transactions are recorded at the amount of proceeds advanced or received plus accrued interest. As described in Note 26 to the Consolidated Financial Statements, the Company has elected to apply fair value accounting to a number of securities borrowing and lending transactions. Fees paid or received for all securities lending and borrowing transactions are recorded in Interest expense or Interest revenue at the contractually specified rate.

The Company monitors the fair value of securities borrowed or loaned on a daily basis and obtains or posts additional collateral in order to maintain contractual margin protection.

As described in Note 25 to the Consolidated Financial Statements, the Company uses a discounted cash flow technique to determine the fair value of securities lending and borrowing transactions.

Repurchase and Resale Agreements

Securities sold under agreements to repurchase (repos) and securities purchased under agreements to resell (reverse repos) do not constitute a sale (or purchase) of the underlying securities for accounting purposes and are treated as collateralized financing transactions. As described in Note 26 to the Consolidated Financial Statements, the Company has elected to apply fair value accounting to the majority of such transactions, with changes in fair value reported in earnings. Any transactions for which fair value accounting has not been elected are recorded at the amount of cash advanced or received plus accrued interest. Irrespective of whether the Company has elected fair value accounting, interest paid or received on all repo and reverse repo transactions is recorded in Interest expense or Interest revenue at the contractually specified rate.

Where the conditions of ASC 210-20-45-11, Balance Sheet-Offsetting: Repurchase and Reverse Repurchase Agreements, are met, repos and reverse repos are presented net on the Consolidated Balance Sheet.

The Company's policy is to take possession of securities purchased under reverse repurchase agreements. The Company monitors the fair value of securities subject to repurchase or resale on a daily basis and obtains or posts additional collateral in order to maintain contractual margin protection.

As described in Note 25 to the Consolidated Financial Statements, the Company uses a discounted cash flow technique to determine the fair value of repo and reverse repo transactions.

Loans

Loans are reported at their outstanding principal balances net of any unearned income and unamortized deferred fees and costs except that credit card receivable balances also include accrued interest and fees. Loan origination fees and certain direct origination costs are generally deferred and

recognized as adjustments to income over the lives of the related loans.

As described in Note 26 to the Consolidated Financial Statements, Citi has elected fair value accounting for certain loans. Such loans are carried at fair value with changes in fair value reported in earnings. Interest income on such loans is recorded in Interest revenue at the contractually specified rate.

Loans for which the fair value option has not been elected are classified upon origination or acquisition as either held-for-investment or held-for-sale. This classification is based on management's initial intent and ability with regard to those loans.

Loans that are held-for-investment are classified as Loans, net of unearned income on the Consolidated Balance Sheet, and the related cash flows are included within the cash flows from investing activities category in the Consolidated Statement of Cash Flows on the line Change in loans. However, when the initial intent for holding a loan has changed from held-for-investment to held-for-sale, the loan is reclassified to held-for-sale, but the related cash flows continue to be reported in cash flows from investing activities in the Consolidated Statement of Cash Flows on the line Proceeds from sales and securitizations of loans.

Consumer Loans

Consumer loans represent loans and leases managed primarily by the Global Consumer Banking (GCB) businesses and Citi Holdings.

Consumer Non-accrual and Re-aging Policies

As a general rule, interest accrual ceases for installment and real estate (both open- and closed-end) loans when payments are 90 days contractually past due. For credit cards and other unsecured revolving loans, however, Citi generally accrues interest until payments are 180 days past due. As a result of OCC guidance, home equity loans in regulated bank entities are classified as non-accrual if the related residential first mortgage is 90 days or more past due. Also as a result of OCC guidance, mortgage loans in regulated bank entities discharged through Chapter 7 bankruptcy, other than FHA-insured loans, are classified as non-accrual. Commercial market loans are placed on a cash (non-accrual) basis when it is determined, based on actual experience and a forward-looking assessment of the collectability of the loan in full, that the payment of interest or principal is doubtful or when interest or principal is 90 days past due.

Loans that have been modified to grant a concession to a borrower in financial difficulty may not be accruing interest at the time of the modification. The policy for returning such modified loans to accrual status varies by product and/or region. In most cases, a minimum number of payments (ranging from one to six) is required, while in other cases the loan is never returned to accrual status. For regulated bank entities, such modified loans are returned to accrual status if a credit evaluation at the time of, or subsequent to, the modification indicates the borrower is able to meet the restructured terms, and the borrower is current and has demonstrated a reasonable period of

sustained payment performance (minimum six months of consecutive payments).

For U.S. consumer loans, generally one of the conditions to qualify for modification is that a minimum number of payments (typically ranging from one to three) must be made. Upon modification, the loan is re-aged to current status. However, re-aging practices for certain open-ended consumer loans, such as credit cards, are governed by Federal Financial Institutions Examination Council (FFIEC) guidelines. For open-ended consumer loans subject to FFIEC guidelines, one of the conditions for the loan to be re-aged to current status is that at least three consecutive minimum monthly payments, or the equivalent amount, must be received. In addition, under FFIEC guidelines, the number of times that such a loan can be re-aged is subject to limitations (generally once in 12 months and twice in five years). Furthermore, Federal Housing Administration (FHA) and Department of Veterans Affairs (VA) loans may only be modified under those respective agencies' guidelines and payments are not always required in order to re-age a modified loan to current.

Consumer Charge-Off Policies

Citi's charge-off policies follow the general guidelines below:

• Unsecured installment loans are charged off at 120 days contractually past due.

• Unsecured revolving loans and credit card loans are charged off at 180 days contractually past due.

• Loans secured with non-real estate collateral are written down to the estimated value of the collateral, less costs to sell, at 120 days contractually past due.

• Real estate-secured loans are written down to the estimated value of the property, less costs to sell, at 180 days contractually past due.

• Real estate-secured loans are charged off no later than 180 days contractually past due if a decision has been made not to foreclose on the loans.

• Non-bank real estate-secured loans are charged off at the earlier of 180 days contractually past due, if there have been no payments within the last six months, or 360 days contractually past due, if a decision has been made not to foreclose on the loans.

• Non-bank loans secured by real estate are written down to the estimated value of the property, less costs to sell, at the earlier of the receipt of title, the initiation of foreclosure (a process that must commence when payments are 120 days contractually past due), when the loan is 180 days contractually past due if there have been no payments within the past six months or 360 days contractually past due.

• Non-bank unsecured personal loans are charged off at the earlier of 180 days contractually past due if there have been no payments within the last six months, or 360 days contractually past due.

• Unsecured loans in bankruptcy are charged off within 60 days of notification of filing by the bankruptcy court

or in accordance with Citi's charge-off policy, whichever occurs earlier.

• Consistent with OCC guidance, real estate-secured loans that were discharged through Chapter 7 bankruptcy, other than FHA-insured loans, are written down to the estimated value of the property, less costs to sell. Other real estate-secured loans in bankruptcy are written down to the estimated value of the property, less costs to sell, at the later of 60 days after notification or 60 days contractually past due.

• Non-bank loans secured by real estate that are discharged through Chapter 7 bankruptcy are written down to the estimated value of the property, less costs to sell, at 60 days contractually past due.

• Non-bank unsecured personal loans in bankruptcy are charged off when they are 30 days contractually past due.

• Commercial market loans are written down to the extent that principal is judged to be uncollectable.

Corporate Loans

Corporate loans represent loans and leases managed by Institutional Clients Group (ICG). Corporate loans are identified as impaired and placed on a cash (non-accrual) basis when it is determined, based on actual experience and a forward-looking assessment of the collectability of the loan in full, that the payment of interest or principal is doubtful or when interest or principal is 90 days past due, except when the loan is well collateralized and in the

process of collection. Any interest accrued on impaired corporate loans and leases is reversed at 90 days and charged against current earnings, and interest is thereafter included in earnings only to the extent actually received in cash. When there is doubt regarding the ultimate collectability of principal, all cash receipts are thereafter applied to reduce the recorded investment in the loan.

Impaired corporate loans and leases are written down to the extent that principal is deemed to be uncollectable. Impaired collateral-dependent loans and leases, where repayment is expected to be provided solely by the sale of the underlying collateral and there are no other available and reliable sources of repayment, are written down to the lower of cost or collateral value. Cash-basis loans are returned to accrual status when all contractual principal and interest amounts are reasonably assured of repayment and there is a sustained period of repayment performance in accordance with the contractual terms.

Loans Held-for-Sale

Corporate and consumer loans that have been identified for sale are classified as loans held-for-sale and included in Other assets. The practice of Citi's U.S. prime mortgage business has been to sell substantially all of its conforming loans. As such, U.S. prime mortgage conforming loans are classified as held-for-sale and the fair value option is elected at origination, with changes in fair value recorded in Other revenue. With the exception of those loans for which the fair value option has been elected, held-for-sale loans are accounted for at the lower of cost or market value, with any

write-downs or subsequent recoveries charged to Other revenue. The related cash flows are classified in the Consolidated Statement of Cash Flows in the cash flows from operating activities category on the line Change in loans held-for-sale.

Allowance for Loan Losses

Allowance for loan losses represents management's best estimate of probable losses inherent in the portfolio, including probable losses related to large individually evaluated impaired loans and troubled debt restructurings. Attribution of the allowance is made for analytical purposes only, and the entire allowance is available to absorb probable loan losses inherent in the overall portfolio. Additions to the allowance are made through the Provision for loan losses. Loan losses are deducted from the allowance and subsequent recoveries are added. Assets received in exchange for loan claims in a restructuring are initially recorded at fair value, with any gain or loss reflected as a recovery or charge-off to the provision.

Consumer Loans

For consumer loans, each portfolio of non-modified smaller-balance, homogeneous loans is independently evaluated for impairment by product type (e.g., residential mortgage, credit card, etc.) in accordance with ASC 450, Contingencies. The allowance for loan losses attributed to these loans is established via a process that estimates the probable losses inherent in the specific portfolio. This process includes migration analysis, in which historical delinquency and credit loss experience is applied to the current aging of the portfolio, together with analyses that reflect current and anticipated economic conditions, including changes in housing prices and unemployment trends. Citi's allowance for loan losses under ASC 450 only considers contractual principal amounts due, except for credit card loans where estimated loss amounts related to accrued interest receivable are also included. Management also considers overall portfolio indicators, including historical credit losses, delinquent, non-performing and classified loans, trends in volumes and terms of loans, an evaluation of overall credit quality, the credit process, including lending policies and procedures, and economic, geographical, product and other environmental factors. Separate valuation allowances are determined for impaired smaller-balance homogeneous loans whose terms have been modified in a troubled debt restructuring (TDR). Long-term modification programs, and short-term (less than 12 months) modifications that provide concessions (such as interest rate reductions) to borrowers in financial difficulty, are reported as TDRs. In addition, loan modifications that involve a trial period are reported as TDRs at the start of the trial period. The allowance for loan losses for TDRs is determined in accordance with ASC 310-10-35, Receivables—Subsequent Measurement (formerly SFAS 114) considering all available evidence, including, as appropriate, the present value of the expected future cash flows discounted at the loan's original contractual effective rate, the secondary market value of the loan and the fair value of

collateral less disposal costs. These expected cash flows incorporate modification program default rate assumptions. The original contractual effective rate for credit card loans is the pre-modification rate, which may include interest rate increases under the original contractual agreement with the borrower.

Valuation allowances for commercial market loans, which are classifiably managed Consumer loans, are determined in the same manner as for Corporate loans and are described in more detail in the following section. Generally, an asset-specific component is calculated under ASC 310-10-35 on an individual basis for larger-balance, non-homogeneous loans that are considered impaired and the allowance for the remainder of the classifiably managed Consumer loan portfolio is calculated under ASC 450 using a statistical methodology that may be supplemented by management adjustment.

Corporate Loans

In the corporate portfolios, the Allowance for loan losses includes an asset-specific component and a statistically based component. The asset-specific component is calculated under ASC 310-10-35, on an individual basis for larger-balance, non-homogeneous loans, which are considered impaired. An asset-specific allowance is established when the discounted cash flows, collateral value (less disposal costs) or observable market price of the impaired loan

are lower than its carrying value. This allowance considers the borrower's overall financial condition, resources, and payment record, the prospects for support from any financially responsible guarantors (discussed further below) and, if appropriate, the realizable value of any collateral. The asset-specific component of the allowance for smaller balance impaired loans is calculated on a pool basis considering historical loss experience.

The allowance for the remainder of the loan portfolio is determined under ASC 450 using a statistical methodology, supplemented by management judgment. The statistical analysis considers the portfolio's size, remaining tenor and credit quality as measured by internal risk ratings assigned to individual credit facilities, which reflect probability of default and loss given default. The statistical analysis considers historical default rates and historical loss severity in the event of default, including historical average levels and historical variability. The result is an estimated range for inherent losses. The best estimate within the range is then determined by management's quantitative and qualitative assessment of current conditions, including general economic conditions, specific industry and geographic trends, and internal factors including portfolio concentrations, trends in internal credit quality indicators, and current and past underwriting standards.

For both the asset-specific and the statistically based components of the Allowance for loan losses, management may incorporate guarantor support. The financial wherewithal of the guarantor is evaluated, as applicable, based on net worth, cash flow statements and personal or company financial statements which are updated and reviewed at least annually. Citi seeks performance on

guarantee arrangements in the normal course of business. Seeking performance entails obtaining satisfactory cooperation from the guarantor or borrower in the specific situation. This regular cooperation is indicative of pursuit and successful enforcement of the guarantee; the exposure is reduced without the expense and burden of pursuing a legal remedy. A guarantor's reputation and willingness to work with Citigroup is evaluated based on the historical experience with the guarantor and the knowledge of the marketplace. In the rare event that the guarantor is unwilling or unable to perform or facilitate borrower cooperation, Citi pursues a legal remedy; however, enforcing a guarantee via legal action against the guarantor is not the primary means of resolving a troubled loan situation and rarely occurs. If Citi does not pursue a legal remedy, it is because Citi does not believe that the guarantor has the financial wherewithal to perform regardless of legal action or because there are legal limitations on simultaneously pursuing guarantors and foreclosure. A guarantor's reputation does not impact Citi's decision or ability to seek performance under the guarantee.

In cases where a guarantee is a factor in the assessment of loan losses, it is included via adjustment to the loan's internal risk rating, which in turn is the basis for the adjustment to the statistically based component of the Allowance for loan losses. To date, it is only in rare circumstances that an impaired commercial loan or commercial real estate loan is carried at a value in excess of the appraised value due to a guarantee.

When Citi's monitoring of the loan indicates that the guarantor's wherewithal to pay is uncertain or has deteriorated, there is either no change in the risk rating, because the guarantor's credit support was never initially factored in, or the risk rating is adjusted to reflect that uncertainty or deterioration. Accordingly, a guarantor's ultimate failure to perform or a lack of legal enforcement of the guarantee does not materially impact the allowance for loan losses, as there is typically no further significant adjustment of the loan's risk rating at that time. Where Citi is not seeking performance under the guarantee contract, it provides for loan losses as if the loans were non-performing and not guaranteed.

Reserve Estimates and Policies

Management provides reserves for an estimate of probable losses inherent in the funded loan portfolio on the Consolidated Balance Sheet in the form of an allowance for loan losses. These reserves are established in accordance with Citigroup's credit reserve policies, as approved by the Audit Committee of the Citigroup Board of Directors. Citi's Chief Risk Officer and Chief Financial Officer review the adequacy of the credit loss reserves each quarter with representatives from the risk management and finance staffs for each applicable business area. Applicable business areas include those having classifiably managed portfolios, where internal credit-risk ratings are assigned (primarily ICG and GCB) or modified Consumer loans, where concessions were granted due to the borrowers' financial difficulties.

The above-mentioned representatives for these business areas present recommended reserve balances for their funded and unfunded lending portfolios along with supporting quantitative and qualitative data discussed below:

Estimated probable losses for non-performing, non-homogeneous exposures within a business line's classifiably managed portfolio and impaired smaller-balance homogeneous loans whose terms have been modified due to the borrowers' financial difficulties, where it was determined that a concession was granted to the borrower. Consideration may be given to the following, as appropriate, when determining this estimate: (i) the present value of expected future cash flows discounted at the loan's original effective rate; (ii) the borrower's overall financial condition, resources and payment record; and (iii) the prospects for support from financially responsible guarantors or the realizable value of any collateral. In the determination of the allowance for loan losses for TDRs, management considers a combination of historical re-default rates, the current economic environment and the nature of the modification program when forecasting expected cash flows. When impairment is measured based on the present value of expected future cash flows, the entire change in present value is recorded in the Provision for loan losses.

Statistically calculated losses inherent in the classifiably managed portfolio for performing and de minimis non-performing exposures. The calculation is based on: (i) Citi's internal system of credit-risk ratings, which are analogous to the risk ratings of the major rating agencies; and (ii) historical default and loss data, including rating

agency information regarding default rates from 1983 to 2014 and internal data dating to the early 1970s on severity of losses in the event of default. Adjustments may be made to this data. Such adjustments include: (i) statistically calculated estimates to cover the historical fluctuation of the default rates over the credit cycle, the historical variability of loss severity among defaulted loans, and the degree to which there are large obligor concentrations in the global portfolio; and (ii) adjustments made for specific known items, such as current environmental factors and credit trends.

In addition, representatives from each of the risk management and finance staffs that cover business areas with delinquency-managed portfolios containing smaller-balance homogeneous loans present their recommended reserve balances based on leading credit indicators, including loan delinquencies and changes in portfolio size as well as economic trends, including current and future housing prices, unemployment, length of time in foreclosure, costs to sell and GDP. This methodology is applied separately for each individual product within each geographic region in which these portfolios exist.

This evaluation process is subject to numerous estimates and judgments. The frequency of default, risk ratings, loss recovery rates, the size and diversity of individual large credits, and the ability of borrowers with foreign currency obligations to obtain the foreign currency necessary for orderly debt servicing, among other things, are all taken into account during this review. Changes in these estimates could

have a direct impact on the credit costs in any period and could result in a change in the allowance.

Allowance for Unfunded Lending Commitments

A similar approach to the allowance for loan losses is used for calculating a reserve for the expected losses related to unfunded lending commitments and standby letters of credit. This reserve is classified on the balance sheet in Other liabilities. Changes to the allowance for unfunded lending commitments are recorded in the Provision for unfunded lending commitments.

Mortgage Servicing Rights

Mortgage servicing rights (MSRs) are recognized as intangible assets when purchased or when the Company sells or securitizes loans acquired through purchase or origination and retains the right to service the loans. Mortgage servicing rights are accounted for at fair value, with changes in value recorded in Other revenue in the Company's Consolidated Statement of Income.

Additional information on the Company's MSRs can be found in Note 22 to the Consolidated Financial Statements.

Goodwill

Goodwill represents the excess of acquisition cost over the fair value of net tangible and intangible assets acquired. Goodwill is subject to annual impairment testing and between annual tests if an event occurs or circumstances change that would more-likely-than-not reduce the fair value of a reporting unit below its carrying amount.

Under ASC 350, Intangibles—Goodwill and Other, the Company has an option to assess qualitative factors to determine if it is necessary to perform the goodwill impairment test. If, after assessing the totality of events or circumstances, the Company determines that it is not more-likely-than-not that the fair value of a reporting unit is less than its carrying amount, no further testing is necessary. If, however, the Company determines that it is more-likely-than-not that the fair value of a reporting unit is less than its carrying amount, then the Company must perform the first step of the two-step goodwill impairment test.

The Company has an unconditional option to bypass the qualitative assessment for any reporting unit in any reporting period and proceed directly to the first step of the goodwill impairment test. Furthermore, on any business dispositions, goodwill is allocated to the disposed business based on the ratio of the fair value of the disposed business to the fair value of the reporting unit.

The first step requires a comparison of the fair value of the individual reporting unit to its carrying value, including goodwill. If the fair value of the reporting unit is in excess of the carrying value, the related goodwill is considered not to be impaired and no further analysis is necessary. If the carrying value of the reporting unit exceeds the fair value, this is an indication of potential impairment and a second step of testing is performed to measure the amount of impairment, if any, for that reporting unit.

If required, the second step involves calculating the implied fair value of goodwill for each of the affected

reporting units. The implied fair value of goodwill is determined in the same manner as the amount of goodwill recognized in a business combination, which is the excess of the fair value of the reporting unit determined in step one over the fair value of the net assets and identifiable intangibles as if the reporting unit were being acquired. If the amount of the goodwill allocated to the reporting unit exceeds the implied fair value of the goodwill in the pro forma purchase price allocation, an impairment charge is recorded for the excess. A recognized impairment charge cannot exceed the amount of goodwill allocated to a reporting unit and cannot subsequently be reversed even if the fair value of the reporting unit recovers.

Additional information on Citi's goodwill impairment testing can be found in Note 17 to the Consolidated Financial Statements.

Intangible Assets

Intangible assets, including core deposit intangibles, present value of future profits, purchased credit card relationships, other customer relationships, and other intangible assets, but excluding MSRs, are amortized over their

estimated useful lives. Intangible assets deemed to have indefinite useful lives, primarily certain asset management contracts and trade names, are not amortized and are subject to annual impairment tests. An impairment exists if the carrying value of the indefinite-lived intangible asset exceeds its fair value. For other intangible assets subject to amortization, an impairment is recognized if the carrying amount is not recoverable and exceeds the fair value of the intangible asset.

Similar to the goodwill impairment analysis, in performing the annual impairment analysis for indefinite-lived intangible assets, Citi may and has elected to bypass the optional qualitative assessment, choosing instead to perform a quantitative analysis.

Other Assets and Other Liabilities

Other assets include, among other items, loans held-for-sale, deferred tax assets, equity method investments, interest and fees receivable, premises and equipment (including purchased and developed software), repossessed assets, and other receivables. Other liabilities include, among other items, accrued expenses and other payables, deferred tax liabilities, and reserves for legal claims, taxes, unfunded lending commitments, repositioning reserves, and other matters.

Other Real Estate Owned and Repossessed Assets

Real estate or other assets received through foreclosure or repossession are generally reported in Other assets, net of a valuation allowance for selling costs and subsequent declines in fair value.

Securizations

The Company primarily securitizes credit card receivables and mortgages. Other types of securitized assets include corporate debt instruments (in cash and synthetic form).

There are two key accounting determinations that must be made relating to securitizations. Citi first makes a determination as to whether the securitization entity must be consolidated. Second, it determines whether the transfer of financial assets to the entity is considered a sale under GAAP. If the securitization entity is a VIE, the Company consolidates the VIE if it is the primary beneficiary (as discussed in “Variable Interest Entities” above). For all other securitization entities determined not to be VIEs in which Citigroup participates, consolidation is based on which party has voting control of the entity, giving consideration to removal and liquidation rights in certain partnership structures. Only securitization entities controlled by Citigroup are consolidated.

Interests in the securitized and sold assets may be retained in the form of subordinated or senior interest-only strips, subordinated tranches, spread accounts and servicing rights. In credit card securitizations, the Company retains a seller’s interest in the credit card receivables transferred to the trusts, which is not in securitized form. In the case of consolidated securitization entities, including the credit card trusts, these retained interests are not reported on Citi’s Consolidated Balance Sheet. The securitized loans remain on the balance sheet. Substantially all of the Consumer loans sold or securitized through non-consolidated trusts by Citigroup are U.S. prime residential mortgage loans. Retained interests in non-consolidated mortgage securitization trusts are classified as Trading account assets, except for MSRs, which are included in Mortgage servicing rights on Citigroup’s Consolidated Balance Sheet.

Debt

Short-term borrowings and Long-term debt are accounted for at amortized cost, except where the Company has elected to report the debt instruments, including certain structured notes at fair value, or the debt is in a fair value hedging relationship.

Transfers of Financial Assets

For a transfer of financial assets to be considered a sale: (i) the assets must have been legally isolated from the Company, even in bankruptcy or other receivership; (ii) the purchaser must have the right to pledge or sell the assets transferred or, if the purchaser is an entity whose sole purpose is to engage in securitization and asset-backed financing activities through the issuance of beneficial interests and that entity is constrained from pledging the assets it receives, each beneficial interest holder must have the right to sell or pledge their beneficial interests; and (iii) the Company may not have an option or obligation to reacquire the assets.

If these sale requirements are met, the assets are removed from the Company’s Consolidated Balance Sheet. If the conditions for sale are not met, the transfer is considered to be a secured borrowing, the assets remain on

the Consolidated Balance Sheet and the sale proceeds are recognized as the Company’s liability. A legal opinion on a sale generally is obtained for complex transactions or where the Company has continuing involvement with assets transferred or with the securitization entity. For a transfer to be eligible for sale accounting, those opinions must state that the asset transfer would be considered a sale and that the assets transferred would not be consolidated with the Company’s other assets in the event of the Company’s insolvency.

For a transfer of a portion of a financial asset to be considered a sale, the portion transferred must meet the definition of a participating interest. A participating interest must represent a pro rata ownership in an entire financial asset; all cash flows must be divided proportionately, with the same priority of payment; no participating interest in the transferred asset may be subordinated to the interest of another participating interest holder; and no party may have the right to pledge or exchange the entire financial asset unless all participating interest holders agree. Otherwise, the transfer is accounted for as a secured borrowing.

See Note 22 to the Consolidated Financial Statements for further discussion.

Risk Management Activities—Derivatives Used for Hedging Purposes

The Company manages its exposures to market rate movements outside its trading activities by modifying the asset and liability mix, either directly or through the use of derivative financial products, including interest-rate swaps, futures, forwards, and purchased options, as well as foreign-exchange contracts. These end-user derivatives are carried at fair value in Other assets, Other liabilities, Trading account assets and Trading account liabilities.

To qualify as an accounting hedge under the hedge accounting rules (versus an economic hedge where hedge accounting is not sought), a derivative must be highly effective in offsetting the risk designated as being hedged. The hedge relationship must be formally documented at inception, detailing the particular risk management objective and strategy for the hedge. This includes the item and risk being hedged, the derivative being used and how effectiveness will be assessed and ineffectiveness measured. The effectiveness of these hedging relationships is evaluated both on a retrospective and prospective basis, typically using quantitative measures of correlation with hedge ineffectiveness measured and recorded in current earnings.

If a hedge relationship is not highly effective, it no longer qualifies as an accounting hedge and hedge accounting may not be applied. Any gains or losses attributable to the derivatives, as well as subsequent changes in fair value, are recognized in Other revenue or Principal transactions with no offset to the hedged item, similar to trading derivatives. The foregoing criteria are applied on a decentralized basis, consistent with the level at which market risk is managed, but are subject to various limits and controls. The underlying asset, liability or forecasted transaction may be an individual item or a portfolio of similar items.

For fair value hedges, in which derivatives hedge the fair value of assets or liabilities, changes in the fair value of derivatives are reflected in Other revenue, together with changes in the fair value of the hedged item related to the hedged risk. These amounts are expected to, and generally do, offset each other. Any net amount, representing hedge ineffectiveness, is reflected in current earnings. Citigroup's fair value hedges are primarily hedges of fixed-rate long-term debt and available-for-sale securities.

For cash flow hedges, in which derivatives hedge the variability of cash flows related to floating- and fixed-rate assets, liabilities or forecasted transactions, the accounting treatment depends on the effectiveness of the hedge. To the extent these derivatives are effective in offsetting the variability of the hedged cash flows, the effective portion of the changes in the derivatives' fair values will not be included in current earnings, but is reported in Accumulated other comprehensive income (loss). These changes in fair value will be included in earnings of future periods when the hedged cash flows impact earnings. To the extent these derivatives are not effective, changes in their fair values are immediately included in Other revenue. Citigroup's cash flow hedges primarily include hedges of floating-rate debt and floating-rate assets, including loans and securities purchased under agreements to resell, as well as rollovers of short-term fixed-rate liabilities and floating-rate liabilities and forecasted debt issuances.

For net investment hedges in which derivatives hedge the foreign currency exposure of a net investment in a foreign operation, the accounting treatment will similarly depend on the effectiveness of the hedge. The effective portion of the change in fair value of the derivative, including any forward premium or discount, is reflected in Accumulated other comprehensive income (loss) as part of the foreign currency translation adjustment.

For those accounting hedge relationships that are terminated or when hedge designations are removed, the hedge accounting treatment described in the paragraphs above is no longer applied. Instead, the end-user derivative is terminated or transferred to the trading account. For fair value hedges, any changes in the fair value of the hedged item remain as part of the basis of the asset or liability and are ultimately reflected as an element of the yield. For cash flow hedges, any changes in fair value of the end-user derivative remain in Accumulated other comprehensive income (loss) and are included in earnings of future periods when the hedged cash flows impact earnings. However, if it becomes probable that some or all of the hedged forecasted transactions will not occur, any amounts that remain in Accumulated other comprehensive income (loss) related to these transactions are immediately reflected in Other revenue.

End-user derivatives that are economic hedges, rather than qualifying for hedge accounting, are also carried at fair value, with changes in value included in Principal transactions or Other revenue. Citigroup often uses economic hedges when qualifying for hedge accounting would be too complex or operationally burdensome. Examples are hedges of the credit risk component of

commercial loans and loan commitments. Citigroup periodically evaluates its hedging strategies in other areas and may designate either a qualifying hedge or an economic hedge, after considering the relative costs and benefits. Economic hedges are also employed when the hedged item itself is marked to market through current earnings, such as hedges of commitments to originate one-to-four-family mortgage loans to be held for sale and MSRs. See Note 23 to the Consolidated Financial Statements for a further discussion of the Company's hedging and derivative activities.

Employee Benefits Expense

Employee benefits expense includes current service costs of pension and other postretirement benefit plans (which are accrued on a current basis), contributions and unrestricted awards under other employee plans, the amortization of restricted stock awards and costs of other employee benefits.

For its most significant pension and postretirement benefit plans (Significant Plans), Citigroup measures and discloses plan obligations, plan assets and periodic plan expense quarterly, instead of annually. The effect of remeasuring the Significant Plan obligations and assets by updating plan actuarial assumptions on a quarterly basis is reflected in Accumulated other comprehensive income (loss) and periodic plan expense. All other plans (All Other Plans) are remeasured annually. See Note 8 to the Consolidated Financial Statements.

Stock-Based Compensation

The Company recognizes compensation expense related to stock and option awards over the requisite service period, generally based on the instruments' grant-date fair value, reduced by expected forfeitures. Compensation cost related to awards granted to employees who meet certain age plus years-of-service requirements (retirement-eligible employees) is accrued in the year prior to the grant date, in the same manner as the accrual for cash incentive compensation. Certain stock awards with performance conditions or certain clawback provisions are subject to variable accounting, pursuant to which the associated compensation expense fluctuates with changes in Citigroup's stock price. See Note 7 to the Consolidated Financial Statements.

Income Taxes

The Company is subject to the income tax laws of the U.S. and its states and municipalities, and the foreign jurisdictions in which it operates. These tax laws are complex and subject to different interpretations by the taxpayer and the relevant governmental taxing authorities. In establishing a provision for income tax expense, the Company must make judgments and interpretations about the application of these inherently complex tax laws. The Company must also make estimates about when in the future certain items will affect taxable income in the various tax jurisdictions, both domestic and foreign. Disputes over interpretations of the tax laws may be subject to review and adjudication by the court systems of

the various tax jurisdictions or may be settled with the taxing authority upon examination or audit. The Company treats interest and penalties on income taxes as a component of Income tax expense.

Deferred taxes are recorded for the future consequences of events that have been recognized for financial statements or tax returns, based upon enacted tax laws and rates. Deferred tax assets are recognized subject to management's judgment that realization is more-likely-than-not. FASB Interpretation No. 48, "Accounting for Uncertainty in Income Taxes" (FIN 48) (now incorporated into ASC 740, Income Taxes), sets out a consistent framework to determine the appropriate level of tax reserves to maintain for uncertain tax positions. This interpretation uses a two-step approach wherein a tax benefit is recognized if a position is more-likely-than-not to be sustained. The amount of the benefit is then measured to be the highest tax benefit that is greater than 50% likely to be realized. ASC 740 also sets out disclosure requirements to enhance transparency of an entity's tax reserves.

See Note 9 to the Consolidated Financial Statements for a further description of the Company's tax provision and related income tax assets and liabilities.

Commissions, Underwriting and Principal Transactions

Commissions revenues are recognized in income when earned. Underwriting revenues are recognized in income typically at the closing of the transaction. Principal transactions revenues are recognized in income on a trade-date basis. See Note 5 to the Consolidated Financial Statements for a description of the Company's revenue recognition policies for commissions and fees, and Note 6 to the Consolidated Financial Statements for details of principal transactions revenue.

Earnings per Share

Earnings per share (EPS) is computed after deducting preferred stock dividends. The Company has granted restricted and deferred share awards with dividend rights that are considered to be participating securities, which are akin to a second class of common stock. Accordingly, a portion of Citigroup's earnings is allocated to those participating securities in the EPS calculation.

Basic earnings per share is computed by dividing income available to common stockholders after the allocation of dividends and undistributed earnings to the participating securities by the weighted average number of common shares outstanding for the period. Diluted earnings per share reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised. It is computed after giving consideration to the weighted average dilutive effect of the Company's stock options and warrants and convertible securities and after the allocation of earnings to the participating securities.

Use of Estimates

Management must make estimates and assumptions that affect the Consolidated Financial Statements and the related Notes to the Consolidated Financial Statements. Such

estimates are used in connection with certain fair value measurements. See Note 25 to the Consolidated Financial Statements for further discussions on estimates used in the determination of fair value. Moreover, estimates are significant in determining the amounts of other-than-temporary impairments, impairments of goodwill and other intangible assets, provisions for probable losses that may arise from credit-related exposures and probable and estimable losses related to litigation and regulatory proceedings, and tax reserves. While management makes its best judgment, actual amounts or results could differ from those estimates. Current market conditions increase the risk and complexity of the judgments in these estimates.

Cash Flows

Cash equivalents are defined as those amounts included in Cash and due from banks. Cash flows from risk management activities are classified in the same category as the related assets and liabilities.

Related Party Transactions

The Company has related party transactions with certain of its subsidiaries and affiliates. These transactions, which are primarily short-term in nature, include cash accounts, collateralized financing transactions, margin accounts, derivative transactions, charges for operational support and the borrowing and lending of funds, and are entered into in the ordinary course of business.

ACCOUNTING CHANGES

Debt Issuance Costs

In April 2015, the FASB issued Accounting Standards Update (ASU) 2015-03, Interest—Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs, to conform the presentation of debt issuance costs to that of debt discounts and premiums. Thus, the ASU requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability. The guidance is effective beginning on January 1, 2016; however, Citi elected to early adopt the ASU on July 1, 2015 which resulted in an approximately \$150 million reclassification from Other assets to Long-term debt. The retrospective application was deemed immaterial and, as such, prior periods were not restated.

Accounting for Investments in Tax Credit Partnerships

In January 2014, the FASB issued ASU No. 2014-01, Investments—Equity Method and Joint Ventures (Topic 323): Accounting for Investments in Qualified Affordable Housing Projects. Any transition adjustment is reflected as an adjustment to retained earnings in the earliest period presented (retrospective application).

The ASU is applicable to Citi's portfolio of low income housing tax credit (LIHTC) partnership interests. The new standard widens the scope of investments eligible to elect to apply a new alternative method, the proportional amortization method, under which the cost of the investment

is amortized to tax expense in proportion to the amount of tax credits and other tax benefits received. Citi qualifies to elect the proportional amortization method under the ASU for its entire LIHTC portfolio. These investments were previously accounted for under the equity method, which resulted in losses (due to amortization of the investment) being recognized in Other revenue and tax credits and benefits being recognized in the Income tax expense line. In contrast, the proportional amortization method combines the amortization of the investment and receipt of the tax credits/benefits into one line, Income tax expense.

Citi adopted ASU 2014-01 in the first quarter of 2015.

The adoption of this ASU was applied retrospectively and cumulatively reduced Retained earnings by approximately \$349 million, Other assets by approximately \$178 million, and deferred tax assets by approximately \$171 million.

Accounting for Repurchase-to-Maturity Transactions

In June 2014, the FASB issued ASU No. 2014-11, Transfers and Servicing (Topic 860): Repurchase-to-Maturity Transactions, Repurchase Financings, and Disclosures. The ASU changes the accounting for repurchase-to-maturity transactions and linked repurchase financings to secured borrowing accounting, which is consistent with the accounting for other repurchase agreements. The ASU also requires disclosures about transfers accounted for as sales in transactions that are economically similar to repurchase agreements (see Note 23 to the Consolidated Financial Statements) and about the types of collateral pledged in repurchase agreements and similar transactions accounted for as secured borrowings (see Note 11 to the Consolidated Financial Statements). The ASU's provisions became effective for Citi in the first quarter of 2015, with the exception of the collateral disclosures which became effective in the second quarter of 2015. The effect of adopting the ASU is required to be reflected as a cumulative effect adjustment to retained earnings as of the beginning of the period of adoption. Adoption of the ASU did not have a material effect on the Company's financial statements.

Disclosures for Investments in Certain Entities That Calculate Net Asset Value (NAV) per Share

In May 2015, the FASB issued ASU No. 2015-07, Fair Value Measurement (Topic 820): Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent), which is intended to reduce diversity in practice related to the categorization of investments measured at NAV within the fair value hierarchy. The ASU removes the current requirement to categorize investments for which fair value is measured using the NAV per share practical expedient within the fair value hierarchy. Citi elected to early adopt the ASU in the second quarter of 2015. The adoption of the ASU was applied retrospectively and reduced Level 3 assets by \$1.0 billion and \$1.1 billion as of December 31, 2015 and December 31, 2014, respectively.

Discontinued Operations and Significant Disposals

The FASB issued ASU No. 2014-08, Presentation of Financial Statements (Topic 810) and Property, Plant, and Equipment (Topic 360), Reporting Discontinued Operations and Disclosures of Disposals of Components of an Entity (ASU 2014-08) in April 2014. ASU 2014-08 changes the criteria for reporting discontinued operations while enhancing disclosures. Under the ASU, only disposals representing a strategic shift having a major effect on an entity's operations and financial results, such as a disposal of a major geographic area, a major line of business or a major equity method investment, may be presented as discontinued operations. Additionally, the ASU requires expanded disclosures about discontinued operations that will provide more information about the assets, liabilities, income and expenses of discontinued operations.

The Company early-adopted the ASU in the second quarter of 2014 on a prospective basis for all disposals (or classifications as held-for-sale) of components of an entity that occurred on or after April 1, 2014. As a result of the adoption of the ASU, fewer disposals will now qualify for reporting as discontinued operations; however, disclosure of the pretax income attributable to a disposal of a significant part of an organization that does not qualify for discontinued operations reporting is required. The impact of adopting the ASU was not material.

Classification of Certain Government-Guaranteed Mortgage Loans upon Foreclosure

In August 2014, the FASB issued ASU No. 2014-14, *Receivables-Troubled Debt Restructuring by Creditors (Subtopic 310-40): Classification of Certain Government-Guaranteed Mortgage Loans upon Foreclosure*, which requires that a mortgage loan be derecognized and a separate other receivable be recognized upon foreclosure if the following conditions are met: (i) the loan has a government guarantee that is not separable from the loan before foreclosure; (ii) at the time of foreclosure, the creditor has the intent to convey the real estate property to the guarantor and make a claim on the guarantee, and the creditor has the ability to recover under that claim; and (iii) at the time of foreclosure, any amount of the claim that is determined on the basis of the fair value of the real estate is fixed. Upon foreclosure, the separate other receivable is measured based on the amount of the loan balance (principal and interest) expected to be recovered from the guarantor.

Citi early adopted the ASU on a modified retrospective basis in the fourth quarter of 2014, which resulted in reclassifying approximately \$130 million of foreclosed assets from Other Real Estate Owned to a separate other receivable that is included in Other assets. Given the modified retrospective approach to adoption, prior periods have not been restated.

FUTURE APPLICATION OF ACCOUNTING STANDARDS

Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued ASU No. 2016-01, Financial Instruments—Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities, which addresses certain aspects of recognition, measurement, presentation, and disclosure of financial instruments.

This ASU will require entities to present separately in OCI the portion of the total change in the fair value of a liability resulting from a change in the instrument-specific credit risk (DVA) when the entity has elected to measure the liability at fair value in accordance with the fair value option for financial instruments. It will also require equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income, thus eliminating eligibility for the current available-for-sale category. However, Federal Reserve Bank and Federal Home Loan Bank stock as well as exchange seats will continue to be presented at cost. As a practical expedient, an entity may choose to measure equity investments that do not have readily determinable fair values at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for the identical or a similar investment of the same issuer.

The guidance is effective beginning on January 1, 2018; however, early adoption is permitted only for the amendment in the ASU related to presentation of DVA for financial liabilities measured under the fair value option. Citi expects to early adopt this amendment as of January 1, 2016. The impact of adopting this amendment is not expected to be material to Citi's balance sheet at January 1, 2016; however, in subsequent periods the changes in DVA are dependent on changes in Citi's credit spreads and could be material in any given period.

Consolidation

In February 2015, the FASB issued ASU No. 2015-02, Consolidation (Topic 810): Amendments to the Consolidation Analysis, which intended to improve certain areas of consolidation guidance for legal entities such as limited partnerships, limited liability companies, and securitization structures. The ASU reduced the number of consolidation models and became effective on January 1, 2016. Adoption of ASU 2015-02 did not have a material impact on the Company's Consolidated Financial Statements.

Revenue Recognition

In May 2014, the FASB issued ASU No. 2014-09, Revenue from Contracts with Customers, which requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers. The ASU will replace most existing revenue

recognition guidance in GAAP when it becomes effective on January 1, 2018. Early application is permitted for annual periods beginning after December 15, 2016; however, the Company does not expect to early adopt. The ASU is not applicable to financial instruments and, therefore, is not expected to impact a majority of the Company's revenue, including net interest income. The Company is evaluating the effect that ASU 2014-09 will have on its consolidated financial statements and related disclosures.

Accounting for Financial Instruments—Credit Losses

In December 2012, the FASB issued a proposed ASU, Financial Instruments—Credit Losses. This proposed ASU, or exposure draft, was issued for public comment in order to allow stakeholders the opportunity to review the proposal and provide comments to the FASB and does not constitute accounting guidance until a final ASU is issued. The exposure draft contains proposed guidance developed by the FASB with the goal of improving financial reporting about expected credit losses on loans, securities and other financial assets held by financial institutions and other organizations. The exposure draft proposes a new accounting model intended to require earlier recognition of credit losses, while also providing additional transparency about credit risk.

The FASB's proposed model would utilize an "expected credit loss" measurement objective for the recognition of credit losses for loans, held-to-maturity securities and other receivables at the time the financial asset is originated or acquired and adjusted each period for changes in expected credit losses. For available-for-sale securities where fair value is less than cost, credit-related impairment would be recognized in an allowance for credit losses and adjusted each period for changes in credit risk. This would replace the multiple existing impairment models in GAAP, which generally require that a loss be incurred before it is recognized.

The FASB's proposed model represents a significant departure from existing GAAP, and may result in material changes to the Company's accounting for financial instruments. The impact of the FASB's final ASU on the Company's financial statements will be assessed when it is issued. The Company expects that the final ASU will be effective for Citi as of January 1, 2019.

Lease Accounting

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842), which is intended to increase transparency and comparability of accounting for lease transactions. The ASU will require all leases to be recognized on the balance sheet as lease assets and lease liabilities and will require both quantitative and qualitative disclosures regarding key information about leasing arrangements. Lessor accounting is largely unchanged. The guidance is effective beginning January 1, 2019 with an option to early adopt. The Company is evaluating whether to early adopt and the effect that ASU 2016-02 will have on its consolidated financial statements, regulatory capital and related disclosures.

2. DISCONTINUED OPERATIONS AND SIGNIFICANT DISPOSALS

Discontinued Operations

The following Discontinued operations are recorded within the Corporate/Other segment.

Sale of Brazil Credicard Business

Citi sold its non-Citibank-branded cards and consumer finance business in Brazil (Credicard) in 2013 and reported it as Discontinued operations. Residual costs and resolution of certain contingencies from the disposal resulted in income from Discontinued operations, net of taxes, of \$6 million and \$52 million for 2015 and 2014, respectively.

Sale of Certain Citi Capital Advisors Business

Citi sold its liquid strategies business within Citi Capital Advisors (CCA) pursuant to two separate transactions in 2013 and reported them as Discontinued operations. Residual costs from the disposals resulted in income and losses from Discontinued operations, net of taxes, of \$1 million and \$4 million for 2015 and 2014, respectively.

Sale of Egg Banking plc Credit Card Business

Citi completed the sale of the Egg Banking plc (Egg) credit card business in 2011 and reported it as Discontinued operations. Residual costs from the disposal resulted in losses from Discontinued operations, net of taxes, of \$61 million and \$30 million for 2015 and 2014, respectively.

Audit of Citi German Consumer Tax Group

Citi completed the sale of its German retail banking operations in 2008 and reported them as Discontinued operations. During 2014, residual costs from the disposal resulted in a tax expense of \$20 million.

Combined Results for Discontinued Operations

The following is summarized financial information for Credicard, CCA, Egg and previous Discontinued operations for which Citi continues to have minimal residual costs associated with the sales:

In millions of dollars	2015	2014	2013
Total revenues, net of interest expense ⁽¹⁾	\$—	\$74	\$1,086
Income (loss) from discontinued operations	\$(83)	)\$10	\$(242)
Gain on sale	—	—	268
Provision (benefit) for income taxes	(29)	)12	(244)
Income (loss) from discontinued operations, net of taxes	\$(54)	)\$(2)	)\$270

(1) Total revenues include gain or loss on sale, if applicable.

Cash flows for the Discontinued operations were not material for all periods presented.

Significant Disposals

The following sales completed during 2015 and 2014 were identified as significant disposals. The major classes of assets and liabilities derecognized from the Consolidated Balance Sheet at closing and the income (loss) before taxes related to each business until the disposal date are presented below.

Sale of OneMain Financial Business

On November 15, 2015, Citi sold its OneMain Financial business, which was part of Citi Holdings, including 1,100 retail branches, 5,500 employees, and approximately 1.3 million customer accounts. One Main Financial had approximately \$10.2 billion of assets, including \$7.8 billion of loans (net of allowance), and \$1.4 billion of available-for-sale securities. The total amount of liabilities sold was \$8.4 billion, including \$6.2 billion of long-term

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debt, and \$1.1 billion of short-term borrowings. The transaction generated a pre-tax gain on sale of \$2.6 billion, recorded in Other revenue (\$1.6 billion after-tax). However, when combined with the loss on redemption of certain long-term debt supporting remaining Citi Holdings' assets, the resulting net after-tax gain was \$0.8 billion.

Income before taxes, excluding the pretax gain on sale and loss on redemption of debt, is as follows:

In millions of dollars	2015	2014	2013
Income before taxes	\$663	\$890	\$923

Sale of Japan Cards Business

On December 14, 2015, Citi sold its Japan cards business, which was part of Citi Holdings, including \$1,350 million of consumer loans (net of allowance), approximately 720,000 customer accounts and 840 employees. The transaction generated a pretax gain on sale of \$180 million, recorded in Other revenue (\$155 million after-tax). Income (loss) before taxes, excluding the pretax gain on sale, is as follows:

In millions of dollars	2015	2014	2013
Income (loss) before taxes	\$ (5	) \$ —	\$ 46

Sale of Japan Retail Banking Business

On November 1, 2015, Citi sold its Japan retail banking business, which was part of Citi Holdings, including \$563 million of consumer loans (net of allowance), \$20 billion of deposits, approximately 725,000 customer accounts, 1,600 employees and 32 branches. The transaction generated a pretax gain on sale of \$446 million, recorded in Other revenue (\$276 million after-tax). Income (loss) before taxes (benefits), excluding the pretax gain on sale, is as follows:

In millions of dollars	2015	2014	2013
Income (loss) before taxes	\$ (57	) \$ (5	) \$ 31

Sale of Spain Consumer Operations

On September 22, 2014, Citi sold its consumer operations in Spain, which were part of Citi Holdings, including \$1.7 billion of consumer loans (net of allowance), \$3.4 billion of assets under management, \$2.2 billion of customer deposits, 45 branches, 48 ATMs and 938 employees, with the buyer assuming the related current pension commitments at closing. The transaction generated a pretax gain on sale of \$243 million, recorded in Other revenue (\$131 million after-tax). Income before taxes, excluding the pretax gain on sale, is as follows:

In millions of dollars	2015	2014	2013
Income before taxes	\$ —	\$ 130	\$ 59

Sale of Greece Consumer Operations

On September 30, 2014, Citi sold its consumer operations in Greece, which were part of Citi Holdings, including \$353 million of consumer loans (net of allowance), \$1.1 billion of assets under management, \$1.2 billion of customer deposits, 20 branches, 85 ATMs and 719 employees, with the buyer assuming certain limited pension obligations related to Diners' Club's employees at closing. The transaction generated a pretax gain on sale of \$209 million, recorded in Other revenue (\$91 million after-tax). Income (loss) before taxes, excluding the pretax gain on sale, is as follows:

In millions of dollars	2015	2014	2013
Income (loss) before taxes	\$ —	\$ (76	) \$ (113

3. BUSINESS SEGMENTS

Citigroup's activities are conducted through the GCB, ICG, Corporate/Other and Citi Holdings business segments. GCB includes a global, full-service consumer franchise delivering a wide array of banking, including commercial banking, credit card lending and investment services through a network of local branches, offices and electronic delivery systems and is composed of four GCB businesses: North America, EMEA, Latin America and Asia. ICG is composed of Banking and Markets and securities services and provides corporate, institutional, public sector and high-net-worth clients in approximately 100 countries with a broad range of banking and financial products and services.

Corporate/Other includes certain unallocated costs of global functions, other corporate expenses and net treasury results, unallocated corporate expenses, offsets to certain line-item reclassifications and eliminations, the results of discontinued operations and unallocated taxes.

Citi Holdings is composed of businesses and portfolios of assets that Citigroup has determined are not central to its core Citicorp businesses.

The accounting policies of these reportable segments are the same as those disclosed in Note 1 to the Consolidated Financial Statements.

The prior-period balances reflect reclassifications to conform the presentation for all periods to the current period's presentation. Effective January 1, 2015, financial data was reclassified from Citicorp to Citi Holdings for the consumer businesses in 11 markets and the consumer finance business in Korea in GCB and certain businesses in ICG that Citi had plans to exit, changes in Citi's charge-out of certain assets and non-interest revenues from the Corporate/Other segment to Citi's businesses, changes in charge-outs of certain administrative, operations and technology costs among Citi's businesses, the re-attribution of regional results within ICG and certain other immaterial reclassifications. Citi's consolidated results remained unchanged for all periods presented as a result of the changes discussed above.

In addition, as discussed in Note 1 to the Consolidated Financial Statements, Citi adopted ASU 2014-01 in the first quarter of 2015. The ASU is applicable to Citi's portfolio of low income housing tax credit partnership interests. Citi's disclosures reflect the retrospective application of the ASU and impacts Citi's consolidated assets, revenues, provision for income taxes and net income for all periods presented.

The following table presents certain information regarding the Company's continuing operations by segment:

In millions of dollars, except identifiable assets in billions	Revenues, net of interest expense ⁽¹⁾			Provision (benefits) for income taxes			Income (loss) from continuing operations ⁽²⁾			Identifiable assets	
	2015	2014	2013	2015	2014	2013	2015	2014	2013	2015	2014
Global Consumer Banking	\$33,862	\$36,017	\$36,305	\$3,393	\$3,414	\$3,361	\$6,382	\$6,819	\$6,576	\$394	\$406
Institutional Clients Group	33,748	33,052	33,322	4,383	4,070	4,174	9,451	9,534	9,425	1,211	1,257
Corporate/Other	907	301	322	(1,339)	(344)	(216)	495	(5,375)	(514)	52	50
Total Citicorp	\$68,517	\$69,370	\$69,949	\$6,437	\$7,140	\$7,319	\$16,328	\$10,978	\$15,487	\$1,657	\$1,713
Citi Holdings	7,837	7,849	6,775	1,003	57	(1,133)	1,058	(3,474)	(1,871)	74	129
Total	\$76,354	\$77,219	\$76,724	\$7,440	\$7,197	\$6,186	\$17,386	\$7,504	\$13,616	\$1,731	\$1,842

Includes Citicorp (excluding Corporate/Other) total revenues, net of interest expense, in North America of \$32.6 billion, \$32.6 billion and \$31.1 billion; in EMEA of \$10.8 billion, \$10.6 billion and \$11.3 billion; in Latin America of \$11.2 billion, and \$12.6 billion and \$13.3 billion; and in Asia of \$13.0 billion, \$13.3 billion and \$13.9 billion in 2015, 2014 and 2013, respectively.

Includes pretax provisions for credit losses and for benefits and claims in the GCB results of \$5.8 billion, \$5.8 billion and \$6.6 billion; in the ICG results of \$929 million, \$57 million and \$78 million; and in Citi Holdings results of \$1.2 billion, \$1.6 billion and \$1.9 billion in 2015, 2014 and 2013, respectively.

4. INTEREST REVENUE AND EXPENSE

Interest revenue and Interest expense consisted of the following:

In millions of dollars	2015	2014	2013
Interest revenue			
Loan interest, including fees	\$40,510	\$44,776	\$45,580
Deposits with banks	727	959	1,026
Federal funds sold and securities borrowed or purchased under agreements to resell	2,516	2,366	2,566
Investments, including dividends	7,017	7,195	6,919
Trading account assets ⁽¹⁾	5,942	5,880	6,277
Other interest ⁽²⁾	1,839	507	602
Total interest revenue	\$58,551	\$61,683	\$62,970
Interest expense			
Deposits ⁽³⁾	\$5,052	\$5,692	\$6,236
Federal funds purchased and securities loaned or sold under agreements to repurchase	1,614	1,895	2,339
Trading account liabilities ⁽¹⁾	216	168	169
Short-term borrowings	522	580	597
Long-term debt	4,517	5,355	6,836
Total interest expense	\$11,921	\$13,690	\$16,177
Net interest revenue	\$46,630	\$47,993	\$46,793
Provision for loan losses	7,108	6,828	7,604
Net interest revenue after provision for loan losses	\$39,522	\$41,165	\$39,189

(1) Interest expense on Trading account liabilities of ICG is reported as a reduction of interest revenue from Trading account assets.

(2) During 2015, interest earned related to assets of significant disposals (primarily OneMain Financial) were reclassified into Other interest.

(3) Includes deposit insurance fees and charges of \$1,118 million and \$1,038 million and \$1,132 million for 2015, 2014 and 2013, respectively.

5. COMMISSIONS AND FEES

The primary components of Commissions and fees revenue are investment banking fees, trading-related fees, credit card and bank card fees and fees related to trade and securities services in ICG.

Investment banking fees are substantially composed of underwriting and advisory revenues and are recognized when Citigroup's performance under the terms of a contractual arrangement is completed, which is typically at the closing of the transaction. Underwriting revenue is recorded in Commissions and fees, net of both reimbursable and non-reimbursable expenses, consistent with the AICPA Audit and Accounting Guide for Brokers and Dealers in Securities (codified in ASC 940-605-05-1). Expenses associated with advisory transactions are recorded in Other operating expenses, net of client reimbursements. Out-of-pocket expenses are deferred and recognized at the time the related revenue is recognized. In general, expenses incurred related to investment banking transactions that fail to close (are not consummated) are recorded gross in Other operating expenses.

Trading-related fees primarily include commissions and fees from the following: executing transactions for clients on exchanges and over-the-counter markets; sale of mutual funds, insurance and other annuity products; and assisting clients in clearing transactions, providing brokerage services and other such activities. Trading-related fees are recognized when earned in Commissions and fees. Gains or losses, if any, on these transactions are included in Principal transactions (see Note 6 to the Consolidated Financial Statements).

Credit card and bank card fees are primarily composed of interchange revenue and certain card fees, including annual fees, reduced by reward program costs and certain partner payments. Interchange revenue and fees are recognized when earned. Annual card fees are deferred and amortized on a straight-line basis over a 12-month period. Reward costs are recognized when points are earned by the customers. The following table presents Commissions and fees revenue:

In millions of dollars	2015	2014	2013
Investment banking	\$3,423	\$3,687	\$3,315
Trading-related	2,345	2,503	2,563
Credit cards and bank cards	1,786	2,227	2,472
Trade and securities services	1,735	1,871	1,847
Other consumer ⁽¹⁾	685	885	911
Corporate finance ⁽²⁾	493	531	516
Checking-related	497	531	551
Loan servicing	404	380	500
Other	480	417	266
Total commissions and fees	\$11,848	\$13,032	\$12,941

⁽¹⁾ Primarily consists of fees for investment fund administration and management, third-party collections, commercial demand deposit accounts and certain credit card services.

⁽²⁾ Consists primarily of fees earned from structuring and underwriting loan syndications.

6. PRINCIPAL TRANSACTIONS

Principal transactions revenue consists of realized and unrealized gains and losses from trading activities. Trading activities include revenues from fixed income, equities, credit and commodities products and foreign exchange transactions which are managed on a portfolio basis characterized by primary risk. Not included in the table below is the impact of net interest revenue related to trading activities, which is an integral part of trading activities' profitability. See Note 4 to the Consolidated Financial Statements for information about

net interest revenue related to trading activities. Principal transactions include CVA (credit valuation adjustments on derivatives), FVA (funding valuation adjustments) on over-the-counter derivatives and DVA (debt valuation adjustments on issued liabilities for which the fair value option has been elected). These adjustments are discussed further in Note 25 to the Consolidated Financial Statements.

The following table presents principal transactions revenue:

In millions of dollars	2015	2014	2013
Global Consumer Banking	\$636	\$699	\$762
Institutional Clients Group	5,823	5,905	6,489
Corporate/Other	(444)	)(380)	)(75)
Subtotal Citicorp	\$6,015	\$6,224	\$7,176
Citi Holdings	(7)	)474	126
Total Citigroup	\$6,008	\$6,698	\$7,302
Interest rate risks ⁽¹⁾	\$3,798	\$3,657	\$4,055
Foreign exchange risks ⁽²⁾	1,532	2,008	2,307
Equity risks ⁽³⁾	(303)	)(260)	)319
Commodity and other risks ⁽⁴⁾	750	590	277
Credit products and risks ⁽⁵⁾	231	703	344
Total	\$6,008	\$6,698	\$7,302

Includes revenues from government securities and corporate debt, municipal securities, mortgage securities and other debt instruments. Also includes spot and forward trading of currencies and exchange-traded and over-the-counter (OTC) currency options, options on fixed income securities, interest rate swaps, currency swaps, swap options, caps and floors, financial futures, OTC options and forward contracts on fixed income securities.

(2) Includes revenues from foreign exchange spot, forward, option and swap contracts, as well as FX translation gains and losses.

(3) Includes revenues from common, preferred and convertible preferred stock, convertible corporate debt, equity-linked notes and exchange-traded and OTC equity options and warrants.

(4) Primarily includes revenues from crude oil, refined oil products, natural gas and other commodities trades.

(5) Includes revenues from structured credit products.

7. INCENTIVE PLANS

Discretionary Annual Incentive Awards

Citigroup grants immediate cash bonus payments, deferred cash awards, stock payments and restricted and deferred stock awards as part of its discretionary annual incentive award program involving a large segment of Citigroup's employees worldwide. Most of the shares of common stock issued by Citigroup as part of its equity compensation programs are to settle the vesting of the stock components of these awards.

Discretionary annual incentive awards are generally awarded in the first quarter of the year based upon the previous year's performance. Awards valued at less than U.S. \$100,000 (or the local currency equivalent) are generally paid entirely in the form of an immediate cash bonus. Pursuant to Citigroup policy and/or regulatory requirements, certain employees and officers are subject to mandatory deferrals of incentive pay and generally receive 25% to 60% of their awards in a combination of restricted or deferred stock and deferred cash. Discretionary annual incentive awards to many employees in the EU are subject to deferral requirements regardless of the total award value, with 50% of the immediate incentive delivered in the form of a stock payment or stock unit award subject to a restriction on sale or transfer or hold back (generally, for six months).

Deferred annual incentive awards may be delivered as two awards—a restricted or deferred stock award under Citi's Capital Accumulation Program (CAP) and a deferred cash award. The applicable mix of CAP and deferred cash awards may vary based on the employee's minimum deferral requirement and the country of employment. In some cases, the entire deferral will be in the form of either a CAP or deferred cash award.

Subject to certain exceptions (principally, for retirement-eligible employees), continuous employment within Citigroup is required to vest in CAP and deferred cash awards. Post-employment vesting by retirement-eligible employees and participants who meet other conditions is generally conditioned upon their refraining from competition with Citigroup during the remaining vesting period, unless the employment relationship has been terminated by Citigroup under certain conditions.

Generally, the CAP and deferred cash awards vest in equal annual installments over three- or four-year periods. Vested CAP awards are delivered in shares of common stock. Deferred cash awards are payable in cash and earn a fixed notional rate of interest that is paid only if and when the underlying principal award amount vests. Generally, in the EU, vested CAP shares are subject to a restriction on sale or transfer after vesting, and vested deferred cash awards are subject to hold back (generally, for six months in each case).

Unvested CAP and deferred cash awards made in January 2011 or later are subject to one or more clawback provisions that apply in certain circumstances, including in the case of employee risk-limit violations or other misconduct, or where the awards were based on earnings that were misstated. CAP awards made to certain employees in February 2013 and later, and deferred cash awards made to certain employees in January 2012, are subject to a formulaic performance-based

vesting condition pursuant to which amounts otherwise scheduled to vest will be reduced based on the amount of any pretax loss in the participant's business in the calendar year preceding the scheduled vesting date. For CAP awards made in February 2013 and later, a minimum reduction of 20% applies for the first dollar of loss.

In addition, deferred cash awards made to certain employees in February 2013 and later are subject to a discretionary performance-based vesting condition under which an amount otherwise scheduled to vest may be reduced in the event of a "material adverse outcome" for which a participant has "significant responsibility." Deferred cash awards made to these employees in February 2014 and later are subject to an additional clawback provision pursuant to which unvested awards may be canceled if the employee engaged in misconduct or exercised materially imprudent judgment, or failed to supervise or escalate the behavior of other employees who did.

Certain CAP and other stock-based awards, including those to participants in the EU that are subject to certain discretionary clawback provisions, are subject to variable accounting, pursuant to which the associated value of the award fluctuates with changes in Citigroup's common stock price until the date that the award is settled, either in cash or shares. For these awards, the total amount that will be recognized as expense cannot be determined in full until the settlement date.

Sign-on and Long-Term Retention Awards

Stock awards and deferred cash awards may be made at various times during the year as sign-on awards to induce new hires to join Citi or to high-potential employees as long-term retention awards.

Vesting periods and other terms and conditions pertaining to these awards tend to vary by grant. Generally, recipients must remain employed through the vesting dates to vest in the awards, except in cases of death, disability or involuntary termination other than for “gross misconduct.” These awards do not usually provide for post-employment vesting by retirement-eligible participants.

Outstanding (Unvested) Stock Awards

A summary of the status of unvested stock awards granted as discretionary annual incentive or sign-on and long-term retention awards is presented below:

Unvested stock awards	Shares	Weighted- average grant date fair value per share
Unvested at January 1, 2015	50,004,393	\$42.52
Granted ⁽¹⁾	17,815,456	50.33
Canceled	(2,005,875	)44.71
Vested ⁽²⁾	(23,953,683	)42.53
Unvested at December 31, 2015	41,860,291	\$45.73

(1) The weighted-average fair value of the shares granted during 2014 and 2013 was \$49.65 and \$43.96, respectively.

(2) The weighted-average fair value of the shares vesting during 2015 was approximately \$48.09 per share.

Total unrecognized compensation cost related to unvested stock awards, excluding the impact of forfeiture estimates, was \$634 million at December 31, 2015. The cost is expected to be recognized over a weighted-average period of 1.5 years. However, the value of the portion of these awards that is subject to variable accounting will fluctuate with changes in Citigroup's common stock price.

Performance Share Units

Certain executive officers were awarded a target number of performance share units (PSUs) on February 19, 2013, for performance in 2012, and to a broader group of executives on February 18, 2014 and February 18, 2015, for performance in 2013 and 2014, respectively. PSUs will be earned only to the extent that Citigroup attains specified performance goals relating to Citigroup's return on assets and relative total shareholder return against peers over the three-year period beginning with the year of award. The actual dollar amounts ultimately earned could vary from zero, if performance goals are not met, to as much as 150% of target, if performance goals are meaningfully exceeded. The value of each PSU is equal to the value of one share of Citi common stock.

PSUs were granted on February 16, 2016, for performance in 2015. The 2016 PSUs are earned over a three-year performance period based on Citigroup's relative total shareholder return as compared to peers. The actual dollar amounts ultimately earned could vary from zero, if performance goals are not met, to as much as 150% of target, if performance goals are meaningfully exceeded. The value of each PSU is equal to the value of one share of Citi common stock.

PSUs are subject to variable accounting, pursuant to which the associated value of the award will fluctuate with changes in Citigroup's stock price and the attainment of the specified performance goals for each award, until the award is settled solely in cash after the end of the performance period. The value of the award, subject to the performance goals, is estimated using a simulation model that incorporates multiple valuation assumptions, including the probability of achieving the specified performance goals of each award. The risk-free rate used in the model is based on the applicable U.S. Treasury yield curve. Other significant assumptions for the awards are as follows:

Valuation Assumptions	2015	2014	2013	
Expected volatility	27.13	%39.12	%42.65	%
Expected dividend yield	0.08	%0.08	%0.12	%

A summary of the performance share unit activity for 2015 is presented below:

Performance Share Units	Units	Weighted- average grant date fair
-------------------------	-------	---

		value per unit
Outstanding, beginning of period	843,793	\$46.28
Granted ⁽¹⁾	513,464	44.07
Canceled	—	—
Payments	—	—
Outstanding, end of period	1,357,257	\$45.45

(1) The weighted-average grant date fair value per unit awarded in 2014 and 2013 was \$48.34 and \$42.26, respectively.

Stock Option Programs

Stock options have not been granted to Citi's employees as part of the annual incentive award programs since 2009. All outstanding stock options are fully vested with the related expense recognized as a charge to income in prior periods. Generally, the stock options outstanding have a six-year term, with some stock options subject to various transfer restrictions. Cash received from employee stock option exercises under this program for the year ended December 31, 2015 was approximately \$634 million.

Information with respect to stock option activity under Citigroup's stock option programs follows:

	2015			2014			2013		
	Options	Weighted-average exercise price	Intrinsic value per share	Options	Weighted-average exercise price	Intrinsic value per share	Options	Weighted-average exercise price	Intrinsic value per share
Outstanding, beginning of period	26,514,119	\$48.00	\$6.11	31,508,106	\$50.72	\$1.39	35,020,397	\$51.20	\$—
Canceled	(7,901)	40.80	—	(28,257)	40.80	—	(50,914)	212.35	—
Expired	(1,646,581)	40.85	—	(602,093)	242.43	—	(86,964)	528.40	—
Exercised	(18,203,048)	41.39	13.03	(4,363,637)	40.82	11.37	(3,374,413)	40.81	9.54
Outstanding, end of period	6,656,588	\$67.92	\$—	26,514,119	\$48.00	\$6.11	31,508,106	\$50.72	\$1.39
Exercisable, end of period	6,656,588			26,514,119			30,662,588		

The following table summarizes information about stock options outstanding under Citigroup's stock option programs at December 31, 2015:

Range of exercise prices	Options outstanding			Options exercisable	
	Number outstanding	Weighted-average contractual life remaining	Weighted-average exercise price	Number exercisable	Weighted-average exercise price
\$39.00—\$49.99	5,763,424	1.0 year	\$48.16	5,763,424	\$48.16
\$50.00—\$99.99	66,660	5.4 years	56.25	66,660	56.25
\$100.00—\$199.99	502,416	3.0 years	147.13	502,416	147.13
\$200.00—\$299.99	124,088	2.1 years	240.28	124,088	240.28
\$300.00—\$399.99	200,000	2.1 years	335.50	200,000	335.50
Total at December 31, 2015	6,656,588	1.3 years	\$67.92	6,656,588	\$67.92

Other Variable Incentive Compensation

Citigroup has various incentive plans globally that are used to motivate and reward performance primarily in the areas of sales, operational excellence and customer satisfaction. Participation in these plans is generally limited to employees who are not eligible for discretionary annual incentive awards.

Summary

Except for awards subject to variable accounting, the total expense recognized for stock awards represents the grant date fair value of such awards, which is generally recognized as a charge to income ratably over the vesting period, other than for awards to retirement-eligible employees and immediately vested awards. Whenever awards are made or are expected to be made to retirement-eligible employees, the charge to income is accelerated based on when the applicable conditions to retirement eligibility were or will be met. If the employee is retirement eligible on the grant date, or the award is vested at grant date, the entire expense is recognized in the year prior to grant.

Recipients of Citigroup stock awards generally do not have any stockholder rights until shares are delivered upon vesting or exercise, or after the expiration of applicable required holding periods. Recipients of restricted or deferred stock awards and stock unit awards, however, may be entitled to receive dividends or dividend-equivalent payments during the vesting period. Recipients of restricted stock awards generally are entitled to vote the shares in their award during

the vesting period. Once a stock award vests, the shares are freely transferable, unless they are subject to a restriction on sale or transfer for a specified period.

All equity awards granted since April 19, 2005, have been made pursuant to stockholder-approved stock incentive plans that are administered by the Personnel and Compensation Committee of the Citigroup Board of Directors, which is composed entirely of independent non-employee directors.

At December 31, 2015, approximately 54.4 million shares of Citigroup common stock were authorized and available for grant under Citigroup's 2014 Stock Incentive Plan, the only plan from which equity awards are currently granted. The 2014 Stock Incentive Plan and predecessor plans permit the use of treasury stock or newly issued shares in connection with awards granted under the plans. Newly issued shares were distributed to settle the vesting of the majority of annual deferred stock awards in 2012 to 2015. Treasury shares were used to settle vestings in the first quarter of 2016. The use of treasury stock or newly issued shares to settle stock awards does not affect the compensation expense recorded in the Consolidated Statement of Income for equity awards.

Incentive Compensation Cost

The following table shows components of compensation expense, relating to certain of the above incentive compensation programs, recorded during 2015, 2014 and 2013:

In millions of dollars	2015	2014	2013
Charges for estimated awards to retirement-eligible employees	\$541	\$525	\$468
Amortization of deferred cash awards, deferred cash stock units and performance stock units	325	311	323
Immediately vested stock award expense ⁽¹⁾	61	51	54
Amortization of restricted and deferred stock awards ⁽²⁾	461	668	862
Option expense	—	1	10
Other variable incentive compensation	773	803	1,076
Profit sharing plan	—	1	78
Total	\$2,161	\$2,360	\$2,871

(1) Represents expense for immediately vested stock awards that generally were stock payments in lieu of cash compensation. The expense is generally accrued as cash incentive compensation in the year prior to grant.

(2) All periods include amortization expense for all unvested awards to non-retirement-eligible employees. Amortization is recognized net of estimated forfeitures of awards.

Future Expenses Associated with Outstanding (Unvested) Awards

Citi expects to record compensation expense in future periods as a result of awards granted for performance in 2015 and prior years. Because the awards contain service or other conditions that will be satisfied in the future, the expense of these already-granted awards is recognized over those future period(s). Citi's expected future expenses, excluding the impact of forfeitures, cancellations, clawbacks and repositioning-related accelerations that have not yet occurred, are summarized in the table below. The portion of these awards that is subject to variable accounting will cause the expense amount to fluctuate with changes in Citigroup's common stock price.

In millions of dollars	2016	2017	2018	2019 and beyond ⁽¹⁾	Total ⁽²⁾
Awards granted in 2015 and prior:					
Deferred stock awards	\$339	\$201	\$88	\$12	\$640
Deferred cash awards	215	121	45	4	385
Future expense related to awards already granted	\$554	\$322	\$133	\$16	\$1,025
Future expense related to awards granted in 2016 ⁽³⁾	297	211	166	113	787
Total	\$851	\$533	\$299	\$129	\$1,812

(1) Principally 2019.

(2) \$1.6 billion of which is attributable to ICG.

(3) Refers to awards granted on or about February 16, 2016, as part of Citi's discretionary annual incentive awards for services performed in 2015.

8. RETIREMENT BENEFITS

Pension and Postretirement Plans

The Company has several non-contributory defined benefit pension plans covering certain U.S. employees and has various defined benefit pension and termination indemnity plans covering employees outside the U.S.

The U.S. qualified defined benefit plan was frozen effective January 1, 2008 for most employees. Accordingly, no additional compensation-based contributions have been credited to the cash balance portion of the plan for existing plan participants after 2007. However, certain employees covered under the prior final pay plan formula continue to accrue benefits. The Company also offers postretirement health care and life insurance benefits to certain eligible U.S. retired employees, as well as to certain eligible employees outside the U.S.

The Company also sponsors a number of non-contributory, nonqualified pension plans. These plans, which are unfunded, provide supplemental defined pension benefits

to certain U.S. employees. With the exception of certain employees covered under the prior final pay plan formula, the benefits under these plans were frozen in prior years.

The plan obligations, plan assets and periodic plan expense for the Company's most significant pension and postretirement benefit plans (Significant Plans) are measured and disclosed quarterly, instead of annually. The Significant Plans captured approximately 90% of the Company's global pension and postretirement plan obligations as of December 31, 2015. All other plans (All Other Plans) are measured annually with a December 31 measurement date.

Net (Benefit) Expense

The following table summarizes the components of net (benefit) expense recognized in the Consolidated Statement of Income for the Company's pension and postretirement plans, for Significant Plans and All Other Plans, for the periods indicated.

In millions of dollars	Pension plans						Postretirement benefit plans					
	U.S. plans			Non-U.S. plans			U.S. plans			Non-U.S. plans		
	2015	2014	2013	2015	2014	2013	2015	2014	2013	2015	2014	2013
Qualified plans												
Benefits earned during the year	\$4	\$6	\$8	\$168	\$178	\$210	\$—	\$—	\$—	\$12	\$15	\$43
Interest cost on benefit obligation	553	541	538	317	376	384	33	33	33	108	120	146
Expected return on plan assets	(893)	(878)	(863)	(323)	(384)	(396)	(3)	(1)	(2)	(105)	(121)	(133)
Amortization of unrecognized												
Prior service (benefit) cost	(3)	(3)	(4)	2	1	4	—	—	(1)	(11)	(12)	—
Net actuarial loss	139	105	104	73	77	95	—	—	—	43	39	45
Curtailment loss (gain) ⁽¹⁾	14	—	21	—	14	4	—	—	—	(1)	—	—
Settlement loss (gain) ⁽¹⁾	—	—	—	44	53	13	—	—	—	—	—	(1)
Special termination benefits ⁽¹⁾	—	—	—	—	9	8	—	—	—	—	—	—
Net qualified plans (benefit) expense	\$(186)	\$(229)	\$(196)	\$281	\$324	\$322	\$30	\$32	\$30	\$46	\$41	\$100
Nonqualified plans expense	43	45	46	—	—	—	—	—	—	—	—	—
	—	—	(23)	—	—	—	—	—	—	—	—	3

Cumulative effect of change
in accounting policy⁽²⁾

Total net (benefit) expense	\$(143)	\$(184)	\$(173)	\$281	\$324	\$322	\$30	\$32	\$30	\$46	\$41	\$103
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(1) Losses (gains) due to curtailment, settlement and special termination benefits relate to repositioning and divestiture actions.

(2) Cumulative effect of adopting quarterly measurement for Significant Plans.

The estimated net actuarial loss and prior service cost that will be amortized from Accumulated other comprehensive income (loss) into net expense in 2016 are approximately \$226 million and \$1 million, respectively, for defined benefit

pension plans. For postretirement plans, the estimated 2016 net actuarial loss and prior service cost (benefit) amortizations are approximately \$35 million and \$(11) million, respectively.

Contributions

The Company's funding practice for U.S. and non-U.S. pension and postretirement plans is generally to fund to minimum funding requirements in accordance with applicable local laws and regulations. The Company may increase its contributions above the minimum required contribution, if appropriate. In addition, management has the ability to change its funding practices. For the U.S. pension plans, there were no required minimum cash contributions for 2015 or 2014.

The following table summarizes the actual Company contributions for the years ended December 31, 2015 and 2014, as well as estimated expected Company contributions for 2016. Expected contributions are subject to change since contribution decisions are affected by various factors, such as market performance and regulatory requirements.

Summary of Company Contributions

In millions of dollars	Pension plans ⁽¹⁾						Postretirement benefit plans ⁽¹⁾					
	U.S. plans ⁽²⁾			Non-U.S. plans			U.S. plans			Non-U.S. plans		
	2016	2015	2014	2016	2015	2014	2016	2015	2014	2016	2015	2014
Contributions made by the Company	\$—	\$—	\$100	\$78	\$92	\$130	\$—	\$174	\$—	\$3	\$4	\$6
Benefits paid directly by the Company	55	52	58	59	42	100	—	61	56	6	5	6

(1) Amounts reported for 2016 are expected amounts.

(2) The U.S. pension plans include benefits paid directly by the Company for the nonqualified pension plans.

Funded Status and Accumulated Other Comprehensive Income

The following tables summarize the funded status and amounts recognized in the Consolidated Balance Sheet for the Company's pension and postretirement plans.

Net Amount Recognized

In millions of dollars	Pension plans				Postretirement benefit plans			
	U.S. plans		Non-U.S. plans		U.S. plans		Non-U.S. plans	
	2015	2014	2015	2014	2015	2014	2015	2014
Change in projected benefit obligation								
Qualified plans								
Projected benefit obligation at beginning of year	\$14,060	\$12,137	\$7,252	\$7,194	\$917	\$780	\$1,527	\$1,411
Benefits earned during the year	4	6	168	178	—	—	12	15
Interest cost on benefit obligation	553	541	317	376	33	33	108	120
Plan amendments	—	—	6	2	—	—	—	(14)
Actuarial loss (gain) ⁽¹⁾	(649)	)2,077	(28)	)790	(55)	)184	(88)	)262
Benefits paid, net of participants' contributions	(751)	) (701)	(294)	) (352)	(90)	) (91)	(57)	) (93)
Expected government subsidy	—	—	—	—	12	11	—	—
Divestitures	—	—	(147)) (18)	—	—	—	(1)
Settlement (gain) loss ⁽²⁾	—	—	(61)) (184)	—	—	—	—
Curtailment (gain) loss ⁽²⁾	14	—	(8)) (58)	—	—	—	(3)

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Special termination benefits ⁽²⁾	—	—	—	9	—	—	—	—
Foreign exchange impact and other	—	—	(671)	(685)	—	—	(211)	(170)
Qualified plans	\$13,231	\$14,060	\$6,534	\$7,252	\$817	\$917	\$1,291	\$1,527
Nonqualified plans	712	779	—	—	—	—	—	—
Projected benefit obligation at year end	\$13,943	\$14,839	\$6,534	\$7,252	\$817	\$917	\$1,291	\$1,527

(1) 2014 amounts for the U.S. plans include impact of the adoption of updated mortality tables (see “Mortality Tables” below).

(2) Curtailment, settlement (gains)/losses and special termination benefits relate to repositioning and divestiture activities.

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In millions of dollars	Pension plans				Postretirement benefit plans			
	U.S. plans		Non-U.S. plans		U.S. plans		Non-U.S. plans	
	2015	2014	2015	2014	2015	2014	2015	2014
Change in plan assets								
Qualified plans								
Plan assets at fair value at beginning of year	\$13,071	\$12,731	\$7,057	\$6,918	\$10	\$32	\$1,384	\$1,472
Actual return on plan assets	(183)	)941	56	1,108	(1)	)2	(5)	)166
Company contributions	—	100	134	230	235	56	9	12
Plan participants' contributions	—	—	5	5	49	51	—	—
Divestitures	—	—	(131)	) (11)	—	—	—	—
Settlements	—	—	(61)	) (184)	—	—	—	—
Benefits paid, net of government subsidy	(751)	) (701)	(299)	) (357)	(127)	) (131)	(57)	) (93)
Foreign exchange impact and other	—	—	(657)	) (652)	—	—	(198)	) (173)
Qualified plans	\$12,137	\$13,071	\$6,104	\$7,057	\$166	\$10	\$1,133	\$1,384
Nonqualified plans	—	—	—	—	—	—	—	—
Plan assets at fair value at year end	\$12,137	\$13,071	\$6,104	\$7,057	\$166	\$10	\$1,133	\$1,384
Funded status of the plans								
Qualified plans ⁽²⁾	\$(1,094)	) \$(989)	) \$(430)	) \$(195)	) \$(651)	) \$(907)	) \$(158)	) \$(143)
Nonqualified plans ⁽¹⁾	(712)	) (779)) —) —) —) —) —) —
Funded status of the plans at year end	\$(1,806)	) \$(1,768)	) \$(430)	) \$(195)	) \$(651)	) \$(907)	) \$(158)	) \$(143)
Net amount recognized								
Qualified plans								
Benefit asset	\$—	\$—	\$726	\$921	\$—	\$—	\$115	\$196
Benefit liability	(1,094)	) (989)	) (1,156)	) (1,116)	) (651)	) (907)	) (273)	) (339)
Qualified plans	\$(1,094)	) \$(989)	) \$(430)	) \$(195)	) \$(651)	) \$(907)	) \$(158)	) \$(143)
Nonqualified plans	(712)	) (779)) —) —) —) —) —) —
Net amount recognized on the balance sheet	\$(1,806)	) \$(1,768)	) \$(430)	) \$(195)	) \$(651)	) \$(907)	) \$(158)	) \$(143)
Amounts recognized in Accumulated other comprehensive income (loss)								
Qualified plans								
Net transition obligation	\$—	\$—	\$(1)	) \$(1)) \$—) \$—) \$—) \$—
Prior service benefit	—	3	5	13	—	—	125	157
Net actuarial gain (loss)	(6,107)	) (5,819)	) (1,613)	) (1,690)	) 3	) (56)	) (547)	) (658)
Qualified plans	\$(6,107)	) \$(5,816)	) \$(1,609)	) \$(1,678)	) \$3	) \$(56)	) \$(422)	) \$(501)
Nonqualified plans	(266)	) (325)) —) —) —) —) —) —
Net amount recognized in equity (pretax)	\$(6,373)	) \$(6,141)	) \$(1,609)	) \$(1,678)	) \$3	) \$(56)	) \$(422)	) \$(501)
Accumulated benefit obligation								
Qualified plans	\$13,226	\$14,050	\$6,049	\$6,699	\$817	\$917	\$1,291	\$1,527
Nonqualified plans	706	771	—	—	—	—	—	—
Accumulated benefit obligation at year end	\$13,932	\$14,821	\$6,049	\$6,699	\$817	\$917	\$1,291	\$1,527

(1) The nonqualified plans of the Company are unfunded.

(2) The U.S. qualified pension plan is fully funded under specified Employee Retirement Income Security Act (ERISA) funding rules as of January 1, 2016 and no minimum required funding is expected for 2016.

The following table shows the change in Accumulated other comprehensive income (loss) related to Company's pension and postretirement benefit plans (for Significant Plans and All Other Plans) for the years indicated.

In millions of dollars	2015	2014	2013
Beginning of year balance, net of tax ⁽¹⁾⁽²⁾	\$(5,159)	\$(3,989)	\$(5,270)
Cumulative effect of change in accounting policy ⁽³⁾	—	—	(22)
Actuarial assumptions changes and plan experience ⁽⁴⁾	898	(3,404)	2,380
Net asset gain (loss) due to difference between actual and expected returns	(1,457)	833	(1,084)
Net amortizations	236	202	271
Prior service (cost) credit	(6)	13	360
Curtailement/settlement gain ⁽⁵⁾	57	67	—
Foreign exchange impact and other	291	459	74
Change in deferred taxes, net	24	660	(698)
Change, net of tax	\$43	\$(1,170)	\$1,281
End of year balance, net of tax ⁽¹⁾⁽²⁾	\$(5,116)	\$(5,159)	\$(3,989)

(1) See Note 20 to the Consolidated Financial Statements for further discussion of net Accumulated other comprehensive income (loss) balance.

(2) Includes net-of-tax amounts for certain profit sharing plans outside the U.S.

(3) Represents the cumulative effect of the change in accounting policy due to adoption of quarterly measurement for Significant Plans.

(4) Includes \$46 million, \$(111) million and \$58 million of actuarial gains (losses) related to the U.S. nonqualified pension plans for 2015, 2014 and 2013, respectively.

(5) Curtailement and settlement gains relate to repositioning and divestiture activities.

At December 31, 2015 and 2014, the aggregate projected benefit obligation (PBO), the aggregate accumulated benefit obligation (ABO), and the aggregate fair value of plan assets are presented for all defined benefit pension plans with a PBO in excess of plan assets and for all defined benefit pension plans with an ABO in excess of plan assets as follows:

In millions of dollars	PBO exceeds fair value of plan assets				ABO exceeds fair value of plan assets			
	U.S. plans ⁽¹⁾		Non-U.S. plans		U.S. plans ⁽¹⁾		Non-U.S. plans	
	2015	2014	2015	2014	2015	2014	2015	2014
Projected benefit obligation	\$13,943	\$14,839	\$3,918	\$2,756	\$13,943	\$14,839	\$2,369	\$2,570
Accumulated benefit obligation	13,932	14,821	3,488	2,353	13,932	14,821	2,047	2,233
Fair value of plan assets	12,137	13,071	2,762	1,640	12,137	13,071	1,243	1,495

(1) At December 31, 2015 and 2014, for both the U.S. qualified plan and nonqualified plans, the aggregate PBO and the aggregate ABO exceeded plan assets.

At December 31, 2015 and 2014, combined ABO for the U.S. and non-U.S. qualified pension plans, were more than plan assets by \$1 billion and \$0.6 billion, respectively.

Plan Assumptions

The Company utilizes a number of assumptions to determine plan obligations and expenses. Changes in one or a combination of these assumptions will have an impact on the Company's pension and postretirement PBO, funded status and (benefit) expense. Changes in the plans' funded status resulting from changes in the PBO and fair value of plan assets will have a corresponding impact on Accumulated other comprehensive income (loss).

The actuarial assumptions at the respective years ended December 31 in the table below are used to measure the year-end PBO and the net periodic (benefit) expense for the subsequent year (period). Since Citi's Significant Plans are measured on a quarterly basis, the year-end rates for those plans are used to calculate the net periodic (benefit) expense for the subsequent year's first quarter. As a result of the quarterly measurement process, the net periodic (benefit) expense for the Significant Plans is calculated at each respective quarter end based on the preceding quarter-end rates (as shown below for the U.S. pension and postretirement plans). The actual assumptions for the non-U.S. pension and postretirement plans relate to the Significant Plans that are measured quarterly and All Other Plans that are measured annually.

Certain assumptions used in determining pension and postretirement benefit obligations and net benefit expense for the Company's plans are shown in the following table:

At year end	2015	2014
Discount rate		
U.S. plans		
Qualified pension	4.40%	4.00%
Nonqualified pension	4.35	3.90
Postretirement	4.20	3.80
Non-U.S. pension plans		
Range	0.25 to 42.00	1.00 to 32.50
Weighted average	4.76	4.74
Non-U.S. postretirement plans		
Range	2.00 to 13.20	2.25 to 12.00
Weighted average	7.90	7.50
Future compensation increase rate		
U.S. plans	N/A	N/A
Non-U.S. pension plans		
Range	1.00 to 40.00	1.00 to 30.00
Weighted average	3.24	3.27
Expected return on assets		
U.S. plans	7.00	7.00
Non-U.S. pension plans		
Range	1.60 to 11.50	1.30 to 11.50
Weighted average	4.95	5.08
Non-U.S. postretirement plans		
Range	8.00 to 10.70	8.50 to 10.40
Weighted average	8.01	8.51

During the year	2015	2014	2013
Discount rate			
U.S. plans			
Qualified pension	4.00%/3.85%/ 4.45%/4.35%	4.75%/4.55%/ 4.25%/4.25%	3.90%/4.20%/ 4.75%/ 4.80%

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Nonqualified pension	3.90/3.70/ 4.30/4.25	4.75	3.90
Postretirement	3.80/3.65/ 4.20/4.10	4.35/4.15/ 3.95/4.00	3.60/3.60/ 4.40/ 4.30
Non-U.S. pension plans			
Range	1.00 to 32.50	1.60 to 29.25	1.50 to 28.00
Weighted average	4.74	5.60	5.24
Non-U.S. postretirement plans			
Range	2.25 to 12.00	3.50 to 11.90	3.50 to 10.00
Weighted average	7.50	8.65	7.46
Future compensation increase rate			
U.S. plans	N/A	N/A	N/A
Non-U.S. pension plans			
Range	1.00 to 30.00	1.00 to 26.00	1.20 to 26.00
Weighted average	3.27	3.40	3.93
Expected return on assets			
U.S. plans	7.00	7.00	7.00
Non-U.S. pension plans			
Range	1.30 to 11.50	1.20 to 11.50	0.90 to 11.50
Weighted average	5.08	5.68	5.76
Non-U.S. postretirement plans			
Range	8.50 to 10.40	8.50 to 8.90	8.50 to 9.60
Weighted average	8.51	8.50	8.50

Discount Rate

The discount rates for the U.S. pension and postretirement plans were selected by reference to a Citigroup-specific analysis using each plan's specific cash flows and compared with high-quality corporate bond indices for reasonableness. The discount rates for the non-U.S. pension and postretirement plans are selected by reference to high-quality corporate bond rates in countries that have developed corporate bond markets. However, where developed corporate bond markets do not exist, the discount rates are selected by reference to local government bond rates with a premium added to reflect the additional risk for corporate bonds in certain countries. Effective in 2015, Citi rounds the discount rate for all the Significant Plans to the nearest 5 basis points. Discount rates for All Other Plans are rounded to the nearest 10 basis points for plans in the six largest non-U.S. countries and to the nearest 25 basis points for the remaining non-US countries.

Expected Rate of Return

The Company determines its assumptions for the expected rate of return on plan assets for its U.S. pension and postretirement plans using a "building block" approach, which focuses on ranges of anticipated rates of return for each asset class. A weighted average range of nominal rates is then determined based on target allocations to each asset class. Market performance over a number of earlier years is evaluated covering a wide range of economic conditions to determine whether there are sound reasons for projecting any past trends.

The Company considers the expected rate of return to be a long-term assessment of return expectations and does not anticipate changing this assumption unless there are significant changes in investment strategy or economic conditions. This contrasts with the selection of the discount rate and certain other assumptions, which are reconsidered annually (or quarterly for the Significant Plans) in accordance with GAAP.

The expected rate of return for the U.S. pension and postretirement plans was 7.00% at December 31, 2015, 2014 and 2013. The expected return on assets reflects the expected annual appreciation of the plan assets and reduces the Company's annual pension expense. The expected return on assets is deducted from the sum of service cost, interest cost and other components of pension expense to arrive at the net pension (benefit) expense. Net pension (benefit) expense for the U.S. pension plans for 2015, 2014 and 2013 reflects deductions of \$893 million, \$878 million and \$863 million of expected returns, respectively.

The following table shows the expected rates of return used in determining the Company's pension expense compared to the actual rate of return on plan assets during 2015, 2014 and 2013 for the U.S. pension and postretirement plans:

	2015	2014	2013	
Expected rate of return	7.00	%7.00	%7.00	%
Actual rate of return ⁽¹⁾	(1.70	) 7.80	6.00	

(1) Actual rates of return are presented net of fees.

For the non-U.S. pension plans, pension expense for 2015 was reduced by the expected return of \$323 million, compared with the actual return of \$56 million. Pension expense for 2014 and 2013 was reduced by expected returns of \$384 million and \$396 million, respectively.

Mortality Tables

At December 31, 2015, the Company maintained the Retirement Plan 2014 (RP-2014) mortality table and adopted Mortality Projection 2015 (MP-2015) projection table for the U.S. plans.

U.S. Plans Mortality ⁽¹⁾	2015 ⁽²⁾	2014 ⁽³⁾
Pension	RP-2014/MP-2015	RP-2014/MP-2014
Postretirement	RP-2014/MP-2015	RP-2014/MP-2014

(1) The RP-2014 table is the white-collar RP-2014 table, with a 4% increase in rates to reflect the lower Citigroup-specific mortality experience.

- (2) The MP-2015 projection scale is projected from 2011, with convergence to 0.5% ultimate rate of annual improvement by 2029.
- (3) The MP-2014 projection scale includes a phase-out of the assumed rates of improvements from 2015 to 2027.

Adjustments were made to the RP-2014 tables and to the long-term rate of mortality improvement to reflect the Citigroup specific experience. As a result, the U.S. qualified and nonqualified pension and postretirement plans' PBO at December 31, 2014 increased by \$1,209 million and its funded status and AOCI decreased by \$1,209 million (\$737 million, net of tax). In addition, the 2015 qualified and nonqualified pension and postretirement benefit expense increased by approximately \$73 million.

Sensitivities of Certain Key Assumptions

The following tables summarize the effect on pension expense of a one-percentage-point change in the discount rate:

	One-percentage-point increase		
In millions of dollars	2015	2014	2013
U.S. plans	\$26	\$28	\$16
Non-U.S. plans	(32)	(39)	(52)

	One-percentage-point decrease		
In millions of dollars	2015	2014	2013
U.S. plans	\$(44)	\$(45)	\$(57)
Non-U.S. plans	44	56	79

Since the U.S. qualified pension plan was frozen, the majority of the prospective service cost has been eliminated and the gain/loss amortization period was changed to the life expectancy for inactive participants. As a result, pension expense for the U.S. qualified pension plan is driven more by interest costs than service costs, and an increase in the discount rate would increase pension expense, while a decrease in the discount rate would decrease pension expense. The following tables summarize the effect on pension expense of a one-percentage-point change in the expected rates of return:

	One-percentage-point increase		
In millions of dollars	2015	2014	2013
U.S. plans	\$(128)	\$(129)	\$(123)
Non-U.S. plans	(63)	(67)	(68)

	One-percentage-point decrease		
In millions of dollars	2015	2014	2013
U.S. plans	\$128	\$129	\$123
Non-U.S. plans	63	67	68

Health Care Cost Trend Rate

Assumed health care cost-trend rates were as follows:

	2015	2014
Health care cost increase rate for U.S. plans		
Following year	7.00%	7.50%
Ultimate rate to which cost increase is assumed to decline	5.00	5.00
Year in which the ultimate rate is reached ⁽¹⁾	2020	2020

(1) Weighted average for plans with different following year and ultimate rates.

	2015	2014
Health care cost increase rate for Non-U.S. plans (weighted average)		
Following year	6.87%	6.94%
Ultimate rate to which cost increase is assumed to decline	6.86	6.93
Range of years in which the ultimate rate is reached	2016–2029	2015–2027

A one-percentage-point change in assumed health care cost trend rates would have the following effects:

	One-percentage-point increase	One-percentage-
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In millions of dollars	2015	2014	point decrease	
			2015	2014
Effect on benefits earned and interest cost for U.S. postretirement plans	\$2	\$2	\$(2)\$(1)
Effect on accumulated postretirement benefit obligation for U.S. postretirement plans	45	40	(38	)(34)
In millions of dollars	2015	2014	One-percentage-point increase	
			2015	2014
Effect on benefits earned and interest cost for non-U.S. postretirement plans	\$15	\$17	\$(12	)\$(14)
Effect on accumulated postretirement benefit obligation for non-U.S. postretirement plans	156	197	(128	)(161)

Plan Assets

Citigroup's pension and postretirement plans' asset allocations for the U.S. plans and the target allocations by asset category based on asset fair values, are as follows:

Asset category ⁽¹⁾	Target asset allocation 2016	U.S. pension assets at December 31,		U.S. postretirement assets at December 31,		
		2015	2014	2015	2014	
Equity securities ⁽²⁾	0–30%	19	% 20	% 19	% 20	%
Debt securities	25–73	46	44	46	44	
Real estate	0–7	4	4	4	4	
Private equity	0–10	6	8	6	8	
Other investments	0–22	25	24	25	24	
Total		100	% 100	% 100	% 100	%

Asset allocations for the U.S. plans are set by investment strategy, not by investment product. For example, private (1) equities with an underlying investment in real estate are classified in the real estate asset category, not private equity.

(2) Equity securities in the U.S. pension and postretirement plans do not include any Citigroup common stock at the end of 2015 and 2014.

Third-party investment managers and advisers provide their services to Citigroup's U.S. pension and postretirement plans. Assets are rebalanced as the Company's Pension Plan Investment Committee deems appropriate. Citigroup's investment strategy, with respect to its assets, is to maintain a globally diversified investment portfolio across several asset classes that, when combined with Citigroup's

contributions to the plans, will maintain the plans' ability to meet all required benefit obligations.

Citigroup's pension and postretirement plans' weighted-average asset allocations for the non-U.S. plans and the actual ranges and the weighted-average target allocations by asset category based on asset fair values are as follows:

Asset category ⁽¹⁾	Non-U.S. pension plans					
	Target asset allocation 2016	Actual range at December 31,		Weighted-average at December 31,		
		2015	2014	2015	2014	
Equity securities	0–63 %	0–68%	0–67%	16	% 17	%
Debt securities	0–100	0–100	0–100	77	77	
Real estate	0–19	0–18	0–21	1	—	
Other investments	0–100	0–100	0–100	6	6	
Total				100	% 100	%

(1) Similar to the U.S. plans, asset allocations for certain non-U.S. plans are set by investment strategy, not by investment product.

Asset category ⁽¹⁾	Non-U.S. postretirement plans					
	Target asset allocation 2016	Actual range at December 31,		Weighted-average at December 31,		
		2015	2014	2015	2014	
Equity securities	0–41%	0–41%	0–42%	41	% 42	%
Debt securities	56–100	56–100	54–100	56	54	
Other investments	0–3	0–3	0–4	3	4	
Total				100	% 100	%

(1)

Similar to the U.S. plans, asset allocations for certain non-U.S. plans are set by investment strategy, not by investment product.

Fair Value Disclosure

For information on fair value measurements, including descriptions of Levels 1, 2 and 3 of the fair value hierarchy and the valuation methodology utilized by the Company, see Note 1 and Note 25 to the Consolidated Financial Statements. ASU 2015-07 removes the current requirement to categorize investments for which fair value is measured using the NAV per share practical expedient within the fair value hierarchy.

Certain investments may transfer between the fair value hierarchy classifications during the year due to changes in valuation methodology and pricing sources. There were no significant transfers of investments between Level 1 and Level 2 during 2015 and 2014.

Plan assets by detailed asset categories and the fair value hierarchy are as follows:

In millions of dollars Asset categories	U.S. pension and postretirement benefit plans ⁽¹⁾ Fair value measurement at December 31, 2015			
	Level 1	Level 2	Level 3	Total
Equity securities				
U.S. equity	\$694	\$—	\$—	\$694
Non-U.S. equity	816	—	—	816
Mutual funds	223	—	—	223
Debt securities				
U.S. Treasuries	1,172	—	—	1,172
U.S. agency	—	105	—	105
U.S. corporate bonds	—	1,681	—	1,681
Non-U.S. government debt	—	309	—	309
Non-U.S. corporate bonds	—	440	—	440
State and municipal debt	—	124	—	124
Asset-backed securities	—	42	—	42
Mortgage-backed securities	—	60	—	60
Annuity contracts	—	—	27	27
Derivatives	6	521	—	527
Other investments	—	—	147	147
Total investments	\$2,911	\$3,282	\$174	\$6,367
Cash and short-term investments	\$138	\$1,064	\$—	\$1,202
Other investment liabilities	(10	)(515	)—	(525
Net investments at fair value	\$3,039	\$3,831	\$174	\$7,044
Other investment receivables valued at NAV				\$18
Securities valued at NAV				5,241
Total net assets				\$12,303

(1) The investments of the U.S. pension and postretirement plans are commingled in one trust. At December 31, 2015, the allocable interests of the U.S. pension and postretirement plans were 98.6% and 1.4%, respectively.

In millions of dollars Asset categories	U.S. pension and postretirement benefit plans ⁽¹⁾ Fair value measurement at December 31, 2014			
	Level 1	Level 2	Level 3	Total
Equity securities				
U.S. equity	\$773	\$—	\$—	\$773
Non-U.S. equity	588	—	—	588
Mutual funds	216	—	—	216
Debt securities				
U.S. Treasuries	1,178	—	—	1,178
U.S. agency	—	113	—	113
U.S. corporate bonds	—	1,534	—	1,534
Non-U.S. government debt	—	357	—	357
Non-U.S. corporate bonds	—	417	—	417
State and municipal debt	—	132	—	132
Asset-backed securities	—	41	—	41
Mortgage-backed securities	—	76	—	76
Annuity contracts	—	—	59	59
Derivatives	12	637	—	649
Other investments	—	—	161	161
Total investments	\$2,767	\$3,307	\$220	\$6,294
Cash and short-term investments	\$111	\$1,287	—	\$1,398
Other investment liabilities	(17	)(618	)—	(635
Net investments at fair value	\$2,861	\$3,976	\$220	\$7,057
Other investment receivables valued at NAV				\$63
Securities valued at NAV				5,961
Total net assets				\$13,081

(1) The investments of the U.S. pension and postretirement plans are commingled in one trust. At December 31, 2014, the allocable interests of the U.S. pension and postretirement plans were 99.9% and .01%, respectively.

In millions of dollars Asset categories	Non-U.S. pension and postretirement benefit plans Fair value measurement at December 31, 2015			
	Level 1	Level 2	Level 3	Total
Equity securities				
U.S. equity	\$5	\$11	\$—	\$16
Non-U.S. equity	74	222	47	343
Commingled funds	5	—	—	5
Debt securities				
U.S. Treasuries	—	1	—	1
U.S. corporate bonds	—	360	—	360
Non-U.S. government debt	2,886	171	—	3,057
Non-U.S. corporate bonds	87	683	5	775
Real estate	—	3	1	4
Mortgage-backed securities	22	—	—	22
Annuity contracts	—	1	41	42
Other investments	1	—	163	164
Total investments	\$3,080	\$1,452	\$257	\$4,789
Cash and short-term investments	\$73	\$2	\$—	\$75
Other investment liabilities	—	(690)	—	(690)
Net investments at fair value	\$3,153	\$764	\$257	\$4,174
Other investment receivables valued at NAV				\$97
Securities valued at NAV				2,966
Total net assets				\$7,237

In millions of dollars Asset categories	Non-U.S. pension and postretirement benefit plans Fair value measurement at December 31, 2014			
	Level 1	Level 2	Level 3	Total
Equity securities				
U.S. equity	\$5	\$13	\$—	\$18
Non-U.S. equity	83	257	48	388
Mutual funds	—	24	—	24
Commingled funds	10	—	—	10
Debt securities				
U.S. corporate bonds	—	350	—	350
Non-U.S. government debt	3,213	220	1	3,434
Non-U.S. corporate bonds	99	765	5	869
Real estate	—	3	—	3
Mortgage-backed securities	—	1	—	1
Annuity contracts	—	1	32	33
Derivatives	11	—	—	11
Other investments	1	1	165	167
Total investments	\$3,422	\$1,635	\$251	\$5,308
Cash and short-term investments	\$112	\$2	\$—	\$114
Other investment liabilities	(3)	(723)	—	(726)
Net investments at fair value	\$3,531	\$914	\$251	\$4,696
Other investment receivables valued at NAV				\$114
Securities valued at NAV				3,631
Total net assets				\$8,441

Level 3 Rollforward

The reconciliations of the beginning and ending balances during the year for Level 3 assets are as follows:

In millions of dollars U.S. pension and postretirement benefit plans						
Asset categories	Beginning Level 3 fair value at Dec. 31, 2014 ⁽¹⁾	Realized gains (losses)	Unrealized gains (losses)	Purchases, sales, and issuances	Transfers in and/or out of Level 3	Ending Level 3 fair value at Dec. 31, 2015
Annuity contracts	\$59	\$—	\$(4)	\$(28)	\$—	\$27
Other investments	161	(1)	(9)	(4)	—	147
Total investments	\$220	\$(1)	\$(13)	\$(32)	\$—	\$174

(1) Beginning balance was adjusted to exclude \$2,496 million of investments valued at NAV.

In millions of dollars U.S. pension and postretirement benefit plans						
Asset categories	Beginning Level 3 fair value at Dec. 31, 2013 ⁽¹⁾	Realized gains (losses)	Unrealized gains (losses)	Purchases, sales, and issuances	Transfers in and/or out of Level 3	Ending Level 3 fair value at Dec. 31, 2014
Annuity contracts	\$91	\$—	\$(1)	\$(31)	\$—	\$59
Other investments	150	(1)	(4)	16	—	161
Total investments	\$241	\$(1)	\$(5)	\$(15)	\$—	\$220

(1) Beginning balance was adjusted to exclude \$3,284 million of investments valued at NAV.

In millions of dollars Non-U.S. pension and postretirement benefit plans					
Asset categories	Beginning Level 3 fair value at Dec. 31, 2014 ⁽¹⁾	Unrealized gains (losses)	Purchases, sales, and issuances	Transfers in and/or out of Level 3	Ending Level 3 fair value at Dec. 31, 2015
Equity securities					
Non-U.S. equity	\$48	\$(1)	\$—	\$—	\$47
Debt securities					
Non-U.S. government debt	1	—	(1)	—	—
Non-U.S. corporate bonds	5	(1)	1	—	5
Real estate	—	—	—	1	1
Annuity contracts	32	2	4	3	41
Other investments	165	(2)	2	(2)	163
Total investments	\$251	\$(2)	\$6	\$2	\$257

(1) Beginning balance was adjusted to exclude \$5 million of investments valued at NAV.

In millions of dollars Asset categories	Non-U.S. pension and postretirement benefit plans				
	Beginning Level 3 fair value at Dec. 31, 2013 ⁽¹⁾	Unrealized gains (losses)	Purchases, sales, and issuances	Transfers in and/or out of Level 3	Ending Level 3 fair value at Dec. 31, 2014
Equity securities					
Non-U.S. equity	\$49	\$(3)	\$—	\$2	\$48
Debt securities					
Non-U.S. government bonds	—	—	—	1	1
Non-U.S. corporate bonds	5	—	1	(1)	5
Annuity contracts	32	—	—	—	32
Other investments	202	—	(37)	—	165
Total investments	\$288	\$(3)	\$(36)	\$2	\$251

(1) Beginning balance was adjusted to exclude \$11 million of investments valued at NAV.

Investment Strategy

The Company's global pension and postretirement funds' investment strategy is to invest in a prudent manner for the exclusive purpose of providing benefits to participants. The investment strategies are targeted to produce a total return that, when combined with the Company's contributions to the funds, will maintain the funds' ability to meet all required benefit obligations. Risk is controlled through diversification of asset types and investments in domestic and international equities, fixed-income securities and cash and short-term investments. The target asset allocation in most locations outside the U.S. is primarily in equity and debt securities. These allocations may vary by geographic region and country depending on the nature of applicable obligations and various other regional considerations. The wide variation in the actual range of plan asset allocations for the funded non-U.S. plans is a result of differing local statutory requirements and economic conditions. For example, in certain countries local law requires that all pension plan assets must be invested in fixed-income investments, government funds, or local-country securities.

Significant Concentrations of Risk in Plan Assets

The assets of the Company's pension plans are diversified to limit the impact of any individual investment. The U.S. qualified pension plan is diversified across multiple asset classes, with publicly traded fixed income, hedge funds, publicly traded equity, and private equity representing the most significant asset allocations. Investments in these four asset classes are further diversified across funds, managers, strategies, vintages, sectors and geographies, depending on the specific characteristics of each asset class. The pension assets for the Company's non-U.S. Significant Plans are primarily invested in publicly traded fixed income and publicly traded equity securities.

Oversight and Risk Management Practices

The framework for the Company's pension oversight process includes monitoring of retirement plans by plan fiduciaries and/or management at the global, regional or country level, as appropriate. Independent risk management contributes to the risk oversight and monitoring for the Company's U.S. qualified pension plan and non-U.S. Significant Pension Plans. Although the specific components of the oversight process are tailored to the requirements of each region, country and plan, the following elements are common to the Company's monitoring and risk management process:

- periodic asset/liability management studies and strategic asset allocation reviews;
- periodic monitoring of funding levels and funding ratios;
- periodic monitoring of compliance with asset allocation guidelines;

periodic monitoring of asset class and/or investment manager performance against benchmarks; and
periodic risk capital analysis and stress testing.

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Estimated Future Benefit Payments

The Company expects to pay the following estimated benefit payments in future years:

In millions of dollars	Pension plans		Postretirement benefit plans	
	U.S. plans	Non-U.S. plans	U.S. plans	Non-U.S. plans
2016	\$903	\$ 377	\$71	\$ 63
2017	818	337	70	67
2018	828	359	68	72
2019	848	382	67	77
2020	876	415	65	83
2021–2025	4,523	2,467	303	523

Prescription Drugs

In December 2003, the Medicare Prescription Drug Improvement and Modernization Act of 2003 (Act of 2003) was enacted. The Act of 2003 established a prescription drug benefit under Medicare known as “Medicare Part D,” and a federal subsidy to sponsors of U.S. retiree health care benefit plans that provide a benefit that is at least actuarially equivalent to Medicare Part D. The benefits provided to certain participants are at least actuarially equivalent to Medicare Part D and, accordingly, the Company is entitled to a subsidy.

The subsidy reduced the accumulated postretirement benefit obligation (APBO) by approximately \$5 million as of December 31, 2015 and 2014 and the postretirement expense by approximately \$0.2 million for 2015 and 2014.

The following table shows the estimated future benefit payments for the Medicare Part D of the U.S. postretirement plan.

In millions of dollars	Expected U.S. postretirement benefit payments		
	Before Medicare Part D subsidy	Medicare Part D subsidy	After Medicare Part D subsidy
2016	\$71	\$—	\$71
2017	70	—	70
2018	68	—	68
2019	67	—	67
2020	65	—	65
2021–2025	303	2	301

Certain provisions of the Patient Protection and Affordable Care Act of 2010 improved the Medicare Part D option known as the Employer Group Waiver Plan (EGWP) with respect to the Medicare Part D subsidy. The EGWP provides prescription drug benefits that are more cost effective for Medicare-eligible participants and large employers. Effective April 1, 2013, the Company began sponsoring and implementing an EGWP for eligible retirees. The Company subsidy received under the EGWP for 2015 and 2014 was \$11.6 million and \$11.0 million, respectively.

The other provisions of the Act of 2010 are not expected to have a significant impact on Citigroup’s pension and postretirement plans.

Postemployment Plans

The Company sponsors U.S. postemployment plans that provide income continuation and health and welfare benefits to certain eligible U.S. employees on long-term disability.

As of December 31, 2015 and 2014, the plans’ funded status recognized in the Company’s Consolidated Balance Sheet was \$(183) million and \$(256) million, respectively. The amounts recognized in Accumulated other comprehensive income (loss) as of December 31, 2015 and 2014 were \$45 million and \$24 million, respectively. Effective January 1, 2014, the Company made changes to its postemployment plans that limit the period for which future disabled employees are eligible for continued Company subsidized medical benefits.

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The following table summarizes the components of net expense recognized in the Consolidated Statement of Income for the Company's U.S. postemployment plans.

In millions of dollars	Net expense		
	2015	2014	2013
Service related expense			
Service cost	\$—	\$—	\$20
Interest cost	4	5	10
Prior service (benefit)	(31)	(31)	(3)
Net actuarial loss	12	14	17
Total service related expense	\$(15)	\$(12)	\$44
Non-service related expense (benefit)	\$3	\$37	\$(14)
Total net (benefit) expense	\$(12)	\$25	\$30

The following table summarizes certain assumptions used in determining the postemployment benefit obligations and net benefit expenses for the Company's U.S. postemployment plans.

	2015	2014
Discount rate	3.70%	3.45%
Health care cost increase rate		
Following year	7.00%	7.50%
Ultimate rate to which cost increase is assumed to decline	5.00	5.00
Year in which the ultimate rate is reached	2020	2020

Defined Contribution Plans

The Company sponsors defined contribution plans in the U.S. and in certain non-U.S. locations, all of which are administered in accordance with local laws. The most significant defined contribution plan sponsored by the Company is the Citi Retirement Savings Plan in the U.S. (formerly known as the Citigroup 401(k) Plan).

Under the Citi Retirement Savings Plan, eligible U.S. employees received matching contributions of up to 6% of their eligible compensation for 2015 and 2014, subject to statutory limits. Additionally, for eligible employees whose eligible compensation is \$100,000 or less, a fixed contribution of up to 2% of eligible compensation is provided. All Company contributions are invested according to participants' individual elections. The following table summarizes the Company contributions to the U.S. and non-U.S. plans.

	U.S. plans		
In millions of dollars	2015	2014	2013
Company contributions	\$ 380	\$ 383	\$ 394
	Non U.S. plans		
In millions of dollars	2015	2014	2013
Company contributions	\$ 375	\$ 385	\$ 402

9. INCOME TAXES

Details of the Company's income tax provision are presented below:

Income Tax Provision In millions of dollars	2015	2014	2013	
Current				
Federal	\$861	\$181	\$(260))
Foreign	3,397	3,281	3,788	
State	388	388	(41))
Total current income taxes	\$4,646	\$3,850	\$3,487	
Deferred				
Federal	\$3,019	\$2,510	\$2,867	
Foreign	(4)	)361	(716))
State	(221)	)476	548	
Total deferred income taxes	\$2,794	\$3,347	\$2,699	
Provision for income tax on continuing operations before non-controlling interests ⁽¹⁾	\$7,440	\$7,197	\$6,186	
Provision (benefit) for income taxes on discontinued operations	(29)	)12	(244))
Income tax expense (benefit) reported in stockholders' equity related to:				
FX translation	(906)	)65	(48))
Investment securities	(498)	)1,007	(1,300))
Employee stock plans	(35)	)87	)28)
Cash flow hedges	176	207	625	
Benefit plans	(24)	)660	)698)
Retained earnings ⁽²⁾	—	(353))—)
Income taxes before non-controlling interests	\$6,124	\$7,388	\$5,945	

Includes the effect of securities transactions and other-than-temporary-impairment losses resulting in a provision (1)(benefit) of \$239 million and \$(93) million in 2015, \$200 million and \$(148) million in 2014 and \$262 million and \$(187) million in 2013, respectively.

(2) See "Consolidated Statement of Changes in Stockholders' Equity" above.

Tax Rate

The reconciliation of the federal statutory income tax rate to the Company's effective income tax rate applicable to income from continuing operations (before non-controlling interests and the cumulative effect of accounting changes) for each of the periods indicated is as follows:

	2015	2014	2013	
Federal statutory rate	35.0	%35.0	%35.0	%
State income taxes, net of federal benefit	1.7	3.4	1.7	
Foreign income tax rate differential	(4.6)	) (0.3)	) (2.3))
Audit settlements ⁽¹⁾	(1.7)	) (2.4)	) (0.7))
Effect of tax law changes ⁽²⁾	0.4	1.2	(0.3))
Nondeductible legal and related expenses	0.3	18.3	0.8	
Basis difference in affiliates	—	(2.5)) —)
Tax advantaged investments	(1.8)) (3.6)) (3.0))
Other, net	0.7	(0.1)) —)
Effective income tax rate	30.0	%49.0	%31.2	%

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For 2015, primarily relates to the conclusion of a New York City tax audit for 2009-2011. For 2014, relates to the conclusion of the audit of various issues in the Company's 2009-2011 U.S. federal tax audit and the conclusion of a
(1) New York State tax audit for 2006-2008. For 2013, relates to the settlement of U.S. federal issues for 2003-2005 and IRS appeals.

For 2015, includes the results of tax reforms enacted in New York City and several states, which resulted in a DTA
(2) charge of approximately \$101 million. For 2014, includes the results of tax reforms enacted in New York State and South Dakota, which resulted in a DTA charge of approximately \$210 million.

As set forth in the table above, Citi's effective tax rate for 2015 was 30.0%. The decline in the effective tax rate from 2014 was primarily due to a lower level of non-deductible legal and related expenses in 2015.

Deferred Income Taxes

Deferred income taxes at December 31 related to the following:

In millions of dollars	2015	2014	
Deferred tax assets			
Credit loss deduction	\$6,058	\$7,010	
Deferred compensation and employee benefits	4,110	4,676	
Repositioning and settlement reserves	1,429	1,599	
Unremitted foreign earnings	8,403	6,368	
Investment and loan basis differences	3,248	4,808	
Cash flow hedges	359	529	
Tax credit and net operating loss carry-forwards	23,053	23,395	
Fixed assets and leases	1,356	2,093	
Other deferred tax assets	3,176	2,334	
Gross deferred tax assets	\$51,192	\$52,812	
Valuation allowance	—	—	
Deferred tax assets after valuation allowance	\$51,192	\$52,812	
Deferred tax liabilities			
Deferred policy acquisition costs and value of insurance in force	\$(327)\$(415)
Intangibles	(1,146)(1,636)
Debt issuances	(850)(866)
Other deferred tax liabilities	(1,020)(559)
Gross deferred tax liabilities	\$(3,343)\$(3,476)
Net deferred tax assets	\$47,849	\$49,336	

Unrecognized Tax Benefits

The following is a rollforward of the Company's unrecognized tax benefits.

In millions of dollars	2015	2014	2013	
Total unrecognized tax benefits at January 1	\$1,060	\$1,574	\$3,109	
Net amount of increases for current year's tax positions	32	135	58	
Gross amount of increases for prior years' tax positions	311	175	251	
Gross amount of decreases for prior years' tax positions	(61)(772)(716)
Amounts of decreases relating to settlements	(45)(28)(1,115)
Reductions due to lapse of statutes of limitation	(22)(30)(15)
Foreign exchange, acquisitions and dispositions	(40	)6	2
Total unrecognized tax benefits at December 31	\$1,235	\$1,060	\$1,574	

The total amounts of unrecognized tax benefits at December 31, 2015, 2014 and 2013 that, if recognized, would affect Citi's effective tax rate, are \$0.9 billion, \$0.8 billion and \$0.8 billion, respectively. The remaining uncertain tax positions have offsetting amounts in other jurisdictions or are temporary differences, except for \$0.4 billion at December 31, 2013, which was recognized in Retained earnings in 2014.

Interest and penalties (not included in "unrecognized tax benefits" above) are a component of the Provision for income taxes.

In millions of dollars	2015		2014		2013	
	Pretax	Net of tax	Pretax	Net of tax	Pretax	Net of tax
Total interest and penalties in the Consolidated Balance Sheet at January 1	\$269	\$169	\$277	\$173	\$492	\$315
Total interest and penalties in the Consolidated Statement of Income	(29	)(18	)(1	)(1	)(108	)(72

Total interest and penalties in the Consolidated Balance Sheet at December 31⁽¹⁾ 233 146 269 169 277 173

(1) Includes \$3 million, \$2 million, and \$2 million for foreign penalties in 2015, 2014 and 2013, respectively. Also includes \$3 million for state penalties in 2015 and 2014, and \$4 million in 2013.

As of December 31, 2015, Citi is under audit by the Internal Revenue Service and other major taxing jurisdictions around the world. It is thus reasonably possible that significant changes in the gross balance of unrecognized tax benefits may occur within the next 12 months, although Citi does not expect such audits to result in amounts that would cause a significant change to its effective tax rate, other than as discussed below.

Citi expects to conclude its IRS audit for the 2012-2013 cycle within the next 12 months. The gross uncertain tax positions at December 31, 2015 for the items that may be resolved are as much as \$97 million. Because of the number and nature of the issues remaining to be resolved, the potential tax benefit to continuing operations could be anywhere in a range between \$0 and \$94 million. In addition, Citi may conclude certain state and local tax audits within the next 12 months. The gross uncertain tax positions at December 31, 2015 are as much as \$222 million. In addition there is gross interest of as much as \$16 million. The potential tax benefit to

continuing operations could be anywhere between \$0 and \$155 million, including interest. Furthermore, Citi may conclude certain foreign audits within the next 12 months. The gross uncertain positions at December 31, 2015 are as much as \$119 million. In addition there is gross interest of as much as \$18 million. The potential tax benefit to continuing operations could be anywhere between \$0 and \$22 million, including interest. The potential tax benefit to discontinued operations could be anywhere between \$0 and \$76 million, including interest.

The following are the major tax jurisdictions in which the Company and its affiliates operate and the earliest tax year subject to examination:

Jurisdiction	Tax year
United States	2012
Mexico	2009
New York State and City	2006
United Kingdom	2014
India	2011
Brazil	2011
Singapore	2010
Hong Kong	2009
Ireland	2011

Foreign Earnings

Foreign pretax earnings approximated \$11.3 billion in 2015, \$10.1 billion in 2014 and \$13.1 billion in 2013. As a U.S. corporation, Citigroup and its U.S. subsidiaries are currently subject to U.S. taxation on all foreign pretax earnings earned by a foreign branch. Pretax earnings of a foreign subsidiary or affiliate are subject to U.S. taxation when effectively repatriated. The Company provides income taxes on the undistributed earnings of non-U.S. subsidiaries except to the extent that such earnings are indefinitely reinvested outside the United States.

At December 31, 2015, \$45.2 billion of accumulated undistributed earnings of non-U.S. subsidiaries was indefinitely invested. At the existing U.S. federal income tax rate, additional taxes (net of U.S. foreign tax credits) of \$12.7 billion would have to be provided if such earnings were remitted currently. The current year's effect on the income tax expense from continuing operations is included in the "Foreign income tax rate differential" line in the reconciliation of the federal statutory rate to the Company's effective income tax rate in the table above.

Income taxes are not provided for the Company's "savings bank base year bad debt reserves" that arose before 1988, because under current U.S. tax rules, such taxes will become payable only to the extent such amounts are distributed in excess of limits prescribed by federal law. At December 31, 2015, the amount of the base year reserves totaled approximately \$358 million (subject to a tax of \$125 million).

Deferred Tax Assets

As of December 31, 2015 and 2014, Citi had no valuation allowance on its DTAs. The following table summarizes Citi's DTAs.

In billions of dollars

Jurisdiction/component	DTAs balance December 31, 2015	DTAs balance December 31, 2014
U.S. federal ⁽¹⁾		
Net operating losses (NOLs) ⁽²⁾	\$3.4	\$2.3
Foreign tax credits (FTCs) ⁽³⁾	15.9	17.6
General business credits (GBCs)	1.3	1.6
Future tax deductions and credits	20.7	21.1
Total U.S. federal	\$41.3	\$42.6
State and local		
New York NOLs	\$2.4	\$1.5
Other state NOLs	0.3	0.4
Future tax deductions	1.2	2.0
Total state and local	\$3.9	\$3.9
Foreign		
APB 23 subsidiary NOLs	\$0.2	\$0.2
Non-APB 23 subsidiary NOLs	0.4	0.5

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Future tax deductions	2.0	2.1
Total foreign	\$2.6	\$2.8
Total	\$47.8	\$49.3

- (1) Included in the net U.S. federal DTAs of \$41.3 billion as of December 31, 2015 were deferred tax liabilities of \$2 billion that will reverse in the relevant carry-forward period and may be used to support the DTAs.
Includes \$0.5 billion and \$0.6 billion for 2015 and 2014, respectively, of NOL carry-forwards related to non-consolidated tax return companies that are expected to be utilized separately from Citigroup's consolidated tax return, and \$2.9 billion and \$1.7 billion of non-consolidated tax return NOL carry-forwards for 2015 and 2014, respectively, that are eventually expected to be utilized in Citigroup's consolidated tax return.
- (2) Includes \$1.7 billion and \$1.0 billion for 2015 and 2014, respectively, of non-consolidated tax return FTC carry-forwards that are eventually expected to be utilized in Citigroup's consolidated tax return.
- (3)

The following table summarizes the amounts of tax carry-forwards and their expiration dates:

In billions of dollars

Year of expiration	December 31, 2015	December 31, 2014
U.S. tax return foreign tax credit carry-forwards		
2017	\$—	\$1.9
2018	4.8	5.2
2019	1.2	1.2
2020	3.1	3.1
2021	1.7	1.8
2022	3.4	3.4
2023 ⁽¹⁾	0.4	1.0
2025 ⁽¹⁾	1.3	—
Total U.S. tax return foreign tax credit carry-forwards	\$15.9	\$17.6
U.S. tax return general business credit carry-forwards		
2030	\$—	\$0.4
2031	0.2	0.3
2032	0.4	0.4
2033	0.3	0.3
2034	0.2	0.2
2035	0.2	—
Total U.S. tax return general business credit carry-forwards	\$1.3	\$1.6
U.S. subsidiary separate federal NOL carry-forwards		
2027	\$0.2	\$0.2
2028	0.1	0.1
2030	0.3	0.3
2031	1.5	1.7
2033	1.7	1.9
2034	2.3	2.3
2035	3.6	—
Total U.S. subsidiary separate federal NOL carry-forwards ⁽²⁾	\$9.7	\$6.5
New York State NOL carry-forwards		
2034	\$14.6	\$12.3
Total New York State NOL carry-forwards ⁽²⁾	\$14.6	\$12.3
New York City NOL carry-forwards		
2028	\$—	\$3.8
2031	—	0.1
2032	—	0.5
2034	13.3	—
Total New York City NOL carry-forwards ⁽²⁾	\$13.3	\$4.4
APB 23 subsidiary NOL carry-forwards		
Various	\$0.2	\$0.2
Total APB 23 subsidiary NOL carry-forwards	\$0.2	\$0.2

(1) The \$1.7 billion in FTC carry-forwards that expire in 2023 and 2025 are in a non-consolidated tax return entity but are eventually expected to be utilized in Citigroup's consolidated tax return.

(2) Pretax.

While Citi's net total DTAs decreased year-over-year, the time remaining for utilization has shortened, given the passage of time, particularly with respect to the foreign tax credit (FTC) component of the DTAs. Although realization is not assured, Citi believes that the realization of the recognized net DTAs of \$47.8 billion at December 31, 2015 is more-likely-than-not based upon expectations as to future taxable income in the jurisdictions in which the DTAs arise and available tax planning strategies (as defined in ASC 740, Income Taxes) that would be implemented, if necessary, to prevent a carry-forward from expiring.

Citi has concluded that it has the necessary positive evidence to support the full realization of its DTAs. Specifically, Citi forecasts sufficient U.S. taxable income in the carry-forward periods, exclusive of ASC 740 tax planning strategies. Citi's forecasted taxable income, which will continue to be subject to overall market and global economic conditions, incorporates geographic business forecasts and taxable income adjustments to those forecasts (e.g., U.S. tax-exempt income, loan loss reserves deductible for U.S. tax reporting in subsequent years), and actions intended to optimize its U.S. taxable earnings. In general, Citi would need to generate approximately \$59 billion of U.S. taxable income during the FTC carry-forward periods to prevent this most time-sensitive component of Citi's FTCs from expiring.

In addition to its forecasted U.S. taxable income, Citi has tax planning strategies available to it under ASC 740 that would be implemented, if necessary, to prevent a carry-forward from expiring. These strategies include: (i) repatriating low-taxed foreign source earnings for which an assertion that the earnings have been indefinitely reinvested has not been made; (ii) accelerating U.S. taxable income into, or deferring U.S. tax deductions out of, the latter years of the carry-forward period (e.g., selling appreciated assets, electing straight-line depreciation); (iii) accelerating deductible temporary differences outside the U.S.; and (iv) selling certain assets that produce tax-exempt income, while purchasing assets that produce fully taxable income. In addition, the sale or restructuring of certain businesses can produce significant U.S. taxable income within the relevant carry-forward periods.

Based upon the foregoing discussion, Citi believes the U.S. federal and New York state and city NOL carry-forward period of 20 years provides enough time to fully utilize the DTAs pertaining to the existing NOL carry-forwards and any NOL that would be created by the reversal of the future net deductions that have not yet been taken on a tax return.

With respect to the FTCs component of the DTAs, the carry-forward period is 10 years. Utilization of FTCs in any year is restricted to 35% of foreign source taxable income in that year. However, overall domestic losses that Citi has incurred of approximately \$54 billion as of December 31, 2015 are allowed to be reclassified as foreign source income to the extent of 50% of domestic source income produced in subsequent years. Such resulting foreign source income would cover the FTCs being carried forward. As noted in the table above, Citi's FTC carry-forwards were \$15.9 billion as of December 31, 2015, compared to \$17.6 billion as of December 31, 2014. This decrease represented \$1.7 billion of the \$1.5 billion decrease in Citi's overall DTAs during 2015,

partially offset by an increase in AOCI related DTAs. Citi believes that it will generate sufficient U.S. taxable income within the 10-year carry-forward period to be able to fully utilize the FTCs, in addition to any FTCs produced in the tax return for such period, which must be used prior to any carry-forward utilization.

10. EARNINGS PER SHARE

The following is a reconciliation of the income and share data used in the basic and diluted earnings per share (EPS) computations:

In millions, except per-share amounts	2015	2014	2013
Income from continuing operations before attribution of noncontrolling interests	\$17,386	\$7,504	\$13,616
Less: Noncontrolling interests from continuing operations	90	192	227
Net income from continuing operations (for EPS purposes)	\$17,296	\$7,312	\$13,389
Income (loss) from discontinued operations, net of taxes	(54)	(2)	270
Citigroup's net income	\$17,242	\$7,310	\$13,659
Less: Preferred dividends ⁽¹⁾	769	511	194
Net income available to common shareholders	\$16,473	\$6,799	\$13,465
Less: Dividends and undistributed earnings allocated to employee restricted and deferred shares with nonforfeitable rights to dividends, applicable to basic EPS	224	111	263
Net income allocated to common shareholders for basic EPS	\$16,249	\$6,688	\$13,202
Add: Interest expense, net of tax, and dividends on convertible securities and adjustment of undistributed earnings allocated to employee restricted and deferred shares with nonforfeitable rights to dividends, applicable to diluted EPS	—	1	1
Net income allocated to common shareholders for diluted EPS	\$16,249	\$6,689	\$13,203
Weighted-average common shares outstanding applicable to basic EPS	3,004.0	3,031.6	3,035.8
Effect of dilutive securities ⁽³⁾			
Options ⁽²⁾	3.6	5.1	5.3
Other employee plans	0.1	0.3	0.5
Adjusted weighted-average common shares outstanding applicable to diluted EPS	3,007.7	3,037.0	3,041.6
Basic earnings per share ⁽⁴⁾			
Income from continuing operations	\$5.43	\$2.21	\$4.26
Discontinued operations	(0.02)	—	0.09
Net income	\$5.41	\$2.21	\$4.35
Diluted earnings per share ⁽⁴⁾			
Income from continuing operations	\$5.42	\$2.20	\$4.25
Discontinued operations	(0.02)	—	0.09
Net income	\$5.40	\$2.20	\$4.34

(1) See Note 21 to the Consolidated Financial Statements for the potential future impact of preferred stock dividends.

During 2015, 2014 and 2013, weighted-average options to purchase 0.9 million, 2.8 million and 4.8 million shares

(2) of common stock, respectively, were outstanding but not included in the computation of earnings per share because the weighted-average exercise prices of \$199.16, \$153.91 and \$101.11 per share, respectively, were anti-dilutive.

Warrants issued to the U.S. Treasury as part of the Troubled Asset Relief Program (TARP) and the loss-sharing agreement (all of which were subsequently sold to the public in January 2011), with exercise prices of \$178.50 and (3) \$106.10 per share for approximately 21.0 million and 25.5 million shares of Citigroup common stock, respectively.

Both warrants were not included in the computation of earnings per share in 2015, 2014 and 2013 because they were anti-dilutive.

(4) Due to rounding, earnings per share on continuing operations and discontinued operations may not sum to earnings per share on net income.

11. FEDERAL FUNDS, SECURITIES BORROWED, LOANED AND SUBJECT TO REPURCHASE AGREEMENTS

Federal funds sold and securities borrowed or purchased under agreements to resell, at their respective carrying values, consisted of the following:

In millions of dollars	2015	2014
Federal funds sold	\$25	\$—
Securities purchased under agreements to resell	119,777	123,979
Deposits paid for securities borrowed	99,873	118,591
Total	\$219,675	\$242,570

Federal funds purchased and securities loaned or sold under agreements to repurchase, at their respective carrying values, consisted of the following:

In millions of dollars	2015	2014
Federal funds purchased	\$189	\$334
Securities sold under agreements to repurchase	131,650	147,204
Deposits received for securities loaned	14,657	25,900
Total	\$146,496	\$173,438

The resale and repurchase agreements represent collateralized financing transactions. The Company executes these transactions primarily through its broker-dealer subsidiaries to facilitate customer matched-book activity and to efficiently fund a portion of the Company's trading inventory. Transactions executed by the Company's bank subsidiaries primarily facilitate customer financing activity.

To maintain reliable funding under a wide range of market conditions, including under periods of stress, Citi manages these activities by taking into consideration the quality of the underlying collateral, and stipulating financing tenor. Citi manages the risks in its collateralized financing transactions by conducting daily stress tests to account for changes in capacity, tenors, haircut, collateral profile and client actions. Additionally, Citi maintains counterparty diversification by establishing concentration triggers and assessing counterparty reliability and stability under stress. It is the Company's policy to take possession of the underlying collateral, monitor its market value relative to the amounts due under the agreements and, when necessary, require prompt transfer of additional collateral in order to maintain contractual margin protection. For resale and repurchase agreements, when necessary, the Company posts additional collateral in order to maintain contractual margin protection.

Collateral typically consists of government and government-agency securities, corporate and municipal bonds, equities, and mortgage-backed and other asset-backed securities.

The resale and repurchase agreements are generally documented under industry standard agreements that allow the prompt close-out of all transactions (including the liquidation of securities held) and the offsetting of obligations to return cash or securities by the non-defaulting party, following a payment default or other type of default under the relevant master agreement. Events of default generally include (i) failure to deliver cash or securities as required under the transaction, (ii) failure to provide or return cash or securities as used for margining purposes, (iii) breach of representation, (iv) cross-default to another transaction entered into among the parties, or, in some cases, their affiliates, and (v) a repudiation of obligations under the agreement. The counterparty that receives the securities in these transactions is generally unrestricted in its use of the securities, with the exception of transactions executed on a tri-party basis, where the collateral is maintained by a custodian and operational limitations may restrict its use of the securities.

A substantial portion of the resale and repurchase agreements is recorded at fair value, as described in Notes 25 and 26 to the Consolidated Financial Statements. The remaining portion is carried at the amount of cash initially advanced or received, plus accrued interest, as specified in the respective agreements.

The securities borrowing and lending agreements also represent collateralized financing transactions similar to the resale and repurchase agreements. Collateral typically consists of government and government-agency securities and corporate debt and equity securities.

Similar to the resale and repurchase agreements, securities borrowing and lending agreements are generally documented under industry standard agreements that allow the prompt close-out of all transactions (including the liquidation of securities held) and the offsetting of obligations to return cash or securities by the non-defaulting party, following a payment default or other default by the other party under the relevant master agreement. Events of default and rights to use securities under the securities borrowing and lending agreements are similar to the resale and repurchase agreements referenced above.

A substantial portion of securities borrowing and lending agreements is recorded at the amount of cash advanced or received. The remaining portion is recorded at fair value as the Company elected the fair value option for certain securities borrowed and loaned portfolios, as described in Note 26 to the Consolidated Financial Statements. With respect to securities loaned, the Company receives cash collateral in an amount generally in excess of the market value of the securities loaned. The Company monitors the market value of securities borrowed and securities loaned on a daily basis and obtains or posts additional collateral in order to maintain contractual margin protection.

The enforceability of offsetting rights incorporated in the master netting agreements for resale and repurchase agreements and securities borrowing and lending agreements is evidenced to the extent that a supportive legal opinion has been obtained from counsel of recognized standing that provides the requisite level of certainty regarding the enforceability of these agreements, and that the exercise of

rights by the non-defaulting party to terminate and close-out transactions on a net basis under these agreements will not be stayed or avoided under applicable law upon an event of default including bankruptcy, insolvency or similar proceeding.

A legal opinion may not have been sought or obtained for certain jurisdictions where local law is silent or sufficiently ambiguous to determine the enforceability of offsetting rights or where adverse case law or conflicting regulation may cast doubt on the enforceability of such rights. In some jurisdictions and for some counterparty types, the insolvency law for a particular counterparty type may be nonexistent or unclear as overlapping regimes may exist. For example, this may be the case for certain sovereigns, municipalities, central banks and U.S. pension plans.

The following tables present the gross and net resale and repurchase agreements and securities borrowing and lending agreements and the related offsetting amount permitted under ASC 210-20-45. The tables also include amounts related to financial instruments that are not permitted to be offset under ASC 210-20-45 but would be eligible for offsetting to the extent that an event of default occurred and a legal opinion supporting enforceability of the offsetting rights has been obtained. Remaining exposures continue to be secured by financial collateral, but the Company may not have sought or been able to obtain a legal opinion evidencing enforceability of the offsetting right.

In millions of dollars	As of December 31, 2015				
	Gross amounts of recognized assets	Gross amounts offset on the Consolidated Balance Sheet ⁽¹⁾	Net amounts of assets included on the Consolidated Balance Sheet ⁽²⁾	Amounts not offset on the Consolidated Balance Sheet but eligible for offsetting upon counterparty default ⁽³⁾	Net amounts ⁽⁴⁾
Securities purchased under agreements to resell	\$176,167	\$56,390	\$119,777	\$92,039	\$27,738
Deposits paid for securities borrowed	99,873	—	99,873	16,619	83,254
Total	\$276,040	\$56,390	\$219,650	\$108,658	\$110,992

In millions of dollars	As of December 31, 2014				
	Gross amounts of recognized liabilities	Gross amounts offset on the Consolidated Balance Sheet ⁽¹⁾	Net amounts of liabilities included on the Consolidated Balance Sheet ⁽²⁾	Amounts not offset on the Consolidated Balance Sheet but eligible for offsetting upon counterparty default ⁽³⁾	Net amounts ⁽⁴⁾
Securities sold under agreements to repurchase	\$188,040	\$56,390	\$131,650	\$60,641	\$71,009
Deposits received for securities loaned	14,657	—	14,657	3,226	11,431
Total	\$202,697	\$56,390	\$146,307	\$63,867	\$82,440

In millions of dollars	As of December 31, 2014				
	Gross amounts of recognized assets	Gross amounts offset on the Consolidated Balance Sheet ⁽¹⁾	Net amounts of assets included on the Consolidated Balance Sheet ⁽²⁾	Amounts not offset on the Consolidated Balance Sheet but eligible for offsetting upon counterparty default ⁽³⁾	Net amounts ⁽⁴⁾
	\$180,318	\$56,339	\$123,979	\$94,353	\$29,626

Securities purchased under agreements to resell					
Deposits paid for securities borrowed	118,591	—	118,591	15,139	103,452
Total	\$298,909	\$56,339	\$242,570	\$109,492	\$133,078
In millions of dollars	Gross amounts of recognized liabilities	Gross amounts offset on the Consolidated Balance Sheet ⁽¹⁾	Net amounts of liabilities included on the Consolidated Balance Sheet ⁽²⁾	Amounts not offset on the Consolidated Balance Sheet but eligible for offsetting upon counterparty default ⁽³⁾	Net amounts ⁽⁴⁾
Securities sold under agreements to repurchase	\$203,543	\$56,339	\$147,204	\$72,928	\$74,276
Deposits received for securities loaned	25,900	—	25,900	5,190	20,710
Total	\$229,443	\$56,339	\$173,104	\$78,118	\$94,986

- (1) Includes financial instruments subject to enforceable master netting agreements that are permitted to be offset under ASC 210-20-45.
- (2) The total of this column for each period excludes Federal funds sold/purchased. See tables above.
- (3) Includes financial instruments subject to enforceable master netting agreements that are not permitted to be offset under ASC 210-20-45 but would be eligible for offsetting to the extent that an event of default has occurred and a legal opinion supporting enforceability of the offsetting right has been obtained.
- (4) Remaining exposures continue to be secured by financial collateral, but the Company may not have sought or been able to obtain a legal opinion evidencing enforceability of the offsetting right.

The following table presents the gross amount of liabilities associated with repurchase agreements and securities lending agreements, by remaining contractual maturity as of December 31, 2015:

In millions of dollars	Open and overnight	Up to 30 days	31–90 days	Greater than 90 days	Total
Securities sold under agreements to repurchase	\$89,732	\$54,336	\$21,541	\$22,431	\$188,040
Deposits received for securities loaned	9,096	1,823	2,324	1,414	14,657
Total	\$98,828	\$56,159	\$23,865	\$23,845	\$202,697

The following table presents the gross amount of liabilities associated with repurchase agreements and securities lending agreements, by class of underlying collateral as of December 31, 2015:

In millions of dollars	Repurchase agreements	Securities lending agreements	Total
U.S Treasury and federal agency	\$67,005	\$—	\$67,005
State and municipal	403	—	403
Foreign government	66,633	789	67,422
Corporate bonds	15,355	1,085	16,440
Equity securities	10,297	12,484	22,781
Mortgage-backed securities	19,913	—	19,913
Asset-backed securities	4,572	—	4,572
Other	3,862	299	4,161
Total	\$188,040	\$14,657	\$202,697

12. BROKERAGE RECEIVABLES AND BROKERAGE PAYABLES

The Company has receivables and payables for financial instruments sold to and purchased from brokers, dealers and customers, which arise in the ordinary course of business. The Company is exposed to risk of loss from the inability of brokers, dealers or customers to pay for purchases or to deliver the financial instruments sold, in which case the Company would have to sell or purchase the financial instruments at prevailing market prices. Credit risk is reduced to the extent that an exchange or clearing organization acts as a counterparty to the transaction and replaces the broker, dealer or customer in question.

The Company seeks to protect itself from the risks associated with customer activities by requiring customers to maintain margin collateral in compliance with regulatory and internal guidelines. Margin levels are monitored daily, and customers deposit additional collateral as required. Where customers cannot meet collateral requirements, the Company may liquidate sufficient underlying financial instruments to bring the customer into compliance with the required margin level.

Exposure to credit risk is impacted by market volatility, which may impair the ability of clients to satisfy their obligations to the Company. Credit limits are established and closely monitored for customers and for brokers and dealers engaged in forwards, futures and other transactions deemed to be credit sensitive.

Brokerage receivables and Brokerage payables consisted of the following:

In millions of dollars	December 31,	
	2015	2014
Receivables from customers	\$10,435	\$10,380
Receivables from brokers, dealers, and clearing organizations	17,248	18,039
Total brokerage receivables ⁽¹⁾	\$27,683	\$28,419
Payables to customers	\$35,653	\$33,984
Payables to brokers, dealers, and clearing organizations	18,069	18,196
Total brokerage payables ⁽¹⁾	\$53,722	\$52,180

⁽¹⁾ Brokerage receivables and payables are accounted for in accordance with the AICPA Audit and Accounting Guide for Brokers and Dealers in Securities as codified in ASC 940-320.

13. TRADING ACCOUNT ASSETS AND LIABILITIES

Trading account assets and Trading account liabilities are carried at fair value, other than physical commodities accounted for at the lower of cost or fair value, and consist of the following:

In millions of dollars	December 31,	
	2015	2014
Trading account assets		
Mortgage-backed securities ⁽¹⁾		
U.S. government-sponsored agency guaranteed	\$24,767	\$27,053
Prime	803	1,271
Alt-A	543	709
Subprime	516	1,382
Non-U.S. residential	523	1,476
Commercial	2,855	4,343
Total mortgage-backed securities	\$30,007	\$36,234
U.S. Treasury and federal agency securities		
U.S. Treasury	\$15,791	\$18,906
Agency obligations	2,005	1,568
Total U.S. Treasury and federal agency securities	\$17,796	\$20,474

State and municipal securities	\$2,696	\$3,402
Foreign government securities	56,609	64,937
Corporate	14,437	27,797
Derivatives ⁽²⁾	56,184	67,957
Equity securities	56,495	57,846
Asset-backed securities ⁽¹⁾	3,956	4,546
Other trading assets ⁽³⁾	11,776	13,593
Total trading account assets	\$249,956	\$296,786
Trading account liabilities		
Securities sold, not yet purchased	\$57,827	\$70,944
Derivatives ⁽²⁾	57,592	68,092
Other trading liabilities ⁽³⁾	2,093	—
Total trading account liabilities	\$117,512	\$139,036

The Company invests in mortgage-backed and asset-backed securities. These securitizations are generally considered VIEs. The Company's maximum exposure to loss from these VIEs is equal to the carrying amount of the securities, which is reflected in the table above. For mortgage-backed and asset-backed securitizations in which the Company has other involvement, see Note 22 to the Consolidated Financial Statements.

(1) Presented net, pursuant to enforceable master netting agreements. See Note 23 to the Consolidated Financial Statements for a discussion regarding the accounting and reporting for derivatives.

(2) Includes positions related to investments in unallocated precious metals, as discussed in Note 26 to the Consolidated Financial Statements. Also includes physical commodities accounted for at the lower of cost or fair value.

14. INVESTMENTS

Overview

The following table presents the Company's investments by category:

In millions of dollars	December 31,	
	2015	2014
Securities available-for-sale (AFS)	\$299,136	\$300,143
Debt securities held-to-maturity (HTM) ⁽¹⁾	36,215	23,921
Non-marketable equity securities carried at fair value ⁽²⁾	2,088	2,758
Non-marketable equity securities carried at cost ⁽³⁾	5,516	6,621
Total investments	\$342,955	\$333,443

(1) Carried at adjusted amortized cost basis, net of any credit-related impairment.

(2) Unrealized gains and losses for non-marketable equity securities carried at fair value are recognized in earnings.

(3) Primarily consists of shares issued by the Federal Reserve Bank, Federal Home Loan Banks, foreign central banks and various clearing houses of which Citigroup is a member.

The following table presents interest and dividend income on investments:

In millions of dollars	2015	2014	2013
Taxable interest	\$6,414	\$6,311	\$5,750
Interest exempt from U.S. federal income tax	215	439	732
Dividend income	388	445	437
Total interest and dividend income	\$7,017	\$7,195	\$6,919

The following table presents realized gains and losses on the sale of investments. The gross realized investment losses exclude losses from other-than-temporary impairment (OTTI):

In millions of dollars	2015	2014	2013
Gross realized investment gains	\$1,124	\$1,020	\$1,606
Gross realized investment losses	(442)	(450)	(858)
Net realized gains on sale of investments	\$682	\$570	\$748

The Company has sold certain debt securities that were classified as HTM. These sales were in response to significant deterioration in the creditworthiness of the issuers or securities or because the Company has collected a substantial portion (at least 85%) of the principal outstanding at acquisition of the security. In addition, certain other securities were reclassified to AFS investments in response to

significant credit deterioration. Because the Company generally intends to sell these reclassified securities, Citi recorded OTTI on the securities. The following table sets forth, for the periods indicated, the carrying value of HTM securities sold and reclassified to AFS, as well as the related gain (loss) or the OTTI losses recorded on these securities.

In millions of dollars	2015	2014	2013
Carrying value of HTM securities sold	\$392	\$8	\$935
Net realized gain (loss) on sale of HTM securities	10	—	(128)
Carrying value of securities reclassified to AFS	243	889	989
OTTI losses on securities reclassified to AFS	(15)	(25)	(156)

Securities Available-for-Sale

The amortized cost and fair value of AFS securities at December 31 were as follows:

In millions of dollars	2015				2014			
	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value	Amortized cost	Gross unrealized gains	Gross unrealized losses	Fair value
Debt securities AFS								
Mortgage-backed securities ⁽¹⁾								
U.S. government-sponsored agency guaranteed	\$39,584	\$367	\$237	\$39,714	\$35,647	\$603	\$159	\$36,091
Prime	2	—	—	2	12	—	—	12
Alt-A	50	5	—	55	43	1	—	44
Non-U.S. residential	5,909	31	11	5,929	8,247	67	7	8,307
Commercial	573	2	4	571	551	6	3	554
Total mortgage-backed securities	\$46,118	\$405	\$252	\$46,271	\$44,500	\$677	\$169	\$45,008
U.S. Treasury and federal agency securities								
U.S. Treasury	\$113,096	\$254	\$515	\$112,835	\$110,492	\$353	\$127	\$110,718
Agency obligations	10,095	22	37	10,080	12,925	60	13	12,972
Total U.S. Treasury and federal agency securities	\$123,191	\$276	\$552	\$122,915	\$123,417	\$413	\$140	\$123,690
State and municipal ⁽²⁾	\$12,099	\$132	\$772	\$11,459	\$13,526	\$150	\$977	\$12,699
Foreign government	92,384	410	593	92,201	90,249	734	286	90,697
Corporate	15,859	121	177	15,803	12,033	215	91	12,157
Asset-backed securities ⁽¹⁾	9,261	5	92	9,174	12,534	30	58	12,506
Other debt securities	688	—	—	688	661	—	—	661
Total debt securities AFS	\$299,600	\$1,349	\$2,438	\$298,511	\$296,920	\$2,219	\$1,721	\$297,418
Marketable equity securities AFS	\$602	\$26	\$3	\$625	\$2,461	\$308	\$44	\$2,725
Total securities AFS	\$300,202	\$1,375	\$2,441	\$299,136	\$299,381	\$2,527	\$1,765	\$300,143

The Company invests in mortgage-backed and asset-backed securities. These securitizations are generally considered VIEs. The Company's maximum exposure to loss from these VIEs is equal to the carrying amount of the securities, which is reflected in the table above. For mortgage-backed and asset-backed securitizations in which the Company has other involvement, see Note 22 to the Consolidated Financial Statements.

The gross unrealized losses on state and municipal debt securities are primarily attributable to the effects of fair value hedge accounting. Specifically, Citi hedges the LIBOR-benchmark interest rate component of certain fixed-rate tax-exempt state and municipal debt securities utilizing LIBOR-based interest rate swaps. During the hedge period, losses incurred on the LIBOR-hedging swaps recorded in earnings were substantially offset by gains on the state and municipal debt securities attributable to changes in the LIBOR swap rate being hedged. However, because the LIBOR swap rate decreased significantly during the hedge period while the overall fair value of the municipal debt securities was relatively unchanged, the effect of reclassifying fair value gains on these securities from Accumulated other comprehensive income (loss) (AOCI) to earnings, attributable solely to changes in the LIBOR swap rate, resulted in net unrealized losses remaining in AOCI that relate to the unhedged components of these securities.

At December 31, 2015, the amortized cost of approximately 5,212 investments in equity and fixed income securities exceeded their fair value by \$2,441 million. Of the \$2,441 million, the gross unrealized losses on equity securities were \$3 million. Of the remainder, \$1,331 million represented unrealized losses on fixed income investments that have been in a gross-unrealized-loss position for less than a year and, of these, 94% were rated investment grade; and \$1,107 million represented unrealized losses on fixed income investments that have been in a gross-unrealized-loss

position for a year or more and, of these, 90% were rated investment grade. Of the \$1,107 million mentioned above, \$746 million represent state and municipal securities.

At December 31, 2015, the AFS mortgage-backed securities portfolio fair value balance of \$46,271 million

consisted of \$39,714 million of government-sponsored agency securities, and \$6,557 million of privately sponsored securities, substantially all of which were backed by non-U.S. residential mortgages.

As discussed in more detail below, the Company conducts periodic reviews of all securities with unrealized losses to evaluate whether the impairment is other-than-temporary. Any credit-related impairment related to debt securities is recorded in earnings as OTTI. Non-credit-related impairment is recognized in AOCI if the Company does not plan to sell and is not likely to be required to sell the security. For other debt securities with OTTI, the entire impairment is recognized in the Consolidated Statement of Income.

The table below shows the fair value of AFS securities that have been in an unrealized loss position for less than 12 months or for 12 months or longer:

In millions of dollars	Less than 12 months		12 months or longer		Total	
	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses	Fair value	Gross unrealized losses
December 31, 2015						
Securities AFS						
Mortgage-backed securities						
U.S. government-sponsored agency guaranteed	\$17,816	\$141	\$2,618	\$96	\$20,434	\$237
Prime	—	—	1	—	1	—
Non-U.S. residential	2,217	7	825	4	3,042	11
Commercial	291	3	55	1	346	4
Total mortgage-backed securities	\$20,324	\$151	\$3,499	\$101	\$23,823	\$252
U.S. Treasury and federal agency securities						
U.S. Treasury	\$59,384	\$505	\$1,204	\$10	\$60,588	\$515
Agency obligations	6,716	30	196	7	6,912	37
Total U.S. Treasury and federal agency securities	\$66,100	\$535	\$1,400	\$17	\$67,500	\$552
State and municipal	\$635	\$26	\$4,450	\$746	\$5,085	\$772
Foreign government	35,491	429	4,642	164	40,133	593
Corporate	5,586	132	1,298	45	6,884	177
Asset-backed securities	5,311	58	2,247	34	7,558	92
Other debt securities	27	—	—	—	27	—
Marketable equity securities AFS	132	3	1	—	133	3
Total securities AFS	\$133,606	\$1,334	\$17,537	\$1,107	\$151,143	\$2,441
December 31, 2014						
Securities AFS						
Mortgage-backed securities						
U.S. government-sponsored agency guaranteed	\$4,198	\$30	\$5,547	\$129	\$9,745	\$159
Prime	5	—	2	—	7	—
Non-U.S. residential	1,276	3	199	4	1,475	7
Commercial	124	1	136	2	260	3
Total mortgage-backed securities	\$5,603	\$34	\$5,884	\$135	\$11,487	\$169
U.S. Treasury and federal agency securities						
U.S. Treasury	\$36,581	\$119	\$1,013	\$8	\$37,594	\$127
Agency obligations	5,698	9	754	4	6,452	13
Total U.S. Treasury and federal agency securities	\$42,279	\$128	\$1,767	\$12	\$44,046	\$140
State and municipal	\$386	\$15	\$5,802	\$962	\$6,188	\$977
Foreign government	18,495	147	5,984	139	24,479	286
Corporate	3,511	63	1,350	28	4,861	91
Asset-backed securities	3,701	13	3,816	45	7,517	58
Marketable equity securities AFS	51	4	218	40	269	44
Total securities AFS	\$74,026	\$404	\$24,821	\$1,361	\$98,847	\$1,765

The following table presents the amortized cost and fair value of AFS debt securities by contractual maturity dates:

In millions of dollars	December 31,			
	2015		2014	
	Amortized cost	Fair value	Amortized cost	Fair value
Mortgage-backed securities ⁽¹⁾				
Due within 1 year	\$ 114	\$ 114	\$ 44	\$ 44
After 1 but within 5 years	1,408	1,411	931	935
After 5 but within 10 years	1,750	1,751	1,362	1,387
After 10 years ⁽²⁾	42,846	42,995	42,163	42,642
Total	\$46,118	\$46,271	\$44,500	\$45,008
U.S. Treasury and federal agency securities				
Due within 1 year	\$3,016	\$3,014	\$13,070	\$13,084
After 1 but within 5 years	107,034	106,878	104,982	105,131
After 5 but within 10 years	12,786	12,684	2,286	2,325
After 10 years ⁽²⁾	355	339	3,079	3,150
Total	\$123,191	\$122,915	\$123,417	\$123,690
State and municipal				
Due within 1 year	\$3,289	\$3,287	\$652	\$651
After 1 but within 5 years	1,781	1,781	4,387	4,381
After 5 but within 10 years	502	516	524	537
After 10 years ⁽²⁾	6,527	5,875	7,963	7,130
Total	\$12,099	\$11,459	\$13,526	\$12,699
Foreign government				
Due within 1 year	\$26,322	\$26,329	\$31,355	\$31,382
After 1 but within 5 years	44,801	44,756	41,913	42,467
After 5 but within 10 years	18,935	18,779	16,008	15,779
After 10 years ⁽²⁾	2,326	2,337	973	1,069
Total	\$92,384	\$92,201	\$90,249	\$90,697
All other ⁽³⁾				
Due within 1 year	\$1,930	\$1,931	\$1,248	\$1,251
After 1 but within 5 years	12,748	12,762	10,442	10,535
After 5 but within 10 years	7,867	7,782	7,282	7,318
After 10 years ⁽²⁾	3,263	3,190	6,256	6,220
Total	\$25,808	\$25,665	\$25,228	\$25,324
Total debt securities AFS	\$299,600	\$298,511	\$296,920	\$297,418

(1) Includes mortgage-backed securities of U.S. government-sponsored agencies.

(2) Investments with no stated maturities are included as contractual maturities of greater than 10 years. Actual maturities may differ due to call or prepayment rights.

(3) Includes corporate, asset-backed and other debt securities.

Debt Securities Held-to-Maturity

The carrying value and fair value of debt securities HTM were as follows:

In millions of dollars	Amortized cost basis ⁽¹⁾	Net unrealized gains (losses) recognized in AOCI	Carrying value ⁽²⁾	Gross unrealized gains	Gross unrealized (losses)	Fair value
December 31, 2015						
Debt securities held-to-maturity						
Mortgage-backed securities ⁽³⁾						
U.S. government agency guaranteed	\$17,648	\$138	\$17,786	\$71	\$(100)	)\$17,757
Prime	121	(78)	)43	3	(1)	)45
Alt-A	433	(1)	)432	259	(162)	)529
Subprime	2	—	2	13	—	15
Non-U.S. residential	1,330	(60)	)1,270	37	—	1,307
Commercial	—	—	—	—	—	—
Total mortgage-backed securities	\$19,534	\$(1)	)\$19,533	\$383	\$(263)	)\$19,653
State and municipal ⁽⁴⁾	\$8,581	\$(438)	)\$8,143	\$245	\$(87)	)\$8,301
Foreign government	4,068	—	4,068	28	(3)	)4,093
Asset-backed securities ⁽³⁾	4,485	(14)	)4,471	34	(41)	)4,464
Total debt securities held-to-maturity	\$36,668	\$(453)	)\$36,215	\$690	\$(394)	)\$36,511
December 31, 2014						
Debt securities held-to-maturity						
Mortgage-backed securities ⁽³⁾						
U.S. government agency guaranteed	\$8,795	\$95	\$8,890	\$106	\$(6)	)\$8,990
Prime	60	(12)	)48	6	(1)	)53
Alt-A	1,125	(213)	)912	537	(287)	)1,162
Subprime	6	(1)	)5	15	—	20
Non-U.S. residential	983	(137)	)846	92	—	938
Commercial	8	—	8	1	—	9
Total mortgage-backed securities	\$10,977	\$(268)	)\$10,709	\$757	\$(294)	)\$11,172
State and municipal	\$8,443	\$(494)	)\$7,949	\$227	\$(57)	)\$8,119
Foreign government	4,725	—	4,725	77	—	4,802
Asset-backed securities ⁽³⁾	556	(18)	)538	50	(10)	)578
Total debt securities held-to-maturity ⁽⁵⁾	\$24,701	\$(780)	)\$23,921	\$1,111	\$(361)	)\$24,671

For securities transferred to HTM from Trading account assets, amortized cost basis is defined as the fair value of the securities at the date of transfer plus any accretion income and less any impairments recognized in earnings subsequent to transfer. For securities transferred to HTM from AFS, amortized cost is defined as the original purchase cost, adjusted for the cumulative accretion or amortization of any purchase discount or premium, plus or minus any cumulative fair value hedge adjustments, net of accretion or amortization, and less any other-than-temporary impairment recognized in earnings.

(2) HTM securities are carried on the Consolidated Balance Sheet at amortized cost basis, plus or minus any unamortized unrealized gains and losses and fair value hedge adjustments recognized in AOCI prior to reclassifying the securities from AFS to HTM. Changes in the values of these securities are not reported in the financial statements, except for the amortization of any difference between the carrying value at the transfer date and par value of the securities, and the recognition of any non-credit fair value adjustments in AOCI in connection

with the recognition of any credit impairment in earnings related to securities the Company continues to intend to hold until maturity.

(3) The Company invests in mortgage-backed and asset-backed securities. These securitizations are generally considered VIEs. The Company's maximum exposure to loss from these VIEs is equal to the carrying amount of the securities, which is reflected in the table above. For mortgage-backed and asset-backed securitizations in which the Company has other involvement, see Note 22 to the Consolidated Financial Statements.

(4) The net unrealized losses recognized in AOCI on state and municipal debt securities are primarily attributable to the effects of fair value hedge accounting applied when these debt securities were classified as AFS. Specifically, Citi hedged the LIBOR-benchmark interest rate component of certain fixed-rate tax-exempt state and municipal debt securities utilizing LIBOR-based interest rate swaps. During the hedge period, losses incurred on the LIBOR-hedging swaps recorded in earnings were substantially offset by gains on the state and municipal debt securities attributable to changes in the LIBOR swap rate being hedged. However, because the LIBOR swap rate decreased significantly during the hedge period while the overall fair value of the municipal debt securities was relatively unchanged, the effect of reclassifying fair value gains on these securities from AOCI to earnings attributable solely to changes in the LIBOR swap rate resulted in net unrealized losses remaining in AOCI that relate to the unhedged components of these securities. Upon transfer of these debt securities to HTM, all hedges have been de-designated and hedge accounting has ceased.

(5) During the second quarter of 2015, securities with a total fair value of approximately \$7.1 billion were transferred from AFS to HTM, consisting of \$7.0 billion of U.S. government agency mortgage-backed securities and \$0.1 billion of obligations of U.S. states and municipalities. During the second quarter of 2014, securities with a total fair value of approximately \$11.8 billion were transferred from AFS to HTM, consisting of \$5.4 billion of U.S. government agency mortgage-backed securities and \$6.4 billion of obligations of U.S. states and municipalities. The transfer reflects the Company's intent to hold these securities to maturity or to issuer call in order to reduce the impact of price volatility on AOCI and certain capital measures under Basel III. While these securities were transferred to HTM at fair value as of the transfer date, no subsequent changes in value may be recorded, other than in connection with the recognition of any subsequent other-than-temporary impairment and the amortization of differences between the carrying values at the transfer date and the par values of each security as an adjustment of yield over the remaining contractual life of each security. Any net unrealized holding losses within AOCI related to the respective securities at the date of transfer, inclusive of any cumulative fair value hedge adjustments, will be amortized over the remaining contractual life of each security as an adjustment of yield in a manner consistent with the amortization of any premium or discount.

The Company has the positive intent and ability to hold these securities to maturity or, where applicable, the exercise of any issuer call options, absent any unforeseen significant changes in circumstances, including deterioration in credit or changes in regulatory capital requirements.

The net unrealized losses classified in AOCI primarily relate to debt securities previously classified as AFS that have been transferred to HTM, and include any cumulative fair

value hedge adjustments. The net unrealized loss amount also includes any non-credit-related changes in fair value of HTM securities that have suffered credit impairment recorded in earnings. The AOCI balance related to HTM securities is amortized over the remaining contractual life of the related securities as an adjustment of yield in a manner consistent with the accretion of any difference between the carrying value at the transfer date and par value of the same debt securities.

The table below shows the fair value of debt securities HTM that have been in an unrecognized loss position for less than 12 months and for 12 months or longer:

In millions of dollars	Less than 12 months		12 months or longer		Total	
	Fair value	Gross unrecognized losses	Fair value	Gross unrecognized losses	Fair value	Gross unrecognized losses
December 31, 2015						
Debt securities held-to-maturity						
Mortgage-backed securities	\$935	\$1	\$10,301	\$262	\$11,236	\$263
State and municipal	881	20	1,826	67	2,707	87
Foreign government	180	3	—	—	180	3
Asset-backed securities	132	13	3,232	28	3,364	41
Total debt securities held-to-maturity	\$2,128	\$37	\$15,359	\$357	\$17,487	\$394
December 31, 2014						
Debt securities held-to-maturity						
Mortgage-backed securities	\$4	\$—	\$1,134	\$294	\$1,138	\$294
State and municipal	2,528	34	314	23	2,842	57
Foreign government	—	—	—	—	—	—
Asset-backed securities	9	1	174	9	183	10

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Total debt securities held-to-maturity	\$2,541	\$35	\$1,622	\$326	\$4,163	\$361
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Excluded from the gross unrecognized losses presented in the above table are \$(453) million and \$(780) million of net unrealized losses recorded in AOCI as of December 31, 2015 and December 31, 2014, respectively, primarily related to the difference between the amortized cost and carrying value of HTM securities that were reclassified from AFS. Substantially all of these net unrecognized losses relate to securities that have been in a loss position for 12 months or longer at December 31, 2015 and December 31, 2014.

The following table presents the carrying value and fair value of HTM debt securities by contractual maturity dates:

In millions of dollars	December 31,			
	2015 Carrying value	Fair value	2014 Carrying value	Fair value
Mortgage-backed securities				
Due within 1 year	\$—	\$—	\$—	\$—
After 1 but within 5 years	172	172	—	—
After 5 but within 10 years	660	663	863	869
After 10 years ⁽¹⁾	18,701	18,818	9,846	10,303
Total	\$19,533	\$19,653	\$10,709	\$11,172
State and municipal				
Due within 1 year	\$309	\$305	\$205	\$205
After 1 but within 5 years	336	335	243	243
After 5 but within 10 years	262	270	140	144
After 10 years ⁽¹⁾	7,236	7,391	7,361	7,527
Total	\$8,143	\$8,301	\$7,949	\$8,119
Foreign government				
Due within 1 year	\$—	\$—	\$—	\$—
After 1 but within 5 years	4,068	4,093	4,725	4,802
After 5 but within 10 years	—	—	—	—
After 10 years ⁽¹⁾	—	—	—	—
Total	\$4,068	\$4,093	\$4,725	\$4,802
All other ⁽²⁾				
Due within 1 year	\$—	\$—	\$—	\$—
After 1 but within 5 years	—	—	—	—
After 5 but within 10 years	—	—	—	—
After 10 years ⁽¹⁾	4,471	4,464	538	578
Total	\$4,471	\$4,464	\$538	\$578
Total debt securities held-to-maturity	\$36,215	\$36,511	\$23,921	\$24,671

(1) Investments with no stated maturities are included as contractual maturities of greater than 10 years. Actual maturities may differ due to call or prepayment rights.

(2) Includes corporate and asset-backed securities.

Evaluating Investments for Other-Than-Temporary Impairment

Overview

The Company conducts periodic reviews of all securities with unrealized losses to evaluate whether the impairment is other-than-temporary.

An unrealized loss exists when the current fair value of an individual security is less than its amortized cost basis. Unrealized losses that are determined to be temporary in nature are recorded, net of tax, in AOCI for AFS securities. Losses related to HTM securities generally are not recorded, as these investments are carried at adjusted amortized cost basis. However, for HTM securities with credit-related losses, the credit loss is recognized in earnings as OTTI and any difference between the cost basis adjusted for the OTTI and fair value is recognized in AOCI and amortized as an adjustment of yield over the remaining contractual life of the security. For securities transferred to HTM from Trading account assets, amortized cost is defined as the fair value of the securities at the date of transfer, plus any accretion income and less any impairment recognized in earnings subsequent to transfer. For securities transferred to HTM from AFS, amortized cost is defined as the original purchase cost, adjusted for the cumulative accretion or amortization of any purchase discount or premium, plus or minus any cumulative fair value hedge adjustments, net of accretion or amortization, and less any impairment recognized in earnings.

Regardless of the classification of the securities as AFS or HTM, the Company assesses each position with an unrealized loss for OTTI. Factors considered in determining whether a loss is temporary include:

- the length of time and the extent to which fair value has been below cost;
- the severity of the impairment;
- the cause of the impairment and the financial condition and near-term prospects of the issuer;
- activity in the market of the issuer that may indicate adverse credit conditions; and
- the Company's ability and intent to hold the investment for a period of time sufficient to allow for any anticipated recovery.

The Company's review for impairment generally entails:

- identification and evaluation of impaired investments;
- analysis of individual investments that have fair values less than amortized cost, including consideration of the length of time the investment has been in an unrealized loss position and the expected recovery period;
- consideration of evidential matter, including an evaluation of factors or triggers that could cause individual investments to qualify as having other-than-temporary impairment and those that would not support other-than-temporary impairment; and
- documentation of the results of these analyses, as required under business policies.

Debt

The entire difference between amortized cost basis and fair value is recognized in earnings as OTTI for impaired debt securities that the Company has an intent to sell or for which the Company believes it will more-likely-than-not be required to sell prior to recovery of the amortized cost basis. However, for those securities that the Company does not intend to sell and is not likely to be required to sell, only the credit-related impairment is recognized in earnings and any non-credit-related impairment is recorded in AOCI.

For debt securities, credit impairment exists where management does not expect to receive contractual principal and interest cash flows sufficient to recover the entire amortized cost basis of a security.

Equity

For equity securities, management considers the various factors described above, including its intent and ability to hold the equity security for a period of time sufficient for recovery to cost or whether it is more-likely-than-not that

the Company will be required to sell the security prior to recovery of its cost basis. Where management lacks that intent or ability, the security's decline in fair value is deemed to be other-than-temporary and is recorded in earnings. AFS equity securities deemed to be other-than-temporarily impaired are written down to fair value, with the full difference between fair value and cost recognized in earnings.

Management assesses equity method investments that have fair values that are less than their respective carrying values for OTTI. Fair value is measured as price multiplied by quantity if the investee has publicly listed securities. If the investee is not publicly listed, other methods are used (see Note 25 to the Consolidated Financial Statements). For impaired equity method investments that Citi plans to sell prior to recovery of value or would likely be required to sell, with no expectation that the fair value will recover prior to the expected sale date, the full impairment is recognized in earnings as OTTI regardless of severity and duration. The measurement of the OTTI does not include partial projected recoveries subsequent to the balance sheet date.

For impaired equity method investments that management does not plan to sell and is not likely to be required to sell prior to recovery of value, the evaluation of whether an impairment is other-than-temporary is based on (i) whether and when an equity method investment will recover in value and (ii) whether the investor has the intent and ability to hold that investment for a period of time sufficient to recover the value. The determination of whether the impairment is considered other-than-temporary considers the following indicators, regardless of the time and extent of impairment:

- the cause of the impairment and the financial condition and near-term prospects of the issuer, including any specific events that may influence the operations of the issuer;
- the intent and ability to hold the investment for a period of time sufficient to allow for any anticipated recovery in market value; and

the length of time and extent to which fair value has been less than the carrying value.

The sections below describe the Company's process for identifying credit-related impairments for security types that have the most significant unrealized losses as of December 31, 2015.

Mortgage-Backed Securities

For U.S. mortgage-backed securities (and in particular for Alt-A and other mortgage-backed securities that have significant unrealized losses as a percentage of amortized cost), credit impairment is assessed using a cash flow model that estimates the principal and interest cash flows on the underlying mortgages using the security-specific collateral and transaction structure. The model distributes the estimated cash flows to the various tranches of securities, considering the transaction structure and any subordination and credit enhancements that exist in that structure. The cash flow model incorporates actual cash flows on the mortgage-backed securities through the current period and then estimates the remaining cash flows using a number of assumptions, including default rates, prepayment rates, recovery rates (on foreclosed properties) and loss severity rates (on non-agency mortgage-backed securities).

Management develops specific assumptions using market data, internal estimates and estimates published by rating agencies and other third-party sources. Default rates are projected by considering current underlying mortgage loan performance, generally assuming the default of (i) 10% of current loans, (ii) 25% of 30–59 day delinquent loans, (iii) 70% of 60–90 day delinquent loans and (iv) 100% of 91+ day delinquent loans. These estimates are extrapolated along a default timing curve to estimate the total lifetime pool default

rate. Other assumptions contemplate the actual collateral attributes, including geographic concentrations, rating actions and current market prices.

Cash flow projections are developed using different stress test scenarios. Management evaluates the results of those stress tests (including the severity of any cash shortfall indicated and the likelihood of the stress scenarios actually occurring based on the underlying pool's characteristics and performance) to assess whether management expects to recover the amortized cost basis of the security. If cash flow projections indicate that the Company does not expect to recover its amortized cost basis, the Company recognizes the estimated credit loss in earnings.

State and Municipal Securities

The process for identifying credit impairments in Citigroup's AFS and HTM state and municipal bonds is primarily based on a credit analysis that incorporates third-party credit ratings. Citigroup monitors the bond issuers and any insurers providing default protection in the form of financial guarantee insurance. The average external credit rating, ignoring any insurance, is Aa3/AA-. In the event of an external rating downgrade or other indicator of credit impairment (i.e., based on instrument-specific estimates of cash flows or probability of issuer default), the subject bond is specifically reviewed for adverse changes in the amount or timing of expected contractual principal and interest payments.

For state and municipal bonds with unrealized losses that Citigroup plans to sell (for AFS only), would be more-likely-than-not required to sell (for AFS only) or will be subject to an issuer call deemed probable of exercise prior to the expected recovery of its amortized cost basis (for AFS and HTM), the full impairment is recognized in earnings.

Recognition and Measurement of OTTI

The total OTTI recognized in earnings are as follows:

OTTI on Investments and Other Assets

In millions of dollars

Year ended
December 31, 2015

AFS ⁽¹⁾	HTM	Other assets	Total
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Impairment losses related to securities that the Company does not intend to sell nor will likely be required to sell:

Total OTTI losses recognized during the period	\$33	\$1	\$—	\$34
Less: portion of impairment loss recognized in AOCI (before taxes)	—	—	—	—
Net impairment losses recognized in earnings for securities that the Company does not intend to sell nor will likely be required to sell	\$33	\$1	\$—	\$34
Impairment losses recognized in earnings for securities that the Company intends to sell, would be more likely than not required to sell or will be subject to an issuer call deemed probable of exercise	182	43	6	231
Total impairment losses recognized in earnings	\$215	\$44	\$6	\$265

(1) Includes OTTI on non-marketable equity securities.

OTTI on Investments and Other Assets	Year ended			Total
	December 31, 2014			
In millions of dollars	AFS ⁽¹⁾	HTM	Other assets	
Impairment losses related to securities that the Company does not intend to sell nor will likely be required to sell:				
Total OTTI losses recognized during the period	\$21	\$5	\$—	\$26
Less: portion of impairment loss recognized in AOCI (before taxes)	8	—	—	8
Net impairment losses recognized in earnings for securities that the Company does not intend to sell nor will likely be required to sell	\$13	\$5	\$—	\$18
Impairment losses recognized in earnings for securities that the Company intends to sell, would be more likely than not required to sell or will be subject to an issuer call deemed probable of exercise	380	26	—	406
Total impairment losses recognized in earnings	\$393	\$31	\$—	\$424

(1) Includes OTTI on non-marketable equity securities.

OTTI on Investments and Other Assets	Year ended			Total
	December 31, 2013			
In millions of dollars	AFS ⁽¹⁾	HTM	Other assets ⁽²⁾	
Impairment losses related to securities that the Company does not intend to sell nor will likely be required to sell:				
Total OTTI losses recognized during the period	\$9	\$154	\$—	\$163
Less: portion of impairment loss recognized in AOCI (before taxes)	—	98	—	98
Net impairment losses recognized in earnings for securities that the Company does not intend to sell nor will likely be required to sell	\$9	\$56	\$—	\$65
Impairment losses recognized in earnings for securities that the Company intends to sell or more-likely-than-not will be required to sell before recovery ⁽²⁾	269	—	201	470
Total impairment losses recognized in earnings	\$278	\$56	\$201	\$535

(1) Includes OTTI on non-marketable equity securities.

(2) The impairment charge relates to the carrying value of Citi's then-remaining 35% interest in the MSSB joint venture, offset by the equity pickup from MSSB during the respective periods that was recorded in Other revenue.

The following are 12-month rollforwards of the credit-related impairments recognized in earnings for AFS and HTM debt securities held that the Company does not intend to sell nor likely will be required to sell:

Cumulative OTTI credit losses recognized in earnings on securities still held					
In millions of dollars	Dec. 31, 2014 balance	Credit impairments recognized in earnings on securities not previously impaired	Credit impairments recognized in earnings on securities that have been previously impaired	Reductions due to credit-impaired securities sold, transferred or matured	Dec. 31, 2015 balance
AFS debt securities					
Mortgage-backed securities	\$295	\$—	\$(1)	\$(—)	\$294
State and municipal	—	8	—	—	8
Foreign government securities	171	—	—	(1)	170
Corporate	118	2	(2)	(6)	112
All other debt securities	149	22	(1)	—	170
Total OTTI credit losses recognized for AFS debt securities	\$733	\$32	\$(4)	\$(7)	\$754
HTM debt securities					
Mortgage-backed securities ⁽¹⁾	\$670	\$1	\$(1)	\$(2)	\$668
Corporate	—	—	—	—	—
All other debt securities	133	—	—	(1)	132
Total OTTI credit losses recognized for HTM debt securities	\$803	\$1	\$(1)	\$(3)	\$800

(1) Primarily consists of Alt-A securities.

Cumulative OTTI credit losses recognized in earnings on securities still held					
In millions of dollars	Dec. 31, 2013 balance	Credit impairments recognized in earnings on securities not previously impaired	Credit impairments recognized in earnings on securities that have been previously impaired	Reductions due to credit-impaired securities sold, transferred or matured	Dec. 31, 2014 balance
AFS debt securities					
Mortgage-backed securities	\$295	\$—	\$—	\$—	\$295
State and municipal	—	—	—	—	—
Foreign government securities	171	—	—	—	171
Corporate	113	8	—	(3)	118
All other debt securities	144	5	—	—	149
Total OTTI credit losses recognized for AFS debt securities	\$723	\$13	\$—	\$(3)	\$733
HTM debt securities					
Mortgage-backed securities ⁽¹⁾	\$678	\$5	\$—	\$(13)	\$670

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Corporate	56	—	—	(56)—
All other debt securities	133	—	—	—	133
Total OTTI credit losses recognized for HTM debt securities	\$867	\$5	\$—	\$(69)\$803

(1) Primarily consists of Alt-A securities.

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Investments in Alternative Investment Funds That Calculate Net Asset Value per Share

The Company holds investments in certain alternative investment funds that calculate net asset value (NAV) per share, including hedge funds, private equity funds, funds of funds and real estate funds. The Company's investments include co-investments in funds that are managed by the Company and investments in funds that are managed by third parties. Investments in funds are generally classified as non-marketable equity securities carried at fair value. The fair values of these investments are estimated using the NAV per share of the Company's ownership interest in the funds, where it is not probable that the Company will sell an investment at a price other than the NAV.

	Fair value		Unfunded commitments		Redemption frequency (if currently eligible) monthly, quarterly, annually	Redemption notice period
	December 31, 2015	December 31, 2014	December 31, 2015	December 31, 2014		
In millions of dollars						
Hedge funds	\$3	\$8	\$—	\$—	Generally quarterly	10–95 days
Private equity funds ⁽¹⁾⁽²⁾	762	891	173	205	—	—
Real estate funds ⁽²⁾⁽³⁾	130	166	21	24	—	—
Total ⁽⁴⁾	\$895	\$1,065	\$194	\$229	—	—

(1) Private equity funds include funds that invest in infrastructure, leveraged buyout transactions, emerging markets and venture capital.

(2) With respect to the Company's investments in private equity funds and real estate funds, distributions from each fund will be received as the underlying assets held by these funds are liquidated. It is estimated that the underlying assets of these funds will be liquidated over a period of several years as market conditions allow. Private equity and real estate funds do not allow redemption of investments by their investors. Investors are permitted to sell or transfer their investments, subject to the approval of the general partner or investment manager of these funds, which generally may not be unreasonably withheld.

(3) Includes several real estate funds that invest primarily in commercial real estate in the U.S., Europe and Asia.

Included in the total fair value of investments above are \$0.9 billion and \$0.8 billion of fund assets that are valued (4) using NAVs provided by third-party asset managers as of December 31, 2015 and December 31, 2014, respectively.

15. LOANS

Citigroup loans are reported in two categories—consumer and corporate. These categories are classified primarily according to the segment and subsegment that manage the loans.

Consumer Loans

Consumer loans represent loans and leases managed primarily by the GCB businesses in Citicorp and in Citi Holdings. The following table provides information by loan type for the periods indicated:

	December 31,	
In millions of dollars	2015	2014
In U.S. offices		
Mortgage and real estate ⁽¹⁾	\$80,281	\$96,533
Installment, revolving credit, and other	3,480	14,450
Cards	112,800	112,982
Commercial and industrial	6,407	5,895
	\$202,968	\$229,860
In offices outside the U.S.		
Mortgage and real estate ⁽¹⁾	\$47,062	\$54,462
Installment, revolving credit, and other	29,480	31,128
Cards	27,342	32,032
Commercial and industrial	21,679	22,561
Lease financing	427	609
	\$125,990	\$140,792
Total consumer loans	\$328,958	\$370,652
Net unearned income	\$825	\$(682)
Consumer loans, net of unearned income	\$329,783	\$369,970

(1) Loans secured primarily by real estate.

Citigroup has established a risk management process to monitor, evaluate and manage the principal risks associated with its consumer loan portfolio. Credit quality indicators that are actively monitored include delinquency status, consumer credit scores (FICO), and loan to value (LTV) ratios, each as discussed in more detail below.

Included in the loan table above are lending products whose terms may give rise to greater credit issues. Credit cards with below-market introductory interest rates and interest-only loans are examples of such products. These products are closely managed using credit techniques that are intended to mitigate their higher inherent risk.

During the years ended December 31, 2015 and 2014, the Company sold and/or reclassified to held-for-sale \$25.8 billion and \$10.3 billion, respectively, of consumer loans. The Company did not have significant purchases of consumer loans during the years ended December 31, 2015 and 2014.

Delinquency Status

Delinquency status is monitored and considered a key indicator of credit quality of consumer loans. Principally, the U.S. residential first mortgage loans use the Mortgage Bankers Association (MBA) method of reporting delinquencies, which considers a loan delinquent if a monthly payment has not been received by the end of the day immediately preceding the loan's next due date. All other loans use a method of reporting delinquencies that considers a loan delinquent if a monthly payment has not been received by the close of business on the loan's next due date. As a general policy, residential first mortgages, home equity loans and installment loans are classified as non-accrual when loan payments are 90 days contractually past due. Credit cards and unsecured revolving loans generally accrue interest until payments are 180 days past due. Home equity loans in regulated bank entities are classified as non-accrual if the related residential first mortgage is 90 days or more past due. Mortgage loans in regulated bank entities discharged through Chapter 7 bankruptcy, other than Federal Housing Administration (FHA)-insured loans, are classified as non-accrual. Commercial market loans are placed on a cash (non-accrual) basis when it is determined,

based on actual experience and a forward-looking assessment of the collectability of the loan in full, that the payment of interest or principal is doubtful or when interest or principal is 90 days past due.

The policy for re-aging modified U.S. consumer loans to current status varies by product. Generally, one of the conditions to qualify for these modifications is that a minimum number of payments (typically ranging from one to three) be made. Upon modification, the loan is re-aged to current status. However, re-aging practices for certain open-ended consumer loans, such as credit cards, are governed by Federal Financial Institutions Examination Council (FFIEC) guidelines. For open-ended consumer loans subject to FFIEC guidelines, one of the conditions for a loan to be re-aged to current status is that at least three consecutive minimum monthly payments, or the equivalent amount, must be received. In addition, under FFIEC guidelines, the number of times that such a loan can be re-aged is subject to limitations (generally once in 12 months and twice in five years). Furthermore, FHA and Department of Veterans Affairs (VA) loans are modified under those respective agencies' guidelines and payments are not always required in order to re-age a modified loan to current.

The following tables provide details on Citigroup's consumer loan delinquency and non-accrual loans:
Consumer Loan Delinquency and Non-Accrual Details at December 31, 2015

In millions of dollars	Total current ⁽¹⁾⁽²⁾	30–89 days past due ⁽³⁾	≥ 90 days past due ⁽³⁾	Past due government guaranteed ⁽⁴⁾	Total loans ⁽²⁾	Total non-accrual	90 days past due and accruing
In North America offices							
Residential first mortgages	\$53,146	\$846	\$564	\$2,318	\$56,874	\$1,216	\$1,997
Home equity loans ⁽⁵⁾	22,335	136	277	—	22,748	1,017	—
Credit cards	110,814	1,296	1,243	—	113,353	—	1,243
Installment and other	4,236	80	33	—	4,349	56	2
Commercial market loans	8,241	16	61	—	8,318	222	17
Total	\$198,772	\$2,374	\$2,178	\$2,318	\$205,642	\$2,511	\$3,259
In offices outside North America							
Residential first mortgages	\$39,698	\$241	\$178	\$—	\$40,117	\$390	\$—
Credit cards	25,810	478	442	—	26,730	261	278
Installment and other	29,067	317	192	—	29,576	226	—
Commercial market loans	27,401	62	63	—	27,526	277	—
Total	\$121,976	\$1,098	\$875	\$—	\$123,949	\$1,154	\$278
Total GCB and Citi Holdings consumer	\$320,748	\$3,472	\$3,053	\$2,318	\$329,591	\$3,665	\$3,537
Other ⁽⁶⁾	178	7	7	—	192	25	—
Total Citigroup	\$320,926	\$3,479	\$3,060	\$2,318	\$329,783	\$3,690	\$3,537

(1) Loans less than 30 days past due are presented as current.

(2) Includes \$34 million of residential first mortgages recorded at fair value.

(3) Excludes loans guaranteed by U.S. government-sponsored entities.

(4) Consists of residential first mortgages that are guaranteed by U.S. government-sponsored entities that are 30–89 days past due of \$0.3 billion and 90 days or more past due of \$2.0 billion.

(5) Fixed-rate home equity loans and loans extended under home equity lines of credit, which are typically in junior lien positions.

(6) Represents loans classified as consumer loans on the Consolidated Balance Sheet that are not included in the Citi Holdings consumer credit metrics.

Consumer Loan Delinquency and Non-Accrual Details at December 31, 2014

In millions of dollars	Total current ⁽¹⁾⁽²⁾	30–89 days past due ⁽³⁾	≥ 90 days past due ⁽³⁾	Past due government guaranteed ⁽⁴⁾	Total loans ⁽²⁾	Total non-accrual	90 days past due and accruing
In North America offices							
Residential first mortgages	\$61,730	\$1,280	\$1,371	\$3,443	\$67,824	\$2,746	\$2,759
Home equity loans ⁽⁵⁾	27,262	335	520	—	28,117	1,271	—
Credit cards	111,441	1,316	1,271	—	114,028	—	1,273
Installment and other	12,361	229	284	—	12,874	254	3
Commercial market loans	8,630	31	13	—	8,674	135	15
Total	\$221,424	\$3,191	\$3,459	\$3,443	\$231,517	\$4,406	\$4,050
In offices outside North America							
Residential first mortgages	\$44,782	\$312	\$223	\$—	\$45,317	\$454	\$—
Credit cards	30,327	602	553	—	31,482	413	322
Installment and other	29,297	328	149	—	29,774	216	—
Commercial market loans	31,280	86	255	—	31,621	405	—
Total	\$135,686	\$1,328	\$1,180	\$—	\$138,194	\$1,488	\$322
Total GCB and Citi Holdings	\$357,110	\$4,519	\$4,639	\$3,443	\$369,711	\$5,894	\$4,372
Other ⁽⁶⁾	238	10	11	—	259	30	—
Total Citigroup	\$357,348	\$4,529	\$4,650	\$3,443	\$369,970	\$5,924	\$4,372

(1) Loans less than 30 days past due are presented as current.

(2) Includes \$43 million of residential first mortgages recorded at fair value.

(3) Excludes loans guaranteed by U.S. government-sponsored entities.

(4) Consists of residential first mortgages that are guaranteed by U.S. government-sponsored entities that are 30–89 days past due of \$0.6 billion and 90 days or more past due of \$2.8 billion.

(5) Fixed-rate home equity loans and loans extended under home equity lines of credit, which are typically in junior lien positions.

(6) Represents loans classified as consumer loans on the Consolidated Balance Sheet that are not included in the Citi Holdings consumer credit metrics.

Consumer Credit Scores (FICO)

In the U.S., independent credit agencies rate an individual's risk for assuming debt based on the individual's credit history and assign every consumer a "FICO" (Fair Isaac Corporation) credit score. These scores are continually updated by the agencies based upon an individual's credit actions (e.g., taking out a loan or missed or late payments).

The following tables provide details on the FICO scores attributable to Citi's U.S. consumer loan portfolio as of December 31, 2015 and 2014 (commercial market loans are not included in the table since they are business based and FICO scores are not a primary driver in their credit evaluation). FICO scores are updated monthly for substantially all of the portfolio or, otherwise, on a quarterly basis for the remaining portfolio.

FICO score distribution in U.S. portfolio ⁽¹⁾⁽²⁾	December 31, 2015		
	Less than 620	≥ 620 but less than 660	Equal to or greater than 660
In millions of dollars			
Residential first mortgages	\$3,483	\$3,036	\$45,047
Home equity loans	2,067	1,782	17,837
Credit cards	7,341	10,072	93,194
Installment and other	337	270	2,662
Total	\$13,228	\$15,160	\$158,740

- (1) Excludes loans guaranteed by U.S. government entities, loans subject to long-term standby commitments (LTSCs) with U.S. government-sponsored entities and loans recorded at fair value.
- (2) Excludes balances where FICO was not available. Such amounts are not material.

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FICO score distribution in U.S. portfolio ⁽¹⁾⁽²⁾	December 31, 2014		
	Less than 620	≥ 620 but less than 660	Equal to or greater than 660
In millions of dollars			
Residential first mortgages	\$8,911	\$5,463	\$45,783
Home equity loans	3,257	2,456	20,957
Credit cards	7,647	10,296	92,877
Installment and other	4,015	2,520	5,150
Total	\$23,830	\$20,735	\$164,767

(1) Excludes loans guaranteed by U.S. government entities, loans subject to LTSCs with U.S. government-sponsored entities and loans recorded at fair value.

(2) Excludes balances where FICO was not available. Such amounts are not material.

Loan to Value (LTV) Ratios

LTV ratios (loan balance divided by appraised value) are calculated at origination and updated by applying market price data.

The following tables provide details on the LTV ratios attributable to Citi's U.S. consumer mortgage portfolios. LTV ratios are updated monthly using the most recent Core Logic Home Price Index data available for substantially all of the portfolio applied at the Metropolitan Statistical Area level, if available, or the state level if not. The remainder of the portfolio is updated in a similar manner using the Federal Housing Finance Agency indices.

LTV distribution in U.S. portfolio⁽¹⁾⁽²⁾ December 31, 2015

In millions of dollars	Less than or equal to 80%	> 80% but less	Greater
		than or equal to 100%	than 100%
Residential first mortgages	\$46,559	\$4,478	\$626
Home equity loans	13,904	5,147	2,527
Total	\$60,463	\$9,625	\$3,153

(1) Excludes loans guaranteed by U.S. government entities, loans subject to LTSCs with U.S. government-sponsored entities and loans recorded at fair value.

(2) Excludes balances where LTV was not available. Such amounts are not material.

LTV distribution in U.S. portfolio⁽¹⁾⁽²⁾ December 31, 2014

In millions of dollars	Less than or equal to 80%	> 80% but less	Greater
		than or equal to 100%	than 100%
Residential first mortgages	\$48,163	\$9,480	\$2,670
Home equity loans	14,638	7,267	4,641
Total	\$62,801	\$16,747	\$7,311

(1) Excludes loans guaranteed by U.S. government entities, loans subject to LTSCs with U.S. government-sponsored entities and loans recorded at fair value.

(2) Excludes balances where LTV was not available. Such amounts are not material.

Impaired Consumer Loans

Impaired loans are those loans where Citigroup believes it is probable all amounts due according to the original contractual terms of the loan will not be collected. Impaired consumer loans include non-accrual commercial market loans, as well as smaller-balance homogeneous loans whose terms have been modified due to the borrower's financial difficulties and where Citigroup has granted a concession to the borrower. These modifications may include interest rate reductions and/or principal forgiveness. Impaired consumer loans exclude smaller-balance homogeneous loans

that have not been modified and are carried on a non-accrual basis.

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The following tables present information about total impaired consumer loans and for interest income recognized on impaired consumer loans:

In millions of dollars	At and for the year ended December 31, 2015				
	Recorded investment ⁽¹⁾⁽²⁾	Unpaid principal balance	Related specific allowance ⁽³⁾	Average carrying value ⁽⁴⁾	Interest income recognized ⁽⁵⁾
Mortgage and real estate					
Residential first mortgages	\$6,038	\$6,610	\$ 739	\$8,932	\$439
Home equity loans	1,399	1,972	406	1,778	64
Credit cards	1,950	1,986	604	2,079	179
Installment and other					
Individual installment and other	464	519	202	449	54
Commercial market loans	352	587	113	372	13
Total	\$10,203	\$11,674	\$ 2,064	\$13,610	\$749

(1) Recorded investment in a loan includes net deferred loan fees and costs, unamortized premium or discount and direct write-downs and includes accrued interest only on credit card loans.

(2) \$1,151 million of residential first mortgages, \$459 million of home equity loans and \$86 million of commercial market loans do not have a specific allowance.

(3) Included in the Allowance for loan losses.

(4) Average carrying value represents the average recorded investment ending balance for the last four quarters and does not include the related specific allowance.

(5) Includes amounts recognized on both an accrual and cash basis.

In millions of dollars	At and for the year ended December 31, 2014				
	Recorded investment ⁽¹⁾⁽²⁾	Unpaid principal balance	Related specific allowance ⁽³⁾	Average carrying value ⁽⁴⁾	Interest income recognized ⁽⁵⁾⁽⁶⁾
Mortgage and real estate					
Residential first mortgages	\$13,551	\$ 14,387	\$ 1,920	\$ 15,389	\$ 690
Home equity loans	2,029	2,674	602	2,075	74
Credit cards	2,407	2,447	862	2,732	196
Installment and other					
Individual installment and other	948	963	445	975	124
Commercial market loans	423	599	88	381	22
Total	\$19,358	\$ 21,070	\$ 3,917	\$ 21,552	\$ 1,106

(1) Recorded investment in a loan includes net deferred loan fees and costs, unamortized premium or discount and direct write-downs and includes accrued interest only on credit card loans.

(2) \$1,896 million of residential first mortgages, \$554 million of home equity loans and \$158 million of commercial market loans do not have a specific allowance.

(3) Included in the Allowance for loan losses.

(4) Average carrying value represents the average recorded investment ending balance for the last four quarters and does not include the related specific allowance.

(5) Includes amounts recognized on both an accrual and cash basis.

(6) Interest income recognized for the year ended December 31, 2013 was \$1,280 million.

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Consumer Troubled Debt Restructurings

The following tables present consumer TDRs occurring:

At and for the year ended December 31, 2015

In millions of dollars except number of loans modified	Number of loans modified	Post- modification recorded investment ⁽¹⁾⁽²⁾	Deferred principal ⁽³⁾	Contingent principal forgiveness ⁽⁴⁾	Principal forgiveness ⁽⁵⁾	Average interest rate reduction	
North America							
Residential first mortgages	9,487	\$ 1,282	\$9	\$4	\$25	1	%
Home equity loans	4,317	157	1	—	3	2	
Credit cards	188,502	771	—	—	—	16	
Installment and other revolving	4,287	37	—	—	—	13	
Commercial markets ⁽⁶⁾	300	47	—	—	—	—	
Total ⁽⁸⁾	206,893	\$ 2,294	\$10	\$4	\$28		
International							
Residential first mortgages	3,918	\$ 104	\$—	\$—	\$—	—	%
Credit cards	142,851	374	—	—	7	13	
Installment and other revolving	65,895	280	—	—	5	5	
Commercial markets ⁽⁶⁾	239	87	—	—	—	1	
Total ⁽⁸⁾	212,903	\$ 845	\$—	\$—	\$12		

At and for the year ended December 31, 2014

In millions of dollars except number of loans modified	Number of loans modified	Post- modification recorded investment ⁽¹⁾⁽⁷⁾	Deferred principal ⁽³⁾	Contingent principal forgiveness ⁽⁴⁾	Principal forgiveness ⁽⁵⁾	Average interest rate reduction	
North America							
Residential first mortgages	20,114	\$ 2,478	\$52	\$36	\$16	1	%
Home equity loans	7,444	279	3	—	14	2	
Credit cards	185,962	808	—	—	—	15	
Installment and other revolving	46,838	351	—	—	—	7	
Commercial markets ⁽⁶⁾	191	35	—	—	1	—	
Total ⁽⁸⁾	260,549	\$ 3,951	\$55	\$36	\$31		
International							
Residential first mortgages	3,217	\$ 114	\$—	\$—	\$1	1	%
Credit cards	139,128	447	—	—	9	13	
Installment and other revolving	61,563	292	—	—	7	9	
Commercial markets ⁽⁶⁾	346	200	—	—	—	—	
Total ⁽⁸⁾	204,254	\$ 1,053	\$—	\$—	\$17		

(1) Post-modification balances include past due amounts that are capitalized at the modification date.

(2) Post-modification balances in North America include \$209 million of residential first mortgages and \$55 million of home equity loans to borrowers who have gone through Chapter 7 bankruptcy in the year ended December 31, 2015. These amounts include \$126 million of residential first mortgages and \$47 million of home equity loans that were newly classified as TDRs during 2015, based on previously received OCC guidance.

(3) Represents portion of contractual loan principal that is non-interest bearing but still due from the borrower. Such deferred principal is charged off at the time of permanent modification to the extent that the related loan balance exceeds the underlying collateral value.

(4) Represents portion of contractual loan principal that is non-interest bearing and, depending upon borrower performance, eligible for forgiveness.

(5) Represents portion of contractual loan principal that was forgiven at the time of permanent modification.

(6) Commercial markets loans are generally borrower-specific modifications and incorporate changes in the amount and/or timing of principal and/or interest.

(7) Post-modification balances in North America include \$322 million of residential first mortgages and \$80 million of home equity loans to borrowers who have gone through Chapter 7 bankruptcy in the year ended December 31, 2014. These amounts include \$179 million of residential first mortgages and \$69 million of home equity loans that were newly classified as TDRs during 2014, based on previously received OCC guidance.

(8) The above tables reflect activity for loans outstanding as of the end of the reporting period that were considered TDRs.

The following table presents consumer TDRs that defaulted for which the payment default occurred within one year of a permanent modification. Default is defined as 60 days past due, except for classifiably managed commercial markets loans, where default is defined as 90 days past due.

In millions of dollars	2015	2014
North America		
Residential first mortgages	\$420	\$715
Home equity loans	38	72
Credit cards	187	194
Installment and other revolving	8	95
Commercial markets	9	9
Total	\$662	\$1,085
International		
Residential first mortgages	\$22	\$24
Credit cards	141	217
Installment and other revolving	88	104
Commercial markets	28	105
Total	\$279	\$450

Corporate Loans

Corporate loans represent loans and leases managed by ICG. The following table presents information by corporate loan type:

In millions of dollars	December 31, 2015	December 31, 2014
In U.S. offices		
Commercial and industrial	\$41,147	\$35,055
Financial institutions	36,396	36,272
Mortgage and real estate ⁽¹⁾	37,565	32,537
Installment, revolving credit and other	33,374	29,207
Lease financing	1,780	1,758
	\$150,262	\$134,829
In offices outside the U.S.		
Commercial and industrial	\$78,420	\$79,239
Financial institutions	28,704	33,269
Mortgage and real estate ⁽¹⁾	5,106	6,031
Installment, revolving credit and other	20,853	19,259
Lease financing	238	356
Governments and official institutions	4,911	2,236
	\$138,232	\$140,390
Total corporate loans	\$288,494	\$275,219
Net unearned income	(660	) (554
Corporate loans, net of unearned income	\$287,834	\$274,665

(1) Loans secured primarily by real estate.

The Company sold and/or reclassified to held-for-sale \$2.8 billion and \$4.8 billion of corporate loans during the years ended December 31, 2015 and 2014, respectively. The Company did not have significant purchases of corporate loans classified as held-for-investment for the years ended December 31, 2015 or 2014.

Delinquency Status

Citi generally does not manage corporate loans on a delinquency basis. Corporate loans are identified as impaired and placed on a cash (non-accrual) basis when it is determined, based on actual experience and a forward-looking assessment of the collectability of the loan in full, that the payment of interest or principal is doubtful or when interest or principal is 90 days past due, except when the loan is well collateralized and in the process of collection. Any interest accrued on impaired corporate loans and leases is reversed at 90 days and charged against current earnings, and interest is thereafter included in earnings only to the extent actually received in cash. When there is doubt regarding the ultimate collectability of principal, all cash receipts are thereafter applied to reduce the recorded investment in the loan. While corporate loans are generally managed based on their internally assigned risk rating (see further discussion below), the following tables present delinquency information by corporate loan type.

Corporate Loan Delinquency and Non-Accrual Details at December 31, 2015

In millions of dollars	30–89 days past due and accruing ⁽¹⁾	≥ 90 days past due and accruing ⁽¹⁾	Total past due and accruing	Total non-accrual ⁽²⁾	Total current ⁽³⁾	Total loans ⁽⁴⁾
Commercial and industrial	\$87	\$4	\$91	\$1,039	\$114,564	\$115,694
Financial institutions	16	—	16	173	64,128	64,317
Mortgage and real estate	137	7	144	232	42,095	42,471
Leases	—	—	—	76	1,941	2,017
Other	29	—	29	44	58,286	58,359
Loans at fair value						4,971
Purchased distressed loans						5
Total	\$269	\$11	\$280	\$1,564	\$281,014	\$287,834

Corporate Loan Delinquency and Non-Accrual Details at December 31, 2014

In millions of dollars	30–89 days past due and accruing ⁽¹⁾	≥ 90 days past due and accruing ⁽¹⁾	Total past due and accruing	Total non-accrual ⁽²⁾	Total current ⁽³⁾	Total loans ⁽⁴⁾
Commercial and industrial	\$50	\$—	\$50	\$575	\$109,764	\$110,389
Financial institutions	2	—	2	250	67,580	67,832
Mortgage and real estate	86	—	86	252	38,135	38,473
Leases	—	—	—	51	2,062	2,113
Other	49	1	50	55	49,844	49,949
Loans at fair value						5,858
Purchased distressed loans						51
Total	\$187	\$1	\$188	\$1,183	\$267,385	\$274,665

(1) Corporate loans that are 90 days past due are generally classified as non-accrual. Corporate loans are considered past due when principal or interest is contractually due but unpaid.

Non-accrual loans generally include those loans that are ≥ 90 days past due or those loans for which Citi believes, based on actual experience and a forward-looking assessment of the collectability of the loan in full, that the payment of interest or principal is doubtful.

(3) Corporate loans are past due when principal or interest is contractually due but unpaid. Loans less than 30 days past due are presented as current.

(4) Total loans include loans at fair value, which are not included in the various delinquency columns.

Citigroup has a risk management process to monitor, evaluate and manage the principal risks associated with its corporate loan portfolio. As part of its risk management process, Citi assigns numeric risk ratings to its corporate loan facilities based on quantitative and qualitative assessments of the obligor and facility. These risk ratings are reviewed at least annually or more often if material events related to the obligor or facility warrant. Factors considered in assigning the risk ratings include financial condition of the obligor, qualitative assessment of management and strategy, amount and sources of repayment, amount and type of collateral and guarantee arrangements, amount and type of any contingencies associated with the obligor, and the obligor's industry and geography.

The obligor risk ratings are defined by ranges of default probabilities. The facility risk ratings are defined by ranges of loss norms, which are the product of the probability of default and the loss given default. The investment grade rating categories are similar to the category BBB-/Baa3 and above as defined by S&P and Moody's. Loans classified according to the bank regulatory definitions as special mention, substandard and doubtful will have risk ratings within the non-investment grade categories.

Corporate Loans Credit Quality Indicators

In millions of dollars	Recorded investment in loans ⁽¹⁾	
	December 31, 2015	December 31, 2014
Investment grade ⁽²⁾		
Commercial and industrial	\$81,927	\$80,812
Financial institutions	53,522	56,154
Mortgage and real estate	18,869	16,068
Leases	1,660	1,669
Other	51,449	46,284
Total investment grade	\$207,427	\$200,987
Non-investment grade ⁽²⁾		
Accrual		
Commercial and industrial	\$32,726	\$29,003
Financial institutions	10,622	11,429
Mortgage and real estate	2,800	3,587
Leases	282	393
Other	6,867	3,609
Non-accrual		
Commercial and industrial	1,039	575
Financial institutions	173	250
Mortgage and real estate	232	252
Leases	76	51
Other	44	55
Total non-investment grade	\$54,861	\$49,204
Private bank loans managed on a delinquency basis ⁽²⁾	\$20,575	\$18,616
Loans at fair value	4,971	5,858
Corporate loans, net of unearned income	\$287,834	\$274,665

(1) Recorded investment in a loan includes net deferred loan fees and costs, unamortized premium or discount, less any direct write-downs.

(2) Held-for-investment loans are accounted for on an amortized cost basis.

Impaired collateral-dependent loans and leases, where repayment is expected to be provided solely by the sale of the underlying collateral and there are no other available and reliable sources of repayment, are written down to the lower of cost or collateral value, less cost to sell. Cash-basis loans are returned to an accrual status when all contractual principal and interest amounts are reasonably assured of repayment and there is a sustained period of repayment performance, generally six months, in accordance with the contractual terms of the loan.

The following tables present non-accrual loan information by corporate loan type and interest income recognized on non-accrual corporate loans:

Non-Accrual Corporate Loans

At and for the year ended December 31, 2015

In millions of dollars	Recorded investment ⁽¹⁾	Unpaid principal balance	Related specific allowance	Average carrying value ⁽²⁾	Interest income recognized ⁽³⁾
Non-accrual corporate loans					
Commercial and industrial	\$ 1,039	\$ 1,224	\$ 246	\$ 825	\$ 7
Financial institutions	173	196	10	194	—
Mortgage and real estate	232	336	21	240	4
Lease financing	76	76	54	62	—
Other	44	114	32	39	—
Total non-accrual corporate loans	\$ 1,564	\$ 1,946	\$ 363	\$ 1,360	\$ 11

At and for the year ended December 31, 2014

In millions of dollars	Recorded investment ⁽¹⁾	Unpaid principal balance	Related specific allowance	Average carrying value ⁽²⁾	Interest income recognized ⁽³⁾
Non-accrual corporate loans					
Commercial and industrial	\$ 575	\$ 863	\$ 155	\$ 658	\$ 32
Financial institutions	250	262	7	278	4
Mortgage and real estate	252	287	24	263	8
Lease financing	51	53	29	85	—
Other	55	68	21	60	3
Total non-accrual corporate loans	\$ 1,183	\$ 1,533	\$ 236	\$ 1,344	\$ 47

In millions of dollars	December 31, 2015		December 31, 2014	
	Recorded investment ⁽¹⁾	Related specific allowance	Recorded investment ⁽¹⁾	Related specific allowance
Non-accrual corporate loans with valuation allowances				
Commercial and industrial	\$ 539	\$ 246	\$ 224	\$ 155
Financial institutions	18	10	37	7
Mortgage and real estate	60	21	70	24
Lease financing	75	54	47	29
Other	40	32	55	21
Total non-accrual corporate loans with specific allowance	\$ 732	\$ 363	\$ 433	\$ 236
Non-accrual corporate loans without specific allowance				
Commercial and industrial	\$ 500		\$ 351	
Financial institutions	155		213	
Mortgage and real estate	172		182	
Lease financing	1		4	
Other	4		—	
Total non-accrual corporate loans without specific allowance	\$ 832	N/A	\$ 750	N/A

(1)

Recorded investment in a loan includes net deferred loan fees and costs, unamortized premium or discount, less any direct write-downs.

(2) Average carrying value represents the average recorded investment balance and does not include related specific allowance.

(3) Interest income recognized for the year ended December 31, 2013 was \$43 million.

N/A Not Applicable

Corporate Troubled Debt Restructurings

The following table presents corporate TDR activity at and for the year ended December 31, 2015:

In millions of dollars	Carrying Value	TDRs involving changes in the amount and/or timing of principal payments ⁽¹⁾	TDRs involving changes in the amount and/or timing of interest payments ⁽²⁾	TDRs involving changes in the amount and/or timing of both principal and interest payments
Commercial and industrial	\$ 120	\$67	\$—	\$53
Mortgage and real estate	47	3	—	44
Total	\$ 167	\$70	\$—	\$97

TDRs involving changes in the amount or timing of principal payments may involve principal forgiveness or deferral of periodic and/or final principal payments. Because forgiveness of principal is rare for commercial loans, modifications typically have little to no impact on the loans' projected cash flows and thus little to no impact on the allowance established for the loans. Charge-offs for amounts deemed uncollectable may be recorded at the time of the restructuring or may have already been recorded in prior periods such that no charge-off is required at the time of the modification.

(1) TDRs involving changes in the amount or timing of principal payments may involve a below-market interest rate.

The following table presents corporate TDR activity at and for the year ended December 31, 2014:

In millions of dollars	Carrying Value	TDRs involving changes in the amount and/or timing of principal payments ⁽¹⁾	TDRs involving changes in the amount and/or timing of interest payments ⁽²⁾	TDRs involving changes in the amount and/or timing of both principal and interest payments
Commercial and industrial	\$48	\$30	\$17	\$1
Mortgage and real estate	8	5	1	2
Total	\$56	\$35	\$18	\$3

TDRs involving changes in the amount or timing of principal payments may involve principal forgiveness or deferral of periodic and/or final principal payments. Because forgiveness of principal is rare for commercial loans, modifications typically have little to no impact on the loans' projected cash flows and thus little to no impact on the allowance established for the loans. Charge-offs for amounts deemed uncollectable may be recorded at the time of the restructuring or may have already been recorded in prior periods such that no charge-off is required at the time of the modification.

(2) TDRs involving changes in the amount or timing of interest payments may involve a below-market interest rate.

The following table presents total corporate loans modified in a TDR as well as those TDRs that defaulted and for which the payment default occurred within one year of a permanent modification. Default is defined as 60 days past due, except for classifiably managed commercial markets loans, where default is defined as 90 days past due.

In millions of dollars	TDR balances at December 31, 2015	TDR loans in payment default during the year ended December 31, 2015	TDR balances at December 31, 2014	TDR loans in payment default during the year ended December 31, 2014
Commercial and industrial	\$ 135	\$—	\$ 117	\$—
	5	1	—	—

Loans to financial institutions

Mortgage and real estate	138	—	107	—
Other	308	—	355	—
Total ⁽¹⁾	\$586	\$1	\$579	\$—

(1) The above tables reflect activity for loans outstanding as of the end of the reporting period that were considered TDRs.

Purchased Distressed Loans

Included in the corporate and consumer loans outstanding tables above are purchased distressed loans, which are loans that have evidenced significant credit deterioration subsequent to origination but prior to acquisition by Citigroup. In accordance with ASC 310-30, the difference between the total expected cash flows for these loans and the initial recorded investment is recognized in income over the life of the loans using a level yield. Accordingly, these loans have been excluded from the impaired loan table information presented above. In addition, per ASC 310-30, subsequent decreases in the expected cash flows for a purchased distressed loan require a build of an allowance so the loan

retains its level yield. However, increases in the expected cash flows are first recognized as a reduction of any previously established allowance and then recognized as income prospectively over the remaining life of the loan by increasing the loan's level yield. Where the expected cash flows cannot be reliably estimated, the purchased distressed loan is accounted for under the cost recovery method. The carrying amount of the Company's purchased distressed loan portfolio was \$234 million and \$361 million, net of an allowance of \$16 million and \$60 million, at December 31, 2015 and 2014, respectively.

The changes in the accretable yield, related allowance and carrying amount net of accretable yield were as follows:

In millions of dollars	Accretable yield	Carrying amount of loan receivable	Allowance
Balance at December 31, 2013	\$ 107	\$ 703	\$ 113
Purchases ⁽¹⁾	\$ 1	\$ 46	\$ —
Disposals/payments received	(6	)(307	)(15
Accretion	(24	)24	—
Builds (reductions) to the allowance	(36	)—	(27
Increase to expected cash flows	23	—	—
FX translation/other	(9	)(45	)(11
Balance at December 31, 2014 ⁽²⁾	\$ 56	\$ 421	\$ 60
Purchases ⁽¹⁾	\$ 3	\$ 54	\$ —
Disposals/payments received	(5	)(162	)(9
Accretion	(13	)13	—
Builds (reductions) to the allowance	—	—	9
Increase to expected cash flows	1	—	—
FX translation/other	(9	)(76	)(44
Balance at December 31, 2015 ⁽²⁾	\$ 33	\$ 250	\$ 16

The balance reported in the column "Carrying amount of loan receivable" consists of \$54 million and \$46 million in 2015 and 2014, respectively, of purchased loans accounted for under the level-yield method. No purchased loans (1) were accounted for under the cost-recovery method. These balances represent the fair value of these loans at their acquisition date. The related total expected cash flows for the level-yield loans at their acquisition dates were \$56 million and \$46 million in 2015 and 2014, respectively.

(2) The balance reported in the column "Carrying amount of loan receivable" consists of \$245 million and \$413 million of loans accounted for under the level-yield method and \$5 million and \$8 million accounted for under the cost-recovery method in 2015 and 2014, respectively.

16. ALLOWANCE FOR CREDIT LOSSES

In millions of dollars	2015	2014	2013
Allowance for loan losses at beginning of period	\$15,994	\$19,648	\$25,455
Gross credit losses	(9,041)	(11,108)	(12,769)
Gross recoveries ⁽¹⁾	1,739	2,135	2,306
Net credit losses (NCLs)	\$(7,302)	\$(8,973)	\$(10,463)
NCLs	\$7,302	\$8,973	\$10,463
Net reserve builds (releases)	139	(1,879)	(1,961)
Net specific reserve releases	(333)	(266)	(898)
Total provision for loan losses	\$7,108	\$6,828	\$7,604
Other, net ⁽²⁾⁽³⁾	(3,174)	(1,509)	(2,948)
Allowance for loan losses at end of period	\$12,626	\$15,994	\$19,648
Allowance for credit losses on unfunded lending commitments at beginning of period	\$1,063	\$1,229	\$1,119
Provision (release) for unfunded lending commitments	74	(162)	)80
Other, net ⁽³⁾	265	(4)	)30
Allowance for credit losses on unfunded lending commitments at end of period ⁽⁴⁾	\$1,402	\$1,063	\$1,229
Total allowance for loans, leases, and unfunded lending commitments	\$14,028	\$17,057	\$20,877

(1) Recoveries have been reduced by certain collection costs that are incurred only if collection efforts are successful.

2015 includes reductions of approximately \$2.4 billion related to the sale or transfer to held-for-sale (HFS) of various loan portfolios, including approximately \$1.5 billion related to the transfer of various real estate loan portfolios to HFS. Additionally, 2015 includes a reduction of approximately \$474 million related to FX translation. 2014 includes reductions of approximately \$1.1 billion related to the sale or transfer to HFS of various loan portfolios, including approximately \$411 million related to the transfer of various real estate loan portfolios to HFS, approximately \$204 million related to the transfer to HFS of a business in Greece, approximately \$177 million related to the transfer to HFS of a business in Spain, approximately \$29 million related to the transfer to HFS of a business in Honduras, and approximately \$108 million related to the transfer to HFS of various EMEA loan portfolios. Additionally, 2014 includes a reduction of approximately \$463 million related to FX translation. 2013 includes reductions of approximately \$2.4 billion related to the sale or transfer to HFS of various loan portfolios, including approximately \$360 million related to the sale of Credicard and approximately \$255 million related to a transfer to HFS of a loan portfolio in Greece, approximately \$230 million related to a non-provision transfer of reserves associated with deferred interest to other assets which includes deferred interest and approximately \$220 million related to FX translation.

(2) 2015 includes a reclassification of \$271 million of Allowance for Loan Losses to Allowance for Unfunded Lending Commitments, included in Other, net. This reclassification reflects the re-attribution of \$271 million in Allowances for Credit Losses between the funded and unfunded portions of the corporate credit portfolios and does not reflect a change in the underlying credit performance of these portfolios.

(3) Represents additional credit loss reserves for unfunded lending commitments and letters of credit recorded in Other liabilities on the Consolidated Balance Sheet.

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Allowance for Credit Losses and Investment in Loans at December 31, 2015

In millions of dollars	Corporate	Consumer	Total
Allowance for loan losses at beginning of period	\$2,389	\$13,605	\$15,994
Charge-offs	(331)	(8,710)	(9,041)
Recoveries	97	1,642	1,739
Replenishment of net charge-offs	234	7,068	7,302
Net reserve builds (releases)	523	(384)	139
Net specific reserve builds (releases)	86	(419)	(333)
Other	(288)	(2,886)	(3,174)
Ending balance	\$2,710	\$9,916	\$12,626
Allowance for loan losses			
Determined in accordance with ASC 450	\$2,345	\$7,839	\$10,184
Determined in accordance with ASC 310-10-35	362	2,064	2,426
Determined in accordance with ASC 310-30	3	13	16
Total allowance for loan losses	\$2,710	\$9,916	\$12,626
Loans, net of unearned income			
Loans collectively evaluated for impairment in accordance with ASC 450	\$281,066	\$319,301	\$600,367
Loans individually evaluated for impairment in accordance with ASC 310-10-35	1,792	10,203	11,995
Loans acquired with deteriorated credit quality in accordance with ASC 310-30	5	245	250
Loans held at fair value	4,971	34	5,005
Total loans, net of unearned income	\$287,834	\$329,783	\$617,617

Allowance for Credit Losses and Investment in Loans at December 31, 2014

In millions of dollars	Corporate	Consumer	Total
Allowance for loan losses at beginning of period	\$2,584	\$17,064	\$19,648
Charge-offs	(427)	(10,681)	(11,108)
Recoveries	139	1,996	2,135
Replenishment of net charge-offs	288	8,685	8,973
Net reserve releases	(133)	(1,746)	(1,879)
Net specific reserve releases	(20)	(246)	(266)
Other	(42)	(1,467)	(1,509)
Ending balance	\$2,389	\$13,605	\$15,994
Allowance for loan losses			
Determined in accordance with ASC 450	\$2,110	\$9,673	\$11,783
Determined in accordance with ASC 310-10-35	235	3,917	4,152
Determined in accordance with ASC 310-30	44	15	59
Total allowance for loan losses	\$2,389	\$13,605	\$15,994
Loans, net of unearned income			
Loans collectively evaluated for impairment in accordance with ASC 450	\$267,271	\$350,199	\$617,470
Loans individually evaluated for impairment in accordance with ASC 310-10-35	1,485	19,358	20,843
Loans acquired with deteriorated credit quality in accordance with ASC 310-30	51	370	421
Loans held at fair value	5,858	43	5,901
Total loans, net of unearned income	\$274,665	\$369,970	\$644,635

Allowance for Credit Losses at December 31, 2013

In millions of dollars	Corporate	Consumer	Total
Allowance for loan losses at beginning of period	\$2,776	\$22,679	\$25,455
Charge-offs	(369)	(12,400)	(12,769)
Recoveries	168	2,138	2,306
Replenishment of net charge-offs	201	10,262	10,463
Net reserve releases	(199)	(1,762)	(1,961)
Net specific reserve releases	(1)	(897)	(898)
Other	8	(2,956)	(2,948)
Ending balance	\$2,584	\$17,064	\$19,648

17. GOODWILL AND INTANGIBLE ASSETS

Goodwill

The changes in Goodwill were as follows:

In millions of dollars

Balance at December 31, 2012	\$25,673	
Foreign currency translation	(577))
Divestitures, purchase accounting adjustments and other ⁽¹⁾	(25))
Sale of Brazil Credicard	(62))
Balance at December 31, 2013	\$25,009	
Foreign currency translation and other	\$(1,214))
Divestitures and purchase accounting adjustments ⁽¹⁾	(203))
Balance at December 31, 2014	\$23,592	
Foreign currency translation and other	\$(1,000))
Impairment of goodwill	(31))
Divestitures ⁽²⁾	(212))
Balance at December 31, 2015	\$22,349	

The changes in Goodwill by segment were as follows:

In millions of dollars	Global Consumer Banking	Institutional Clients Group	Citi Holdings	Total
Balance at December 31, 2013	\$13,985	\$10,868	\$156	\$25,009
Foreign currency translation and other	(505)	)(711)	)2	\$(1,214)
Divestitures and purchase accounting adjustments ⁽¹⁾	(86)	)(1)	)(116)	)(203)
Balance at December 31, 2014	\$13,394	\$10,156	\$42	\$23,592
Impact of reorganization at January 1, 2015 ⁽³⁾	\$(177)	)\$—	\$177	\$—
Foreign currency translation and other	(355)	)(644)	)(1)	)(1,000)
Impairment of goodwill	—	—	(31)	)(31)
Divestitures ⁽²⁾	(24)	)(1)	)(187)	)(212)
Balance at December 31, 2015	\$12,838	\$9,511	\$—	\$22,349

(1) Primarily related to the sales of the Spain consumer operations and the Japan retail banking business. See Note 2 to the Consolidated Financial Statements.

(2) Primarily related to the sales of the Latin America Retirement Services and Japan cards businesses completed during the year, and agreements to sell certain businesses in Citi Holdings as of December 31, 2015. See Note 2 to the Consolidated Financial Statements.

(3) Goodwill allocation associated with the transfers of certain GCB businesses to Citi Holdings effective January 1, 2015, as described above. See Note 3 to the Consolidated Financial Statements.

Goodwill impairment testing is performed at the level below each business segment (referred to as a reporting unit). The Company performed its annual goodwill impairment test as of July 1, 2015 resulting in no impairment for any of the reporting units. The reporting unit structure in 2015 was the same as the reporting unit structure in 2014, except for the effect of the January 1, 2015 reorganization noted below and the sales involving the Citi Holdings—Cards, Latin America Retirement Services, and Citi Holdings—Consumer Japan reporting units during the third quarter of 2014 and second and fourth quarter of 2015, respectively.

Furthermore, interim goodwill impairment tests were performed during the year, which resulted in \$31 million of total goodwill impairment recorded in Operating expenses,

as discussed below. No goodwill was deemed impaired in 2014 and 2013.

Effective January 1, 2015, certain consumer banking and institutional businesses were transferred to Citi Holdings and aggregated to form five new reporting units: Citi Holdings—Consumer EMEA, Citi Holdings—Consumer Latin America, Citi Holdings—Consumer Japan, Citi Holdings—Consumer Finance South Korea, and Citi Holdings—ICG. Goodwill balances associated with the transfers were allocated to each of the component businesses based on their relative fair values to the legacy reporting units. An interim goodwill impairment test was performed as of January 1, 2015 under the legacy and new reporting structures, which resulted in full impairment of the new Citi Holdings—Consumer Finance South Korea reporting unit's \$16 million of goodwill. Additionally,

during the third quarter of 2015, Citi signed definitive agreements to sell most of its businesses reported in Citi Holdings—Consumer Latin America and allocated \$55 million of goodwill to these disposals, which are classified as held-for-sale. This resulted in full impairment of the remaining \$15 million of goodwill within the Citi Holdings—Consumer Latin America reporting unit.

The fair values of the Company's reporting units substantially exceeded their carrying values and did not indicate a risk of impairment based on current valuations. The following table shows reporting units with goodwill balances as of December 31, 2015 and the fair value as a percentage of allocated book value as of the annual impairment test.

In millions of dollars

Reporting unit ⁽¹⁾⁽²⁾	Fair value as a % of allocated book value	Goodwill
North America Global Consumer Banking	182	%\$6,706
EMEA Global Consumer Banking	199	293
Asia Global Consumer Banking	229	4,513
Latin America Global Consumer Banking	146	1,326
Banking	237	3,052
Markets and Securities Services	145	6,459
Total		\$22,349

(1)Citi Holdings—Other and Citi Holdings—ICG are excluded from the table as there is no goodwill allocated to them.

Citi Holdings—Consumer EMEA, Citi Holdings — Consumer Latin America, and Citi Holdings—Consumer Finance

(2)South Korea are excluded from the table as the allocated goodwill was either impaired or classified as held-for-sale as of December 31, 2015.

Intangible Assets

The components of intangible assets were as follows:

In millions of dollars	December 31, 2015			December 31, 2014		
	Gross carrying amount	Accumulated amortization	Net carrying amount	Gross carrying amount	Accumulated amortization	Net carrying amount
Purchased credit card relationships	\$7,606	\$6,520	\$1,086	\$7,626	\$6,294	\$1,332
Core deposit intangibles	1,050	969	81	1,153	1,021	132
Other customer relationships	471	252	219	579	331	248
Present value of future profits	37	31	6	233	154	79
Indefinite-lived intangible assets	234	—	234	290	—	290
Other ⁽¹⁾	4,709	2,614	2,095	5,217	2,732	2,485
Intangible assets (excluding MSR's)	\$14,107	\$10,386	\$3,721	\$15,098	\$10,532	\$4,566
Mortgage servicing rights (MSR's) ⁽²⁾	1,781	—	1,781	1,845	—	1,845
Total intangible assets	\$15,888	\$10,386	\$5,502	\$16,943	\$10,532	\$6,411

(1)Includes contract-related intangible assets.

(2)For additional information on Citi's MSR's, including the rollforward from 2014 to 2015, see Note 22 to the Consolidated Financial Statements.

Intangible assets amortization expense was \$625 million, \$756 million and \$808 million for 2015, 2014 and 2013, respectively. Intangible assets amortization expense is estimated to be \$528 million in 2016, \$840 million in 2017, \$348 million in 2018, \$334 million in 2019 and \$141 million in 2020.

The changes in intangible assets during the twelve months ended December 31, 2015 were as follows:

In millions of dollars	Net carrying	Acquisitions/ divestitures	Amortization	Impairments	FX translation and other	Net carrying
	amount at December 31, 2014					amount at December 31, 2015
Purchased credit card relationships	\$1,332	\$—	\$(261)	)\$—	\$15	\$1,086
Core deposit intangibles	132	—	(41)	)—	(10)	)81
Other customer relationships	248	—	(24)	)—	(5)	)219
Present value of future profits	79	(68)	) (4)	)—	(1)	)6
Indefinite-lived intangible assets	290	—	—	(17)	) (39)	)234
Other	2,485	(108)	) (295)	) (5)	) 18	2,095
Intangible assets (excluding MSR ^s)	\$4,566	\$(176)	) \$(625)	) \$(22)	) \$(22)	) \$3,721
Mortgage servicing rights (MSR ^s) ⁽¹⁾	1,845					1,781
Total intangible assets	\$6,411					\$5,502

(1) For additional information on Citi's MSR^s, including the rollforward from 2014 to 2015, see Note 22 to the Consolidated Financial Statements.

18. DEBT

Short-Term Borrowings

In millions of dollars	2015		2014		
	Balance	Weighted average coupon	Balance	Weighted average coupon	
Commercial paper					
Citibank, N.A.	\$9,995	0.22	% \$16,085	0.22	%
Non-bank and other ⁽¹⁾	—	—	70	0.95	
Total commercial paper	\$9,995	0.22	% \$16,155	0.23	%
Other borrowings ⁽²⁾	11,084	1.50	42,180	0.53	
Total	\$21,079		\$58,335		

(1) Includes parent holding company (Citigroup Inc.), Citi's broker-dealer subsidiaries and other non-bank subsidiaries that are consolidated into Citigroup Inc., as well as Banamex and Citibank (Switzerland) AG.

Includes borrowings from the Federal Home Loan Banks and other market participants. At December 31, 2014, (2) collateralized short-term advances from the Federal Home Loan Banks were \$11.2 billion. At December 31, 2015, no amounts were outstanding.

Borrowings under bank lines of credit may be at interest rates based on LIBOR, CD rates, the prime rate or bids submitted by the banks. Citigroup pays commitment fees for its lines of credit.

Some of Citigroup's non-bank subsidiaries have credit facilities with Citigroup's subsidiary depository institutions, including Citibank. Borrowings under these facilities are secured in accordance with Section 23A of the Federal Reserve Act.

Citigroup Global Markets Holdings Inc. (CGMHI) has borrowing agreements consisting of facilities that CGMHI has been advised are available, but where no contractual lending obligation exists. These arrangements are reviewed on an ongoing basis to ensure flexibility in meeting CGMHI's short-term requirements.

Long-Term Debt

In millions of dollars	Weighted average coupon	Maturities	Balances at December 31,	
			2015	2014
Citigroup Inc. ⁽¹⁾				
Senior debt	3.84	% 2016-2098	\$113,569	\$122,323
Subordinated debt ⁽²⁾	4.48	2016-2044	26,875	25,464
Trust preferred securities	6.90	2036-2067	1,713	1,725
Bank ⁽³⁾				
Senior debt	1.58	2016-2038	55,131	65,146
Broker-dealer ⁽⁴⁾				
Senior debt	3.25	2016-2042	3,968	8,399
Subordinated debt ⁽²⁾	1.18	2016-2037	19	23
Total	3.32	%	\$201,275	\$223,080
Senior debt			\$172,668	\$195,868
Subordinated debt ⁽²⁾			26,894	25,487
Trust preferred securities			1,713	1,725

Total	\$201,275	\$223,080
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(1) Parent holding company, Citigroup Inc.

(2) Includes notes that are subordinated within certain countries, regions or subsidiaries.

Represents Citibank entities as well as other bank entities. At December 31, 2015 and December 31, 2014,

(3) collateralized long-term advances from the Federal Home Loan Banks were \$17.8 billion and \$19.8 billion, respectively.

(4) Represents broker-dealer subsidiaries that are consolidated into Citigroup Inc., the parent holding company.

The Company issues both fixed and variable rate debt in a range of currencies. It uses derivative contracts, primarily interest rate swaps, to effectively convert a portion of its fixed-rate debt to variable-rate debt and variable-rate debt to fixed-rate debt. The maturity structure of the derivatives generally corresponds to the maturity structure of the debt being hedged. In addition, the Company uses other derivative contracts to manage the foreign exchange impact of certain debt issuances. At December 31, 2015, the Company's overall weighted average interest rate for long-term debt was 3.32% on a contractual basis and 2.55% including the effects of derivative contracts.

Aggregate annual maturities of long-term debt obligations (based on final maturity dates) including trust preferred securities are as follows:

In millions of dollars	2016	2017	2018	2019	2020	Thereafter	Total
Bank	\$24,577	\$14,614	\$9,341	\$2,280	\$448	\$3,871	\$55,131
Broker-dealer	951	294	806	640	103	1,193	3,987
Citigroup Inc.	18,009	19,437	21,269	16,233	8,826	58,383	142,157
Total	\$43,537	\$34,345	\$31,416	\$19,153	\$9,377	\$63,447	\$201,275

The following table summarizes the Company's outstanding trust preferred securities at December 31, 2015:

Trust	Issuance date	Securities issued	Liquidation value ⁽¹⁾	Coupon rate ⁽²⁾	Common shares issued to parent	Junior subordinated debentures owned by trust		Redeemable by issuer beginning
						Amount	Maturity	
In millions of dollars, except share amounts								
Citigroup Capital III	Dec. 1996	194,053	\$194	7.625	%6,003	\$200	Dec. 1, 2036	Not redeemable
Citigroup Capital XIII	Sept. 2010	89,840,000	2,246	7.875	1,000	2,246	Oct. 30, 2040	Oct. 30, 2015
Citigroup Capital XVIII	June 2007	99,901	148	6.829	50	148	June 28, 2067	June 28, 2017
Total obligated			\$2,588			\$2,594		

Note: Distributions on the trust preferred securities and interest on the subordinated debentures are payable semiannually for Citigroup Capital III and Citigroup Capital XVIII and quarterly for Citigroup Capital XIII.

(1) Represents the notional value received by investors from the trusts at the time of issuance.

(2) In each case, the coupon rate on the subordinated debentures is the same as that on the trust preferred securities.

19. REGULATORY CAPITAL

Citigroup is subject to risk-based capital and leverage standards issued by the Federal Reserve Board. Citi's U.S. insured depository institution subsidiaries, including Citibank, are subject to similar standards issued by their respective primary federal bank regulatory agencies. These standards are used to evaluate capital adequacy and include the required minimums shown in the following table. The regulatory agencies are required by law to take specific prompt actions

with respect to institutions that do not meet minimum capital standards.

The following table sets forth Citigroup's and Citibank's regulatory capital tiers, total risk-weighted assets, quarterly adjusted average total assets, Total Leverage Exposure, risk-based capital ratios and leverage ratios in accordance with current regulatory standards (reflecting Basel III Transition Arrangements):

In millions of dollars, except ratios	Stated minimum	Citigroup Well capitalized minimum	December 31, 2015	Citibank Well capitalized minimum ⁽¹⁾	December 31, 2015	
Common Equity Tier 1 Capital			\$ 173,862		\$ 126,496	
Tier 1 Capital			176,420		126,496	
Total Capital (Tier 1 Capital + Tier 2 Capital)			198,746		148,916	
Total risk-weighted assets			1,190,853		998,181	
Quarterly adjusted average total assets ⁽²⁾			1,732,933		1,297,733	
Total Leverage Exposure ⁽³⁾			2,326,072		1,838,114	
Common Equity Tier 1 Capital ratio ⁽⁴⁾	4.5	% N/A	14.60	% 6.5	% 12.67	%
Tier 1 Capital ratio ⁽⁴⁾	6.0	6.0	% 14.81	8.0	12.67	
Total Capital ratio ⁽⁴⁾	8.0	10.0	16.69	10.0	14.92	
Tier 1 Leverage ratio	4.0	N/A	10.18	5.0	9.75	
Supplementary Leverage ratio ⁽⁵⁾	N/A	N/A	7.58	N/A	6.88	

Beginning January 1, 2015, an insured depository institution, such as Citibank, must maintain minimum Common (1) Equity Tier 1 Capital, Tier 1 Capital, Total Capital, and Tier 1 Leverage ratios of 6.5%, 8%, 10% and 5%, respectively, to be considered "well capitalized."

(2) Tier 1 Leverage ratio denominator.

(3) Supplementary Leverage ratio denominator.

As of December 31, 2015, Citigroup's reportable Common Equity Tier 1 Capital, Tier 1 Capital, and Total Capital ratios were the lower derived under the Basel III Advanced Approaches framework. As of December 31, 2015, (4) Citibank's reportable Common Equity Tier 1 Capital, Tier 1 Capital, and Total Capital ratios were the lower derived under the Basel III Standardized Approach framework.

Commencing with 2015, Citi and Citibank are required to publicly disclose their Supplementary Leverage ratios.

(5) Beginning on January 1, 2018, Citi and Citibank will be required to maintain a stated minimum Supplementary Leverage ratio of 3%, and Citibank will be required to maintain a Supplementary Leverage ratio of 6% to be considered "well capitalized."

N/A Not Applicable

As indicated in the table above, Citigroup and Citibank were "well capitalized" under the current federal bank regulatory definitions as of December 31, 2015.

Banking Subsidiaries—Constraints on Dividends

There are various legal limitations on the ability of Citigroup's subsidiary depository institutions to extend credit, pay dividends or otherwise supply funds to Citigroup and its non-bank subsidiaries. The approval of the Office of the Comptroller of the Currency is required if total dividends declared in any calendar year exceed amounts specified by the applicable agency's regulations. State-chartered depository institutions are subject to dividend limitations imposed by applicable state law.

In determining the dividends, each depository institution must also consider its effect on applicable risk-based capital and leverage ratio requirements, as well as policy statements of the federal regulatory agencies that indicate that banking

organizations should generally pay dividends out of current operating earnings. Citigroup received \$13.5 billion and \$8.9 billion in dividends from Citibank during 2015 and 2014, respectively.

20. CHANGES IN ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

Changes in each component of Citigroup's Accumulated other comprehensive income (loss):

In millions of dollars	Net unrealized gains (losses) on investment securities	Cash flow hedges ⁽¹⁾	Benefit plans ⁽²⁾	Foreign currency translation adjustment (CTA), net of hedges ⁽³⁾⁽⁴⁾	Accumulated other comprehensive income (loss)
Balance, December 31, 2012	\$ 597	\$(2,293)	\$(5,270)	\$(9,930)	\$(16,896)
Change, net of taxes ⁽⁵⁾	(1,962)	512	1,098	(2,534)	(2,886)
Increase (decrease) due to amounts reclassified from AOCI ⁽⁵⁾	(275)	536	183	205	649
Change, net of taxes ⁽⁵⁾	\$(2,237)	\$1,048	\$1,281	\$(2,329)	\$(2,237)
Balance, December 31, 2013	\$(1,640)	\$(1,245)	\$(3,989)	\$(12,259)	\$(19,133)
Other comprehensive income before reclassifications	\$1,790	\$85	\$(1,346)	\$(4,946)	\$(4,417)
Increase (decrease) due to amounts reclassified from AOCI	(93)	251	176	—	334
Change, net of taxes	\$1,697	\$336	\$(1,170)	\$(4,946)	\$(4,083)
Balance, December 31, 2014	\$57	\$(909)	\$(5,159)	\$(17,205)	\$(23,216)
Other comprehensive income before reclassifications	\$(695)	\$83	\$(143)	\$(5,465)	\$(6,220)
Increase (decrease) due to amounts reclassified from AOCI	(269)	209	186	(34)	92
Change, net of taxes	\$(964)	\$292	\$43	\$(5,499)	\$(6,128)
Balance at December 31, 2015	\$(907)	\$(617)	\$(5,116)	\$(22,704)	\$(29,344)

(1) Primarily driven by Citigroup's pay fixed/receive floating interest rate swap programs that hedge the floating rates on liabilities.

(2) Primarily reflects adjustments based on the quarterly actuarial valuations of the Company's significant pension and postretirement plans, annual actuarial valuations of all other plans, and amortization of amounts previously recognized in other comprehensive income.

Primarily reflects the movements in (by order of impact) the Mexican peso, Brazilian real, Korean won and Euro against the U.S. dollar, and changes in related tax effects and hedges for the year ended December 31, 2015.

(3) Primarily reflects the movements in (by order of impact) the Mexican peso, Euro, Japanese yen, and Russian ruble against the U.S. dollar, and changes in related tax effects and hedges for the year ended December 31, 2014.

Primarily reflects the movements in (by order of impact) the Japanese yen, Mexican peso, Australian dollar and Indian rupee against the U.S. dollar, and changes in related tax effects and hedges for the year ended December 31, 2013.

(4) During 2014, \$137 million (\$84 million net of tax) was reclassified to reflect the allocation of FX translation between net unrealized gains (losses) on investment securities to foreign currency translation adjustment (CTA).

On December 20, 2013, the sale of Credicard was completed (see Note 2 to the Consolidated Financial Statements). The total impact to the gross CTA (net CTA including hedges) was a pretax loss of \$314 million (\$205 million net of tax).

The pretax and after-tax changes in each component of Accumulated other comprehensive income (loss) are as follows:

In millions of dollars	Pretax	Tax effect	After-tax	
Balance, December 31, 2012	\$(25,334	)\$8,438	\$(16,896)
Change in net unrealized gains (losses) on investment securities	(3,537	)1,300	(2,237)
Cash flow hedges	1,673	(625	)1,048	
Benefit plans	1,979	(698	)1,281	
Foreign currency translation adjustment	(2,377	)48	(2,329)
Change	\$(2,262	)\$25	\$(2,237)
Balance, December 31, 2013	\$(27,596	)\$8,463	\$(19,133)
Change in net unrealized gains (losses) on investment securities	2,704	(1,007	)1,697	
Cash flow hedges	543	(207	)336	
Benefit plans	(1,830	)660	(1,170)
Foreign currency translation adjustment	(4,881	)65	(4,946)
Change	\$(3,464	)\$(619	)\$(4,083)
Balance, December 31, 2014	\$(31,060	)\$7,844	\$(23,216)
Change in net unrealized gains (losses) on investment securities	(1,462	)498	(964)
Cash flow hedges	468	(176	)292	
Benefit plans	19	24	43	
Foreign currency translation adjustment	(6,405	)906	(5,499)
Change	\$(7,380	)\$1,252	\$(6,128)
Balance, December 31, 2015	\$(38,440	)\$9,096	\$(29,344)

During 2015, 2014 and 2013 the Company recognized pretax losses of \$155 million (\$92 million net of tax), \$542 million (\$334 million gain net of tax) and \$1,071 million (\$649 million net of tax), respectively, related to amounts reclassified out of Accumulated other comprehensive income (loss) into the Consolidated Statement of Income. See details in the table below:

In millions of dollars	Increase (decrease) in AOCI due to amounts reclassified to Consolidated Statement of Income			
	Year ended December 31,			
	2015	2014	2013	
Realized (gains) losses on sales of investments	\$(682	) \$(570	) \$(748)
OTTI gross impairment losses	265	424	334	
Subtotal, pretax	\$(417	) \$(146	) \$(414)
Tax effect	148	53	139	
Net realized (gains) losses on investment securities, after-tax ⁽¹⁾	\$(269	) \$(93	) \$(275)
Interest rate contracts	\$186	\$260	\$700	
Foreign exchange contracts	146	149	176	
Subtotal, pretax	\$332	\$409	\$876	
Tax effect	(123	) (158	) (340)
Amortization of cash flow hedges, after-tax ⁽²⁾	\$209	\$251	\$536	
Amortization of unrecognized				
Prior service cost (benefit)	\$(40	) \$(40) \$—	
Net actuarial loss	276	243	271	
Curtailment/settlement impact ⁽³⁾	57	76	44	
Cumulative effect of change in accounting policy ⁽³⁾	—	—	(20)
Subtotal, pretax	\$293	\$279	\$295	
Tax effect	(107	) (103	) (112)
Amortization of benefit plans, after-tax ⁽³⁾	\$186	\$176	\$183	
Foreign currency translation adjustment	\$(53	) \$—	\$314	
Tax effect	19	—	(109)
Foreign currency translation adjustment	\$(34	) \$—	\$205	
Total amounts reclassified out of AOCI, pretax	\$155	\$542	\$1,071	
Total tax effect	(63	) (208	) (422)
Total amounts reclassified out of AOCI, after-tax	\$92	\$334	\$649	

The pretax amount is reclassified to Realized gains (losses) on sales of investments, net and Gross impairment (1) losses on the Consolidated Statement of Income. See Note 14 to the Consolidated Financial Statements for additional details.

(2) See Note 23 to the Consolidated Financial Statements for additional details.

(3) See Note 8 to the Consolidated Financial Statements for additional details.

21. PREFERRED STOCK

The following table summarizes the Company's preferred stock outstanding:

	Issuance date	Redeemable by issuer beginning	Dividend rate	Redemption price per depositary share/preference share	Number of depositary shares	Carrying value in millions of dollars	December 31, 2015	December 31, 2014
Series AA ⁽¹⁾	January 25, 2008	February 15, 2018	8.125	% \$ 25	3,870,330	\$97		\$ 97
Series E ⁽²⁾	April 28, 2008	April 30, 2018	8.400	1,000	121,254	121		121
Series A ⁽³⁾	October 29, 2012	January 30, 2023	5.950	1,000	1,500,000	1,500		1,500
Series B ⁽⁴⁾	December 13, 2012	February 15, 2023	5.900	1,000	750,000	750		750
Series C ⁽⁵⁾	March 26, 2013	April 22, 2018	5.800	25	23,000,000	575		575
Series D ⁽⁶⁾	April 30, 2013	May 15, 2023	5.350	1,000	1,250,000	1,250		1,250
Series J ⁽⁷⁾	September 19, 2013	September 30, 2023	7.125	25	38,000,000	950		950
Series K ⁽⁸⁾	October 31, 2013	November 15, 2023	6.875	25	59,800,000	1,495		1,495
Series L ⁽⁹⁾	February 12, 2014	February 12, 2019	6.875	25	19,200,000	480		480
Series M ⁽¹⁰⁾	April 30, 2014	May 15, 2024	6.300	1,000	1,750,000	1,750		1,750
Series N ⁽¹¹⁾	October 29, 2014	November 15, 2019	5.800	1,000	1,500,000	1,500		1,500
Series O ⁽¹²⁾	March 20, 2015	March 27, 2020	5.875	1,000	1,500,000	1,500		—
Series P ⁽¹³⁾	April 24, 2015	May 15, 2025	5.950	1,000	2,000,000	2,000		—
Series Q ⁽¹⁴⁾	August 12, 2015	August 15, 2020	5.950	1,000	1,250,000	1,250		—
Series R ⁽¹⁵⁾	November 13, 2015	November 15, 2020	6.125	1,000	1,500,000	1,500		—
						\$16,718		\$ 10,468

Issued as depositary shares, each representing a 1/1,000th interest in a share of the corresponding series of (1) non-cumulative perpetual preferred stock. Dividends are payable quarterly on February 15, May 15, August 15 and November 15, in each case when, as and if declared by the Citi Board of Directors.

Issued as depositary shares, each representing a 1/25th interest in a share of the corresponding series of (2) non-cumulative perpetual preferred stock. Dividends are payable semi-annually on April 30 and October 30 at a fixed rate until April 30, 2018, thereafter payable quarterly on January 30, April 30, July 30 and October 30 at a floating rate, in each case when, as and if declared by the Citi Board of Directors.

Issued as depositary shares, each representing a 1/25th interest in a share of the corresponding series of (3) non-cumulative perpetual preferred stock. Dividends are payable semi-annually on January 30 and July 30 at a fixed rate until January 30, 2023, thereafter payable quarterly on January 30, April 30, July 30 and October 30 at a floating rate, in each case when, as and if declared by the Citi Board of Directors.

Issued as depositary shares, each representing a 1/25th interest in a share of the corresponding series of (4) non-cumulative perpetual preferred stock. Dividends are payable semi-annually on February 15 and August 15 at a fixed rate until February 15, 2023, thereafter payable quarterly on February 15, May 15, August 15 and November 15 at a floating rate, in each case when, as and if declared by the Citi Board of Directors.

Issued as depositary shares, each representing a 1/1,000th interest in a share of the corresponding series of (5) non-cumulative perpetual preferred stock. Dividends are payable quarterly on January 22, April 22, July 22 and October 22 when, as and if declared by the Citi Board of Directors.

(6)

Issued as depositary shares, each representing a 1/25th interest in a share of the corresponding series of non-cumulative perpetual preferred stock. Dividends are payable semi-annually on May 15 and November 15 at a fixed rate until May 15, 2023, thereafter payable quarterly on February 15, May 15, August 15 and November 15 at a floating rate, in each case when, as and if declared by the Citi Board of Directors.

(7) Issued as depositary shares, each representing a 1/1,000th interest in a share of the corresponding series of non-cumulative perpetual preferred stock. Dividends are payable quarterly on March 30, June 30, September 30 and December 30 at a fixed rate until September 30, 2023, thereafter payable quarterly on the same dates at a floating rate, in each case when, as and if declared by the Citi Board of Directors.

(8) Issued as depositary shares, each representing a 1/1,000th interest in a share of the corresponding series of non-cumulative perpetual preferred stock. Dividends are payable quarterly on February 15, May 15, August 15 and November 15 at a fixed rate until November 15, 2023, thereafter payable quarterly on the same dates at a floating rate, in each case when, as and if declared by the Citi Board of Directors.

(9) Issued as depositary shares, each representing a 1/1,000th interest in a share of the corresponding series of non-cumulative perpetual preferred stock. Dividends are payable quarterly on February 12, May 12, August 12 and November 12 at a fixed rate, in each case when, as and if declared by the Citi Board of Directors.

(10) Issued as depositary shares, each representing a 1/25th interest in a share of the corresponding series of non-cumulative perpetual preferred stock. Dividends are payable semi-annually on May 15 and November 15 at a fixed rate until May 15, 2024, thereafter payable quarterly on February 15, May 15, August 15, and November 15 at a floating rate, in each case when, as and if declared by the Citi Board of Directors.

(11) Issued as depositary shares, each representing a 1/25th interest in a share of the corresponding series of non-cumulative perpetual preferred stock. Dividends are payable semi-annually on May 15 and November 15 at a fixed rate until, but excluding, November 15, 2019, and thereafter payable quarterly on February 15, May 15, August 15 and November 15 at a floating rate, in each case when, as and if declared by the Citi Board of Directors.

(12) Issued as depositary shares, each representing a 1/25th interest in a share of the corresponding series of non-cumulative perpetual preferred stock. Dividends are payable semi-annually on March 27 and September 27 at a fixed rate until, but excluding, March 27, 2020, and thereafter payable quarterly on March 27, June 27, September 27 and December 27 at a floating rate, in each case when, as and if declared by the Citi Board of Directors.

(13) Issued as depositary shares, each representing a 1/25th interest in a share of the corresponding series of non-cumulative perpetual preferred stock. Dividends are payable semi-annually on May 15 and November 15 at a fixed rate until, but excluding, May 15, 2025, and thereafter payable quarterly on February 15, May 15, August 15, and November 15 at a floating rate, in each case when, as and if declared by the Citi Board of Directors.

Issued as depository shares, each representing 1/25th interest in a share of the corresponding series of non-cumulative perpetual preferred stock. Dividends are payable semi-annually on February 15 and August 15 at (14) a fixed rate until, but excluding, August 15, 2020, and thereafter payable quarterly on February 15, May 15, August 15, and November 15 at a floating rate, in each case when, as and if declared by the Citi Board of Directors.

Issued as depository shares, each representing 1/25th interest in a share of the corresponding series of non-cumulative perpetual preferred stock. Dividends are payable semi-annually on May 15 and November 15 at a (15) fixed rate until, but excluding, November 15, 2020, and thereafter payable quarterly on February 15, May 15, August 15 and November 15 at a floating rate, in each case when, as and if declared by the Citi Board of Directors.

On January 26, 2016, Citi issued \$1 billion of Series S Preferred Stock as depository shares, each representing 1/1000th interest in a share of corresponding series of non-cumulative perpetual preferred stock. The dividend rate is 6.3% payable quarterly on February 12, May 12, August 12 and November 12, beginning May 12, 2016, in each case when, as and if declared by the Citi Board of Directors.

During 2015, Citi distributed \$769 million in dividends on its outstanding preferred stock. Based on its preferred stock outstanding as of December 31, 2015, Citi estimates it will distribute preferred dividends of approximately \$1,027 million during 2016, in each case assuming such dividends are declared by the Citi Board of Directors.

22. SECURITIZATIONS AND VARIABLE INTEREST ENTITIES

Uses of Special Purpose Entities

A special purpose entity (SPE) is an entity designed to fulfill a specific limited need of the company that organized it. The principal uses of SPEs by Citi are to obtain liquidity and favorable capital treatment by securitizing certain financial assets, to assist clients in securitizing their financial assets and to create investment products for clients. SPEs may be organized in various legal forms, including trusts, partnerships or corporations. In a securitization, the company transferring assets to an SPE converts all (or a portion) of those assets into cash before they would have been realized in the normal course of business through the SPE's issuance of debt and equity instruments, certificates, commercial paper or other notes of indebtedness. These issuances are recorded on the balance sheet of the SPE, which may or may not be consolidated onto the balance sheet of the company that organized the SPE. Investors usually have recourse only to the assets in the SPE, but may also benefit from other credit enhancements, such as a collateral account, a line of credit or a liquidity facility, such as a liquidity put option or asset purchase agreement. Because of these enhancements, the SPE issuances typically obtain a more favorable credit rating than the transferor could obtain for its own debt issuances. This results in less expensive financing costs than unsecured debt. The SPE may also enter into derivative contracts in order to convert the yield or currency of the underlying assets to match the needs of the SPE investors or to limit or change the credit risk of the SPE. Citigroup may be the provider of certain credit enhancements as well as the counterparty to any related derivative contracts. Most of Citigroup's SPEs are variable interest entities (VIEs), as described below.

Variable Interest Entities

VIEs are entities that have either a total equity investment that is insufficient to permit the entity to finance its activities without additional subordinated financial support, or whose equity investors lack the characteristics of a controlling financial interest (i.e., ability to make significant decisions through voting rights and a right to receive the expected residual returns of the entity or an obligation to absorb the expected losses of the entity). Investors that finance the VIE through debt or equity interests or other counterparties providing other forms of support, such as guarantees, subordinated fee arrangements or certain types of derivative contracts are variable interest holders in the entity.

The variable interest holder, if any, that has a controlling financial interest in a VIE is deemed to be the primary beneficiary and must consolidate the VIE. Citigroup would be deemed to have a controlling financial interest and be the primary beneficiary if it has both of the following characteristics:

- power to direct the activities of the VIE that most significantly impact the entity's economic performance; and
- an obligation to absorb losses of the entity that could potentially be significant to the VIE, or a right to receive benefits from the entity that could potentially be significant to the VIE.

The Company must evaluate each VIE to understand the purpose and design of the entity, the role the Company had in the entity's design and its involvement in the VIE's ongoing activities. The Company then must evaluate which activities most significantly impact the economic performance of the VIE and who has the power to direct such activities.

For those VIEs where the Company determines that it has the power to direct the activities that most significantly impact the VIE's economic performance, the Company must then evaluate its economic interests, if any, and determine whether it could absorb losses or receive benefits that could potentially be significant to the VIE. When evaluating whether the Company has an obligation to absorb losses that could potentially be significant, it considers the maximum exposure to such loss without consideration of probability. Such obligations could be in various forms, including, but not limited to, debt and equity investments, guarantees, liquidity agreements and certain derivative contracts.

In various other transactions, the Company may: (i) act as a derivative counterparty (for example, interest rate swap, cross-currency swap, or purchaser of credit protection under a credit default swap or total return swap where the Company pays the total return on certain assets to the SPE); (ii) act as underwriter or placement agent; (iii) provide administrative, trustee or other services; or (iv) make a market in debt securities or other instruments issued by VIEs. The Company generally considers such involvement, by itself, not to be variable interests and thus not an indicator of power or potentially significant benefits or losses.

See Note 1 to the Consolidated Financial Statements for a discussion of impending changes to targeted areas of consolidation guidance.

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Citigroup's involvement with consolidated and unconsolidated VIEs with which the Company holds significant variable interests or has continuing involvement through servicing a majority of the assets in a VIE is presented below:

As of December 31, 2015

In millions of dollars	Total involvement with SPE assets	Consolidated VIE / SPE assets	Significant unconsolidated VIE assets ⁽³⁾	Maximum exposure to loss in significant unconsolidated VIEs ⁽¹⁾		Funding commitments	Guarantees and derivatives	Total
				Debt investments	Equity investments			
Credit card securitizations	\$55,050	\$54,916	\$ 134	\$—	\$—	\$—	\$—	\$—
Mortgage securitizations ⁽⁴⁾								
U.S. agency-sponsored	236,225	—	236,225	3,582	—	—	95	3,677
Non-agency-sponsored	14,305	1,586	12,719	528	—	—	1	529
Citi-administered asset-backed commercial paper conduits (ABCP)	21,280	21,280	—	—	—	—	—	—
Collateralized loan obligations (CLOs)	20,564	—	20,564	3,154	—	—	86	3,240
Asset-based financing	83,397	1,364	82,033	25,923	270	3,891	436	30,520
Municipal securities tender option bond trusts (TOBs)	8,572	3,830	4,742	2	—	3,100	—	3,102
Municipal investments	22,935	44	22,891	2,275	2,512	2,338	—	7,125
Client intermediation	1,965	335	1,630	49	—	—	—	49
Investment funds ⁽⁵⁾	27,569	842	26,727	13	318	102	—	433
Other	4,986	597	4,389	292	554	—	52	898
Total ⁽⁶⁾	\$496,848	\$84,794	\$412,054	\$35,818	\$3,654	\$9,431	\$670	\$49,573

As of December 31, 2014

In millions of dollars	Total involvement with SPE assets	Consolidated VIE / SPE assets	Significant unconsolidated VIE assets ⁽³⁾	Maximum exposure to loss in significant unconsolidated VIEs ⁽¹⁾		Funding commitments	Guarantees and derivatives	Total
				Debt investments	Equity investments			
Credit card securitizations	\$60,503	\$60,271	\$ 232	\$—	\$—	\$—	\$—	\$—
Mortgage securitizations ⁽⁴⁾								
U.S. agency-sponsored	264,848	—	264,848	5,213	—	—	110	5,323
Non-agency-sponsored	17,888	1,304	16,584	577	—	—	1	578
Citi-administered asset-backed commercial paper	29,181	29,181	—	—	—	—	—	—

conduits (ABCP)								
Collateralized loan obligations (CLOs)	19,736	—	19,736	1,965	—	—	86	2,051
Asset-based financing	63,900	1,151	62,749	22,928	66	2,271	333	25,598
Municipal securities tender option bond trusts (TOBs)	12,280	6,671	5,609	3	—	3,670	—	3,673
Municipal investments	23,706	70	23,636	2,014	2,197	2,225	—	6,436
Client intermediation	1,745	137	1,608	10	—	—	10	20
Investment funds ⁽⁵⁾	31,992	1,096	30,896	16	382	124	—	522
Other	8,298	2,909	5,389	183	1,451	23	73	1,730
Total ⁽⁶⁾	\$534,077	\$102,790	\$431,287	\$32,909	\$4,096	\$8,313	\$613	\$45,931

(1) The definition of maximum exposure to loss is included in the text that follows this table.

(2) Included on Citigroup's December 31, 2015 and 2014 Consolidated Balance Sheet.

(3) A significant unconsolidated VIE is an entity where the Company has any variable interest or continuing involvement considered to be significant, regardless of the likelihood of loss or the notional amount of exposure.

(4) Citigroup mortgage securitizations also include agency and non-agency (private-label) re-securitization activities.

(4) These SPEs are not consolidated. See "Re-securitizations" below for further discussion.

(5) Substantially all of the unconsolidated investment funds' assets are related to retirement funds in Mexico managed by Citi. See "Investment Funds" below for further discussion.

(6) Citi's total involvement with Citicorp SPE assets was \$460.5 billion and \$481.3 billion as of December 31, 2015 and 2014, respectively, with the remainder related to Citi Holdings.

The previous tables do not include:

- certain venture capital investments made by some of the Company's private equity subsidiaries, as the Company accounts for these investments in accordance with the Investment Company Audit Guide (codified in ASC 946);
- certain limited partnerships that are investment funds that qualify for the deferral from the requirements of ASC 810 where the Company is the general partner and the limited partners have the right to replace the general partner or liquidate the funds;
- certain investment funds for which the Company provides investment management services and personal estate trusts for which the Company provides administrative, trustee and/or investment management services;
- VIEs structured by third parties where the Company holds securities in inventory, as these investments are made on arm's-length terms;
- certain positions in mortgage-backed and asset-backed securities held by the Company, which are classified as Trading account assets or Investments, where the Company has no other involvement with the related securitization entity deemed to be significant (for more information on these positions, see Notes 13 and 14 to the Consolidated Financial Statements);
- certain representations and warranties exposures in legacy ICG-sponsored mortgage-backed and asset-backed securitizations, where the Company has no variable interest or continuing involvement as servicer. The outstanding balance of mortgage loans securitized during 2005 to 2008 where the Company has no variable interest or continuing involvement as servicer was approximately \$12 billion and \$14 billion at December 31, 2015 and 2014, respectively;
- certain representations and warranties exposures in Citigroup residential mortgage securitizations, where the original mortgage loan balances are no longer outstanding; and
- VIEs such as trust preferred securities trusts used in connection with the Company's funding activities. The Company does not have a variable interest in these trusts.

The asset balances for consolidated VIEs represent the carrying amounts of the assets consolidated by the Company. The carrying amount may represent the amortized cost or the current fair value of the assets depending on the legal form of the asset (e.g., security or loan) and the Company's standard accounting policies for the asset type and line of business.

The asset balances for unconsolidated VIEs where the Company has significant involvement represent the most current information available to the Company. In most cases, the asset balances represent an amortized cost basis without regard to impairments in fair value, unless fair value information is readily available to the Company. For VIEs that obtain asset exposures synthetically through derivative instruments, the tables generally include the full original notional amount of the derivative as an asset balance.

The maximum funded exposure represents the balance sheet carrying amount of the Company's investment in the VIE. It reflects the initial amount of cash invested in the VIE adjusted for any accrued interest and cash principal payments received. The carrying amount may also be adjusted for increases or declines in fair value or any impairment in value recognized in earnings. The maximum exposure of unfunded positions represents the remaining undrawn committed amount, including liquidity and credit facilities provided by the Company, or the notional amount of a derivative instrument considered to be a variable interest. In certain transactions, the Company has entered into derivative instruments or other arrangements that are not considered variable interests in the VIE (e.g., interest rate swaps, cross-currency swaps, or where the Company is the purchaser of credit protection under a credit default swap or total return swap where the Company pays the total return on certain assets to the SPE). Receivables under such arrangements are not included in the maximum exposure amounts.

Funding Commitments for Significant Unconsolidated VIEs—Liquidity Facilities and Loan Commitments

The following table presents the notional amount of liquidity facilities and loan commitments that are classified as funding commitments in the VIE tables above:

In millions of dollars	December 31, 2015		December 31, 2014	
	Liquidity facilities	Loan / equity commitments	Liquidity facilities	Loan / equity commitments
Asset-based financing	\$5	\$3,886	\$5	\$2,266
Municipal securities tender option bond trusts (TOBs)	3,100	—	3,670	—
Municipal investments	—	2,338	—	2,225
Investment funds	—	102	—	124
Other	—	—	—	23
Total funding commitments	\$3,105	\$6,326	\$3,675	\$4,638

Consolidated VIEs

The Company engages in on-balance sheet securitizations, which are securitizations that do not qualify for sales treatment; thus, the assets remain on the Company's Consolidated Balance Sheet, and any proceeds received are recognized as secured liabilities. The consolidated VIEs included in the tables below represent hundreds of separate entities with which the Company is involved. In general, the third-party investors in the obligations of consolidated VIEs have legal recourse only to the assets of the respective VIEs and do not have such recourse to the Company, except where the Company has provided a guarantee to the investors or is the counterparty to certain derivative transactions involving

the VIE. Thus, the Company's maximum legal exposure to loss related to consolidated VIEs is significantly less than the carrying value of the consolidated VIE assets due to outstanding third-party financing. Intercompany assets and liabilities are excluded from the table. All VIE assets are restricted from being sold or pledged as collateral. The cash flows from these assets are the only source used to pay down the associated liabilities, which are non-recourse to the Company's general assets.

The following table presents the carrying amounts and classifications of consolidated assets that are collateral for consolidated VIE obligations:

In billions of dollars	December 31, 2015	December 31, 2014
Cash	\$0.2	\$0.3
Trading account assets	0.6	0.7
Investments	5.3	8.0
Total loans, net of allowance	78.6	93.2
Other	0.1	0.6
Total assets	\$84.8	\$102.8
Short-term borrowings	\$14.0	\$22.7
Long-term debt	31.3	40.1
Other liabilities	2.1	0.9
Total liabilities ⁽¹⁾	\$47.4	\$63.7

(1) The total liabilities of consolidated VIEs for which creditors or beneficial interest holders do not have recourse to the general credit of Citi were \$45.3 billion and \$61.2 billion as of December 31, 2015 and 2014, respectively. Liabilities of consolidated VIEs for which creditors or beneficial interest holders have recourse to the general credit of Citi comprise two items included in the above table: (i) credit enhancements provided to consolidated Citi-administered commercial paper conduits in the form of letters of credit of \$1.9 billion and \$2.3 billion at December 31, 2015 and 2014, respectively; and (ii) credit guarantees provided by Citi to certain consolidated

municipal tender option bond trusts of \$82 million and \$198 million at December 31, 2015 and 2014, respectively.

Significant Interests in Unconsolidated VIEs—Balance Sheet Classification

The following table presents the carrying amounts and classification of significant variable interests in unconsolidated VIEs:

In billions of dollars	December 31, 2015	December 31, 2014
Cash	\$0.1	\$—
Trading account assets	6.2	7.6
Investments	3.0	2.6
Total loans, net of allowance	28.4	25.0
Other	1.8	2.0
Total assets	\$39.5	\$37.2

Credit Card Securitizations

The Company securitizes credit card receivables through trusts established to purchase the receivables. Citigroup transfers receivables into the trusts on a non-recourse basis. Credit card securitizations are revolving securitizations; as customers pay their credit card balances, the cash proceeds are used to purchase new receivables and replenish the receivables in the trust.

Substantially all of the Company's credit card securitization activity is through two trusts—Citibank Credit Card Master Trust (Master Trust) and the Citibank Omni Master Trust (Omni Trust), with the substantial majority through the Master Trust. These trusts are consolidated entities because, as servicer, Citigroup has the power to direct

the activities that most significantly impact the economic performance of the trusts, Citigroup holds a seller's interest and certain securities issued by the trusts, and also provides liquidity facilities to the trusts, which could result in potentially significant losses or benefits from the trusts. Accordingly, the transferred credit card receivables remain on Citi's Consolidated Balance Sheet with no gain or loss recognized. The debt issued by the trusts to third parties is included on Citi's Consolidated Balance Sheet.

The Company utilizes securitizations as one of the sources of funding for its business in North America. The following table reflects amounts related to the Company's securitized credit card receivables:

In billions of dollars	December 31, 2015	December 31, 2014
Ownership interests in principal amount of trust credit card receivables		
Sold to investors via trust-issued securities	\$29.7	\$37.0
Retained by Citigroup as trust-issued securities	9.4	10.1
Retained by Citigroup via non-certificated interests	16.5	14.2
Total	\$55.6	\$61.3

The following tables summarize selected cash flow information related to Citigroup's credit card securitizations:

In billions of dollars	2015	2014	2013
Proceeds from new securitizations	\$—	\$12.6	\$11.7
Pay down of maturing notes	(7.4	)(7.8	)(2.2

Managed Loans

After securitization of credit card receivables, the Company continues to maintain credit card customer account relationships and provides servicing for receivables transferred to the trusts. As a result, the Company considers the securitized credit card receivables to be part of the business it manages. As Citigroup consolidates the credit card trusts, all managed securitized card receivables are on-balance sheet.

Funding, Liquidity Facilities and Subordinated Interests

As noted above, Citigroup securitizes credit card receivables through two securitization trusts—Master Trust, which is part of Citicorp, and Omni Trust, substantially all of which is also part of Citicorp. The liabilities of the trusts are included in the Consolidated Balance Sheet, excluding those retained by Citigroup.

The Master Trust issues fixed- and floating-rate term notes. Some of the term notes are issued to multi-seller commercial paper conduits. The weighted average maturity of the term notes issued by the Master Trust was 2.4 years as of December 31, 2015 and 2.8 years as of December 31, 2014.

Master Trust Liabilities (at Par Value)

In billions of dollars	Dec. 31, 2015	Dec. 31, 2014
Term notes issued to third parties	\$28.4	\$35.7
Term notes retained by Citigroup affiliates	7.5	8.2
Total Master Trust liabilities	\$35.9	\$43.9

The Omni Trust issues fixed- and floating-rate term notes, some of which are purchased by multi-seller commercial paper conduits. The weighted average maturity of the third-party term notes issued by the Omni Trust was 0.9 years as of December 31, 2015 and 1.9 years as of December 31, 2014.

Omni Trust Liabilities (at Par Value)

In billions of dollars	Dec. 31, 2015	Dec. 31, 2014
Term notes issued to third parties	\$1.3	\$1.3
Term notes retained by Citigroup affiliates	1.9	1.9
Total Omni Trust liabilities	\$3.2	\$3.2

Mortgage Securitizations

The Company provides a wide range of mortgage loan products to a diverse customer base. Once originated, the Company often securitizes these loans through the use of VIEs. These VIEs are funded through the issuance of trust certificates backed solely by the transferred assets. These certificates have the same life as the transferred assets. In addition to providing a source of liquidity and less expensive funding, securitizing these assets also reduces the Company's credit exposure to the borrowers. These mortgage loan securitizations are primarily non-recourse, thereby effectively transferring the risk of future credit losses to the purchasers of the securities issued by the trust. However, the Company's U.S. consumer mortgage business generally retains the servicing rights and in certain instances retains investment securities, interest-only strips and residual interests in future cash flows from the trusts and also provides servicing for a limited number of ICG securitizations.

The Company securitizes mortgage loans generally through either a government-sponsored agency, such as Ginnie Mae, Fannie Mae or Freddie Mac (U.S. agency-sponsored

mortgages), or private-label (non-agency-sponsored mortgages) securitization. The Company is not the primary beneficiary of its U.S. agency-sponsored mortgage securitizations because Citigroup does not have the power to direct the activities of the VIE that most significantly impact the entity's economic performance. Therefore, Citi does not consolidate these U.S. agency-sponsored mortgage securitizations.

The Company does not consolidate certain non-agency-sponsored mortgage securitizations because Citi is either not the servicer with the power to direct the significant activities of the entity or Citi is the servicer but the servicing relationship is deemed to be a fiduciary relationship; therefore, Citi is not deemed to be the primary beneficiary of the entity.

In certain instances, the Company has (i) the power to direct the activities and (ii) the obligation to either absorb losses or the right to receive benefits that could be potentially significant to its non-agency-sponsored mortgage securitizations and, therefore, is the primary beneficiary and thus consolidates the VIE.

The following tables summarize selected cash flow information related to Citigroup mortgage securitizations:

In billions of dollars	2015	2014		2013
	U.S. agency-sponsored mortgages	Non-agency sponsored mortgages	Agency- and non-agency-sponsored mortgages	Agency- and non-agency-sponsored mortgages
Proceeds from new securitizations ⁽¹⁾	\$25.6	\$12.1	\$ 39.6	\$ 72.7
Contractual servicing fees received	0.5	—	0.5	0.7
Cash flows received on retained interests and other net cash flows	0.1	—	0.1	0.1

(1) The proceeds from new securitizations in 2015 include \$0.7 billion related to personal loan securitizations.

Agency and non-agency securitization gains for the year ended December 31, 2015 were \$150 million and \$44 million, respectively.

Agency and non-agency securitization gains for the years ended December 31, 2014 and 2013 were \$267 million and \$223 million, respectively.

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Key assumptions used in measuring the fair value of retained interests at the date of sale or securitization of mortgage receivables were as follows:

	December 31, 2015		
	U.S. agency-sponsored mortgages	Non-agency-sponsored mortgages ⁽¹⁾ Senior interests	Subordinated interests
Discount rate	0.0% to 11.3%	2.0% to 3.2%	2.9% to 12.1%
Weighted average discount rate	8.0	% 2.9	% 5.2 %
Constant prepayment rate	5.7% to 34.9%	—	2.8% to 8.0%
Weighted average constant prepayment rate	11.7	%—	3.5 %
Anticipated net credit losses ⁽²⁾	NM	40.0	% 38.1% to 92.0%
Weighted average anticipated net credit losses	NM	40.0	% 70.6 %
Weighted average life	3.5 to 10.4 years	2.5 to 9.8 years	8.9 to 12.9 years

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	December 31, 2014		
	U.S. agency-sponsored mortgages	Senior interests	Subordinated interests
Discount rate	0.0% to 14.7%	1.4% to 6.6%	2.6% to 9.1%
Weighted average discount rate	11.0	%4.2	%7.8
Constant prepayment rate	0.0% to 23.1%	0.0% to 7.0%	0.5% to 8.9%
Weighted average constant prepayment rate	6.2	%5.4	%3.2
Anticipated net credit losses ⁽²⁾	NM	40.0% to 67.1%	8.9% to 58.5%
Weighted average anticipated net credit losses	NM	56.3	%43.1
Weighted average life	0.0 to 9.7 years	2.6 to 11.1 years	3.0 to 14.5 years

(1) Disclosure of non-agency-sponsored mortgages as senior and subordinated interests is indicative of the interests' position in the capital structure of the securitization.

(2) Anticipated net credit losses represent estimated loss severity associated with defaulted mortgage loans underlying the mortgage securitizations disclosed above. Anticipated net credit losses, in this instance, do not represent total credit losses incurred to date, nor do they represent credit losses expected on retained interests in mortgage securitizations.

NM Anticipated net credit losses are not meaningful due to U.S. agency guarantees.

The interests retained by the Company range from highly rated and/or senior in the capital structure to unrated and/or residual interests.

The key assumptions used to value retained interests, and the sensitivity of the fair value to adverse changes of 10% and 20% in each of the key assumptions, are set forth in the tables

below. The negative effect of each change is calculated independently, holding all other assumptions constant. Because the key assumptions may not be independent, the net effect of simultaneous adverse changes in the key assumptions may be less than the sum of the individual effects shown below.

	December 31, 2015		
	U.S. agency-sponsored mortgages	Senior interests	Subordinated interests
Discount rate	0.0% to 22.1%	1.6% to 67.6%	2.0% to 24.9%
Weighted average discount rate	5.7	%7.6	%8.4
Constant prepayment rate	6.5% to 27.8%	4.2% to 100.0%	0.5% to 20.8%
Weighted average constant prepayment rate	12.5	%14.0	%7.5
Anticipated net credit losses ⁽²⁾	NM	0.2% to 89.1%	3.8% to 92.0%
Weighted average anticipated net credit losses	NM	48.9	%54.4
Weighted average life	1.3 to 21.0 years	0.3 to 18.1 years	0.9 to 19.0 years

	December 31, 2014	
	U.S. agency-sponsored mortgages	Non-agency-sponsored mortgages ⁽¹⁾
	Senior interests	Subordinated interests

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Discount rate	0.0% to 21.2%	1.1% to 47.1%	1.3% to 19.6%	
Weighted average discount rate	8.4	% 7.7	% 8.2	%
Constant prepayment rate	6.0% to 41.4%	2.0% to 100.0%	0.5% to 16.2%	
Weighted average constant prepayment rate	15.3	% 10.9	% 7.2	%
Anticipated net credit losses ⁽²⁾	NM	0.0% to 92.4%	13.7% to 83.8%	
Weighted average anticipated net credit losses	NM	51.7	% 52.5	%
Weighted average life	0.0 to 16.0 years	0.3 to 14.4 years	0.0 to 24.4 years	

Note: Citi Holdings held no subordinated interests in mortgage securitizations as of December 31, 2015 and 2014.

(1) Disclosure of non-agency-sponsored mortgages as senior and subordinated interests is indicative of the interests' position in the capital structure of the securitization.

(2) Anticipated net credit losses represent estimated loss severity associated with defaulted mortgage loans underlying the mortgage securitizations disclosed above. Anticipated net credit losses, in this instance, do not represent total credit losses incurred to date, nor do they represent credit losses expected on retained interests in mortgage securitizations.

NM Anticipated net credit losses are not meaningful due to U.S. agency guarantees.

In millions of dollars at December 31, 2015	U.S. agency-sponsored mortgages	Non-agency-sponsored mortgages ⁽¹⁾	
		Senior interests	Subordinated interests
Carrying value of retained interests	\$2,563	\$179	\$553
Discount rates			
Adverse change of 10%	\$(65)	\$(8)	\$(25)
Adverse change of 20%	(127)	(15)	(49)
Constant prepayment rate			
Adverse change of 10%	(102)	(3)	(9)
Adverse change of 20%	(196)	(6)	(18)
Anticipated net credit losses			
Adverse change of 10%	NM	(6)	(7)
Adverse change of 20%	NM	(11)	(14)

In millions of dollars at December 31, 2014	U.S. agency-sponsored mortgages	Non-agency-sponsored mortgages ⁽¹⁾	
		Senior interests	Subordinated interests
Carrying value of retained interests	\$2,374	\$310	\$554
Discount rates			
Adverse change of 10%	\$(69)	\$(7)	\$(30)
Adverse change of 20%	(134)	(13)	(57)
Constant prepayment rate			
Adverse change of 10%	(93)	(3)	(9)
Adverse change of 20%	(179)	(5)	(18)
Anticipated net credit losses			
Adverse change of 10%	NM	(6)	(9)
Adverse change of 20%	NM	(10)	(16)

Note: Citi Holdings held no subordinated interests in mortgage securitizations as of December 31, 2015 and December 31, 2014.

⁽¹⁾ Disclosure of non-agency-sponsored mortgages as senior and subordinated interests is indicative of the interests' position in the capital structure of the securitization.

NM Anticipated net credit losses are not meaningful due to U.S. agency guarantees.

Mortgage Servicing Rights

In connection with the securitization of mortgage loans, the Company's U.S. consumer mortgage business generally retains the servicing rights, which entitle the Company to a future stream of cash flows based on the outstanding principal balances of the loans and the contractual servicing fee. Failure to service the loans in accordance with contractual requirements may lead to a termination of the servicing rights and the loss of future servicing fees. These transactions create an intangible asset referred to as mortgage servicing rights (MSRs), which are recorded at fair value on Citi's Consolidated Balance Sheet. The fair value of Citi's capitalized MSRs was \$1.8 billion at December 31, 2015 and 2014. Of these amounts, approximately \$1.7 billion was specific to Citicorp, with the remainder to Citi Holdings as of December 31, 2015 and 2014. The MSRs correspond to principal loan balances of \$198 billion and \$224 billion as of December 31, 2015 and 2014, respectively. The following table summarizes the changes in capitalized MSRs:

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In millions of dollars	2015	2014	
Balance, beginning of year	\$1,845	\$2,718	
Originations	214	217	
Changes in fair value of MSR due to changes in inputs and assumptions	110	(344)
Other changes ⁽¹⁾	(350	)(429)
Sale of MSRs	(38	)(317)
Balance, as of December 31	\$1,781	\$1,845	

(1) Represents changes due to customer payments and passage of time.

The fair value of the MSR is primarily affected by changes in prepayments of mortgages that result from shifts in mortgage interest rates. Specifically, higher interest rates tend to lead to declining prepayments, which causes the fair value of the MSR to increase. In managing this risk, the Company economically hedges a significant portion of the value of its MSRs through the use of interest rate derivative contracts, forward purchase and sale commitments of mortgage-backed securities and purchased securities all classified as Trading account assets. The Company receives fees during the course of servicing previously securitized mortgages. The amounts of these fees were as follows:

In millions of dollars	2015	2014	2013
Servicing fees	\$552	\$638	\$800
Late fees	16	25	42
Ancillary fees	31	56	100
Total MSR fees	\$599	\$719	\$942

These fees and changes in MSR fair values are classified in the Consolidated Statement of Income as Other revenue.

Re-securitizations

The Company engages in re-securitization transactions in which debt securities are transferred to a VIE in exchange for new beneficial interests. During the years ended December 31, 2015 and 2014, Citi transferred non-agency (private-label) securities with an original par value of approximately \$885 million and \$1.2 billion, respectively, to re-securitization entities. These securities are backed by either residential or commercial mortgages and are often structured on behalf of clients.

As of December 31, 2015, the fair value of Citi-retained interests in private-label re-securitization transactions structured by Citi totaled approximately \$428 million (including \$132 million related to re-securitization transactions executed in 2015), which has been recorded in Trading account assets. Of this amount, approximately \$18 million was related to senior beneficial interests and approximately \$410 million was related to subordinated beneficial interests. As of December 31, 2014, the fair value of Citi-retained interests in private-label re-securitization transactions structured by Citi totaled approximately \$545 million (including \$194 million related to re-securitization transactions executed in 2014). Of this amount, approximately \$133 million was related to senior beneficial interests, and approximately \$412 million was related to subordinated beneficial interests. The original par value of private-label re-securitization transactions in which Citi holds a retained interest as of December 31, 2015 and 2014 was approximately \$3.7 billion and \$5.1 billion, respectively.

The Company also re-securitizes U.S. government-agency guaranteed mortgage-backed (agency) securities. During the years ended December 31, 2015 and 2014, Citi transferred agency securities with a fair value of approximately \$17.8 billion and \$22.5 billion, respectively, to re-securitization entities.

As of December 31, 2015, the fair value of Citi-retained interests in agency re-securitization transactions structured by Citi totaled approximately \$1.8 billion (including \$1.5 billion related to re-securitization transactions executed in 2015) compared to \$1.8 billion as of December 31, 2014 (including \$1.5 billion related to re-securitization transactions executed in 2014), which is recorded in Trading account assets. The original fair value of agency re-securitization transactions in which Citi holds a retained interest as of December 31, 2015 and 2014 was approximately \$65.0 billion and \$73.0 billion, respectively.

As of December 31, 2015 and 2014, the Company did not consolidate any private-label or agency re-securitization entities.

Citi-Administered Asset-Backed Commercial Paper Conduits

The Company is active in the asset-backed commercial paper conduit business as administrator of several multi-seller commercial paper conduits and also as a service provider to single-seller and other commercial paper conduits sponsored by third parties.

Citi's multi-seller commercial paper conduits are designed to provide the Company's clients access to low-cost funding in the commercial paper markets. The conduits purchase assets from or provide financing facilities to clients and are

funded by issuing commercial paper to third-party investors. The conduits generally do not purchase assets originated by the Company. The funding of the conduits is facilitated by the liquidity support and credit enhancements provided by the Company.

As administrator to Citi's conduits, the Company is generally responsible for selecting and structuring assets purchased or financed by the conduits, making decisions regarding the funding of the conduits, including determining the tenor and other features of the commercial paper issued, monitoring the quality and performance of the conduits' assets, and facilitating the operations and cash flows of the conduits. In return, the Company earns structuring fees from customers for individual transactions and earns an administration fee from the conduit, which is equal to the income from the client program and liquidity fees of the conduit after payment of conduit expenses. This administration fee is fairly stable, since most risks and rewards of the underlying assets are passed back to the clients. Once the asset pricing is negotiated, most ongoing income, costs and fees are relatively stable as a percentage of the conduit's size. The conduits administered by the Company do not generally invest in liquid securities that are formally rated by third parties. The assets are privately negotiated and structured transactions that are generally designed to be held by the conduit, rather than actively traded and sold. The yield earned by the conduit on each asset is generally tied to the rate on the commercial paper issued by the conduit, thus passing interest rate risk to the client. Each asset purchased by the conduit is structured with transaction-specific credit enhancement features provided by the third-party client seller, including over collateralization, cash and excess spread collateral accounts, direct recourse or third-party guarantees. These credit enhancements are sized with the objective of approximating a credit rating of A or above, based on the

Company's internal risk ratings. At December 31, 2015 and 2014, the conduits had approximately \$21.3 billion and \$29.2 billion of purchased assets outstanding, respectively, and had incremental funding commitments with clients of approximately \$11.6 billion and \$13.5 billion, respectively.

Substantially all of the funding of the conduits is in the form of short-term commercial paper. At December 31, 2015 and 2014, the weighted average remaining lives of the commercial paper issued by the conduits were approximately 56 and 57 days, respectively.

The primary credit enhancement provided to the conduit investors is in the form of transaction-specific credit enhancements described above. In addition to the transaction-specific credit enhancements, the conduits, other than the government guaranteed loan conduit, have obtained a letter of credit from the Company, which is equal to at least 8% to 10% of the conduit's assets with a minimum of \$200 million. The letters of credit provided by the Company to the conduits total approximately \$1.9 billion and \$2.3 billion as of December 31, 2015 and 2014, respectively. The net result across multi-seller conduits administered by the Company, other than the government guaranteed loan conduit, is that, in the event defaulted assets exceed the transaction-specific credit enhancements described above, any losses in each conduit are allocated first to the Company and then the commercial paper investors.

The Company also provides the conduits with two forms of liquidity agreements that are used to provide funding to the conduits in the event of a market disruption, among other events. Each asset of the conduits is supported by a transaction-specific liquidity facility in the form of an asset purchase agreement (APA). Under the APA, the Company has generally agreed to purchase non-defaulted eligible receivables from the conduit at par. The APA is not designed to provide credit support to the conduit, as it generally does not permit the purchase of defaulted or impaired assets.

Any funding under the APA will likely subject the underlying conduit clients to increased interest costs. In addition, the Company provides the conduits with program-wide liquidity in the form of short-term lending commitments.

Under these commitments, the Company has agreed to lend to the conduits in the event of a short-term disruption in the commercial paper market, subject to specified conditions. The Company receives fees for providing both types of liquidity agreements and considers these fees to be on fair market terms.

Finally, the Company is one of several named dealers in the commercial paper issued by the conduits and earns a market-based fee for providing such services. Along with third-party dealers, the Company makes a market in the commercial paper and may from time to time fund commercial paper pending sale to a third party. On specific dates with less liquidity in the market, the Company may hold in inventory commercial paper issued by conduits administered by the Company, as well as conduits administered by third parties. Separately, in the normal course of business, the Company invests in commercial paper, including commercial paper issued by the Company's conduits. At December 31, 2015 and 2014, the Company owned \$11.4 billion and \$10.6 billion, respectively, of the commercial paper issued by its administered conduits. The Company's investments were not

driven by market illiquidity and the Company is not obligated under any agreement to purchase the commercial paper issued by the conduits.

The asset-backed commercial paper conduits are consolidated by the Company. The Company has determined that, through its roles as administrator and liquidity provider, it has the power to direct the activities that most significantly impact the entities' economic performance. These powers include its ability to structure and approve the assets purchased by the conduits, its ongoing surveillance and credit mitigation activities, its ability to sell or repurchase assets out of the conduits, and its liability management. In addition, as a result of all the Company's involvement described above, it was concluded that the Company has an economic interest that could potentially be significant. However, the assets and liabilities of the conduits are separate and apart from those of Citigroup. No assets of any conduit are available to satisfy the creditors of Citigroup or any of its other subsidiaries.

Collateralized Loan Obligations

A collateralized loan obligation (CLO) is a VIE that purchases a portfolio of assets consisting primarily of non-investment grade corporate loans. The CLO issues multiple tranches of debt and equity to investors to fund the asset purchases and pay upfront expenses associated with forming the CLO. A third-party asset manager is contracted by the CLO to purchase the underlying assets from the open market and monitor the credit risk associated with those

assets. Over the term of the CLO, the asset manager directs purchases and sales of assets in a manner consistent with the CLO's asset management agreement and indenture. In general, the CLO asset manager will have the power to direct the activities of the entity that most significantly impact the economic performance of the CLO. Investors in the CLO, through their ownership of debt and/or equity in the CLO, can also direct certain activities of the CLO, including removing the CLO asset manager under limited circumstances, optionally redeeming the notes, voting on amendments to the CLO's operating documents and other activities. The CLO has a finite life, typically 12 years. Citi serves as a structuring and placement agent with respect to the CLO. Typically, the debt and equity of the CLO are sold to third-party investors. On occasion, certain Citi entities may purchase some portion of the CLO's liabilities for investment purposes. In addition, Citi may purchase, typically in the secondary market, certain securities issued by the CLO to support its market making activities.

The Company does not generally have the power to direct the activities of the entity that most significantly impact the economic performance of the CLOs, as this power is generally held by a third-party asset manager of the CLO. As such, those CLOs are not consolidated.

Key Assumptions and Retained Interests

The key assumptions used to value retained interests in CLOs, and the sensitivity of the fair value to adverse changes of 10% and 20% are set forth in the tables below:

	Dec. 31, 2015	Dec. 31, 2014
Discount rate	1.4% to 49.6%	1.4% to 49.2%
In millions of dollars	Dec. 31, 2015	Dec. 31, 2014
Carrying value of retained interests	\$918	\$1,555
Discount rates		
Adverse change of 10%	\$(5	)(10
Adverse change of 20%	(10	)(20

Asset-Based Financing

The Company provides loans and other forms of financing to VIEs that hold assets. Those loans are subject to the same credit approvals as all other loans originated or purchased by the Company. Financings in the form of debt securities or derivatives are, in most circumstances, reported in Trading account assets and accounted for at fair value through earnings. The Company generally does not have the power to direct the activities that most significantly impact these VIEs' economic performance, and thus it does not consolidate them.

The primary types of Citigroup's asset-based financings, total assets of the unconsolidated VIEs with significant involvement, and the Company's maximum exposure to loss are shown below. For the Company to realize the maximum loss, the VIE (borrower) would have to default with no recovery from the assets held by the VIE.

	December 31, 2015	
In millions of dollars	Total unconsolidated VIE assets	Maximum exposure to unconsolidated VIEs
Type		
Commercial and other real estate	\$41,695	\$11,454
Corporate loans	1,274	1,871
Hedge funds and equities	385	55
Airplanes, ships and other assets	38,679	17,140
Total ⁽¹⁾	\$82,033	\$30,520
	December 31, 2014	
In millions of dollars	Total unconsolidated VIE assets	Maximum exposure to unconsolidated VIEs
Type		
Commercial and other real estate	\$26,146	\$9,476
Corporate loans	460	473
Hedge funds and equities	—	—
Airplanes, ships and other assets	36,143	15,649
Total	\$62,749	\$25,598

(1) The increase in the total unconsolidated VIE assets and related maximum exposure to unconsolidated VIEs is due to normal, yet increased, client activity.

The following table summarizes selected cash flow information related to asset-based financings:

In billions of dollars	2015	2014	2013
Proceeds from new securitizations	\$—	\$0.5	\$0.5
Cash flows received on retained interests and other net cash flows	—	0.3	1.0

There were no gains recognized on the securitizations of asset-based financings for the years ended December 31, 2015, 2014 and 2013.

Municipal Securities Tender Option Bond (TOB) Trusts

Municipal TOB trusts may hold fixed- or floating-rate, taxable or tax-exempt securities issued by state and local governments and municipalities. TOB trusts are typically structured as single-issuer entities whose assets are purchased from either the Company or from other investors in the municipal securities market. TOB trusts finance the purchase of their municipal assets by issuing two classes of certificates: long-dated, floating rate certificates (“Floaters”) that are putable pursuant to a liquidity facility and residual interest certificates (“Residuals”). The Floaters are purchased by third-party investors, typically tax-exempt money market funds. The Residuals are purchased by the original owner of the municipal securities that are being financed.

From the Company’s perspective, there are two types of TOB trusts: customer TOB trusts and non-customer TOB trusts. Customer TOB trusts are those trusts utilized by customers of the Company to finance their municipal securities investments. The Residuals issued by these trusts are purchased by the customer being financed.

Non-customer TOB trusts are trusts that are used by the Company to finance its own municipal securities investments; the Residuals issued by non-customer TOB trusts are purchased by the Company.

With respect to both customer and non-customer TOB trusts, the Company may provide remarketing agent services. If Floaters are optionally tendered and the Company, in its role as remarketing agent, is unable to find a new investor to purchase the optionally tendered Floaters within a specified period of time, the Company may, but is not obligated to, purchase the tendered Floaters into its own inventory. The level of the Company’s inventory of such Floaters fluctuates. At December 31, 2015 and 2014, the Company held \$2 million and \$3 million, respectively, of Floaters related to customer and non-customer TOB trusts.

For certain customer TOB trusts, the Company may also serve as a voluntary advance provider. In this capacity, the Company may, but is not obligated to, make loan advances to customer TOB trusts to purchase optionally tendered Floaters that have not otherwise been successfully remarketed to new investors. Such loans are secured by pledged Floaters. As of December 31, 2015, the Company had no outstanding voluntary advances to customer TOB trusts.

For certain non-customer trusts, the Company also provides credit enhancement. At December 31, 2015 and 2014, approximately \$82 million and \$198 million, respectively, of the municipal bonds owned by non-customer TOB trusts are subject to a credit guarantee provided by the Company.

The Company also provides liquidity services to many customer and non-customer trusts. If a trust is unwound early due to an event other than a credit event on the underlying municipal bonds, the underlying municipal bonds are sold out of the Trust and bond sale proceeds are used to redeem the outstanding Trust certificates. If this results in a shortfall between the bond sale proceeds and the redemption price of the tendered Floaters, the Company, pursuant to the liquidity agreement, would be obligated to make a payment to the trust to satisfy that shortfall. For certain customer TOB trusts the Company has also executed a reimbursement agreement with the holder of the Residual, pursuant to which the Residual holder is obligated to reimburse the Company for any payment the Company makes under the liquidity arrangement. These reimbursement agreements may be subject to daily margining based on changes in the market value of the underlying municipal bonds. In cases where a third party provides liquidity to a non-customer TOB trust, a similar reimbursement arrangement may be executed, whereby the Company (or a consolidated subsidiary of the Company), as Residual holder, would absorb any losses incurred by the liquidity provider.

For certain other non-customer TOB trusts, the Company serves as tender option provider. The tender option provider arrangement allows Floater holders to put their interests directly to the Company at any time, subject to the requisite notice period requirements, at a price of par.

At December 31, 2015 and 2014, liquidity agreements provided with respect to customer TOB trusts totaled \$3.1 billion and \$3.7 billion, respectively, of which \$2.2 billion and \$2.6 billion, respectively, were offset by reimbursement agreements. For the remaining exposure related to TOB transactions, where the Residual owned by the customer was at least 25% of the bond value at the inception of the transaction, no reimbursement agreement was executed.

The Company considers both customer and non-customer TOB trusts to be VIEs. Customer TOB trusts are not consolidated by the Company, as the power to direct the activities that most significantly impact the trust's economic performance rests with the customer Residual holder, which may unilaterally cause the sale of the trust's bonds. Non-customer TOB trusts generally are consolidated because the Company holds the Residual interest, and thus has the unilateral power to cause the sale of the trust's bonds.

The Company also provides other liquidity agreements or letters of credit to customer-sponsored municipal investment funds, which are not variable interest entities, and municipality-related issuers that totaled \$8.1 billion and \$7.4 billion as of December 31, 2015 and 2014, respectively. These liquidity agreements and letters of credit are offset by reimbursement agreements with various term-out provisions.

Municipal Investments

Municipal investment transactions include debt and equity interests in partnerships that finance the construction and rehabilitation of low-income housing, facilitate lending in new or underserved markets, or finance the construction or operation of renewable municipal energy facilities. The Company generally invests in these partnerships as a limited partner and earns a return primarily through the receipt of tax credits and grants earned from the investments made by the partnership. The Company may also provide construction loans or permanent loans for the development or operation of real estate properties held by partnerships. These entities are generally considered VIEs. The power to direct the activities of these entities is typically held by the general partner. Accordingly, these entities are not consolidated by the Company.

Client Intermediation

Client intermediation transactions represent a range of transactions designed to provide investors with specified returns based on the returns of an underlying security, referenced asset or index. These transactions include credit-linked notes and equity-linked notes. In these transactions, the VIE typically obtains exposure to the underlying security, referenced asset or index through a derivative instrument, such as a total-return swap or a credit-default swap. In turn the VIE issues notes to investors that pay a return based on the specified underlying security, referenced asset or index. The VIE invests the proceeds in a financial asset or a guaranteed insurance contract that serves as collateral for the derivative contract over the term of the transaction. The Company's involvement in these transactions

includes being the counterparty to the VIE's derivative instruments and investing in a portion of the notes issued by the VIE. In certain transactions, the investor's maximum risk of loss is limited, and the Company absorbs risk of loss above a specified level. The Company does not have the power to direct the activities of the VIEs that most significantly impact their economic performance, and thus it does not consolidate them.

The Company's maximum risk of loss in these transactions is defined as the amount invested in notes issued by the VIE and the notional amount of any risk of loss absorbed by the Company through a separate instrument issued by the VIE. The derivative instrument held by the Company may generate a receivable from the VIE (for example, where the Company purchases credit protection from the VIE in connection with the VIE's issuance of a credit-linked note), which is collateralized by the assets owned by the VIE. These derivative instruments are not considered variable interests, and any associated receivables are not included in the calculation of maximum exposure to the VIE.

The proceeds from new securitizations related to the Company's client intermediation transactions for the years ended December 31, 2015 and 2014 totaled approximately \$2.0 billion.

Investment Funds

The Company is the investment manager for certain investment funds and retirement funds that invest in various asset classes including private equity, hedge funds, real estate, fixed income and infrastructure. The Company earns a management fee, which is a percentage of capital under management, and may earn performance fees. In addition, for some of these funds the Company has an ownership interest in the investment funds. The Company has also established a number of investment funds as opportunities for qualified employees to invest in private equity investments. The Company acts as investment manager to these funds and may provide employees with financing on both recourse and non-recourse bases for a portion of the employees' investment commitments.

The Company has determined that a majority of the investment entities managed by Citigroup are provided a deferral from the requirements of ASC 810, because they meet the criteria in Accounting Standards Update No. 2010-10, Consolidation (Topic 810), Amendments for Certain Investment Funds (ASU 2010-10). These entities continue to be evaluated under the requirements of ASC 810-10, prior to the implementation of SFAS 167 (FIN 46(R), Consolidation of Variable Interest Entities), which required that a VIE be consolidated by the party with a variable interest that will absorb a majority of the entity's expected losses or residual returns, or both. See Note 1 to the Consolidated Financial Statements for a discussion of ASU 2015-02 which includes impending changes to targeted areas of consolidation guidance. When ASU 2015-02 becomes effective on January 1, 2016, it will eliminate the above noted deferral for certain investment entities pursuant to ASU 2010-10.

23. DERIVATIVES ACTIVITIES

In the ordinary course of business, Citigroup enters into various types of derivative transactions. These derivative transactions include:

- Futures and forward contracts, which are commitments to buy or sell at a future date a financial instrument, commodity or currency at a contracted price and may be settled in cash or through delivery.

- Swap contracts, which are commitments to settle in cash at a future date or dates that may range from a few days to a number of years, based on differentials between specified indices or financial instruments, as applied to a notional principal amount.

- Option contracts, which give the purchaser, for a premium, the right, but not the obligation, to buy or sell within a specified time a financial instrument, commodity or currency at a contracted price that may also be settled in cash, based on differentials between specified indices or prices.

Swaps and forwards and some option contracts are over-the-counter (OTC) derivatives that are bilaterally negotiated with counterparties and settled with those counterparties, except for swap contracts that are novated and "cleared" through central counterparties (CCPs). Futures contracts and other option contracts are standardized contracts that are traded on an exchange with a CCP as the counterparty from the inception of the transaction. Citigroup enters into these derivative contracts relating to interest rate, foreign currency, commodity and other market/credit risks for the following reasons:

Trading Purposes: Citigroup trades derivatives as an active market maker. Citigroup offers its customers derivatives in connection with their risk management actions to transfer, modify or reduce their interest rate, foreign exchange and other market/credit risks or for their own trading purposes. Citigroup also manages its derivative risk positions through offsetting trade activities, controls focused on price verification, and daily reporting of positions to senior managers.

Hedging: Citigroup uses derivatives in connection with its risk management activities to hedge certain risks or reposition the risk profile of the Company. For example, Citigroup issues fixed-rate long-term debt and then enters into a receive-fixed, pay-variable-rate interest rate swap with the same tenor and notional amount to convert the interest payments to a net variable-rate basis. This strategy is the most common form of an interest rate hedge, as it minimizes net interest cost in certain yield curve environments. Derivatives are also used to manage risks inherent in specific groups of on-balance sheet assets and liabilities, including AFS securities and borrowings, as well as other interest-sensitive assets and liabilities. In addition, foreign-exchange contracts are used to hedge non-U.S.-dollar-denominated debt, foreign-currency-denominated AFS securities and net investment exposures.

Derivatives may expose Citigroup to market, credit or liquidity risks in excess of the amounts recorded on the Consolidated Balance Sheet. Market risk on a derivative product is the exposure created by potential fluctuations in interest rates, foreign-exchange rates and other factors and is a function of the type of product, the volume of transactions, the tenor and terms of the agreement and the underlying volatility. Credit risk is the exposure to loss in the event of nonperformance by the other party to the transaction where the value of any collateral held is not adequate to cover such losses. The recognition in earnings of unrealized gains on these transactions is subject to management's assessment of the probability of counterparty default. Liquidity risk is the potential exposure that arises when the size of a derivative position may not be able to be monetized in a reasonable period of time and at a reasonable cost in periods of high volatility and financial stress.

Derivative transactions are customarily documented under industry standard master agreements that provide that, following an uncured payment default or other event of default, the non-defaulting party may promptly terminate all transactions between the parties and determine the net amount due to be paid to, or by, the defaulting party. Events of default include: (i) failure to make a payment on a derivatives transaction that remains uncured following applicable notice and grace periods, (ii) breach of agreement that remains uncured after applicable notice and grace periods, (iii)

breach of a representation, (iv) cross default, either to third-party debt or to other derivative transactions entered into between the parties, or, in some cases, their affiliates, (v) the occurrence of a merger or consolidation which results in a party's becoming a materially weaker credit, and (vi) the cessation or repudiation of any applicable guarantee or other credit support document. Obligations under master netting agreements are often secured by collateral posted under an industry standard credit support annex to the master netting agreement. An event of default may also occur under a credit support annex if a party fails to make a collateral delivery that remains uncured following applicable notice and grace periods.

The netting and collateral rights incorporated in the master netting agreements are considered to be legally enforceable if a supportive legal opinion has been obtained from counsel of recognized standing that provides the requisite level of certainty regarding enforceability and that the exercise of rights by the non-defaulting party to terminate and close-out transactions on a net basis under these agreements will not be stayed or avoided under applicable law upon an event of default including bankruptcy, insolvency or similar proceeding.

A legal opinion may not be sought for certain jurisdictions where local law is silent or unclear as to the enforceability of such rights or where adverse case law or conflicting regulation may cast doubt on the enforceability of such rights. In some jurisdictions and for some counterparty types, the insolvency law may not provide the requisite level of certainty. For example, this may be the case for certain sovereigns, municipalities, central banks and U.S. pension plans.

Exposure to credit risk on derivatives is affected by market volatility, which may impair the ability of counterparties to satisfy their obligations to the Company. Credit limits are established and closely monitored for customers engaged in derivatives transactions. Citi considers the level of legal certainty regarding enforceability of its offsetting rights under master netting agreements and credit support annexes to be an important factor in its risk management process. Specifically, Citi generally transacts much lower volumes of derivatives under master netting agreements where Citi does not have the requisite level of legal certainty regarding enforceability, because such derivatives consume greater amounts of single counterparty credit limits than those executed under enforceable master netting agreements. Cash collateral and security collateral in the form of G10 government debt securities is often posted by a party to a master netting agreement to secure the net open exposure of the other party; the receiving party is free to commingle/rehypothesize such collateral in the ordinary course of its business. Nonstandard collateral such as corporate bonds, municipal bonds, U.S. agency securities and/or MBS may also be pledged as collateral for derivative transactions. Security collateral posted to open and maintain a master netting agreement with a counterparty, in the form of cash and/or securities, may from time to time be segregated in an account at a third-party custodian pursuant to a tri-party account control agreement.

Information pertaining to Citigroup's derivative activity, based on notional amounts is presented in the table below. Derivative notional amounts are reference amounts from which contractual payments are derived and do not represent a complete and accurate measure of Citi's exposure to derivative transactions. Rather, as discussed above, Citi's derivative exposure arises primarily from market fluctuations (i.e., market risk), counterparty failure (i.e., credit risk) and/or periods of high volatility or financial stress (i.e., liquidity risk), as well as any market valuation adjustments that may be

required on the transactions. Moreover, notional amounts do not reflect the netting of offsetting trades (also as discussed above). For example, if Citi enters into an interest rate swap with \$100 million notional, and offsets this risk with an identical but opposite position with a different counterparty, \$200 million in derivative notionals is reported, although these offsetting positions may result in de minimis overall market risk. Aggregate derivative notional amounts can fluctuate from period to period in the normal course of business based on Citi's market share, levels of client activity and other factors.

Derivative Notionals

In millions of dollars	Hedging instruments under ASC 815 ⁽¹⁾⁽²⁾		Other derivative instruments			
			Trading derivatives		Management hedges ⁽³⁾	
	December 31, 2015	December 31, 2014	December 31, 2015	December 31, 2014	December 31, 2015	December 31, 2014
Interest rate contracts						
Swaps	\$ 166,576	\$ 163,348	\$ 22,208,794	\$ 31,906,549	\$ 28,969	\$ 31,945
Futures and forwards	—	—	6,868,340	7,044,990	38,421	42,305
Written options	—	—	3,033,617	3,311,904	2,606	3,913
Purchased options	—	—	2,887,605	3,171,184	4,575	4,910
Total interest rate contract notionals	\$ 166,576	\$ 163,348	\$ 34,998,356	\$ 45,434,627	\$ 74,571	\$ 83,073
Foreign exchange contracts						
Swaps	\$ 23,007	\$ 25,157	\$ 4,765,687	\$ 4,567,977	\$ 23,960	\$ 23,990
Futures, forwards and spot ⁽⁴⁾	72,124	73,219	2,563,649	3,003,295	3,034	7,069
Written options	448	—	1,125,664	1,343,520	—	432
Purchased options	819	—	1,131,816	1,363,382	—	432
Total foreign exchange contract notionals	\$ 96,398	\$ 98,376	\$ 9,586,816	\$ 10,278,174	\$ 26,994	\$ 31,923
Equity contracts						
Swaps	\$ —	\$ —	\$ 180,963	\$ 131,344	\$ —	\$ —
Futures and forwards	—	—	33,735	30,510	—	—
Written options	—	—	298,876	305,627	—	—
Purchased options	—	—	265,062	275,216	—	—
Total equity contract notionals	\$ —	\$ —	\$ 778,636	\$ 742,697	\$ —	\$ —
Commodity and other contracts						
Swaps	\$ —	\$ —	\$ 70,561	\$ 90,817	\$ —	\$ —
Futures and forwards	789	1,089	106,474	106,021	—	—
Written options	—	—	72,648	104,581	—	—
Purchased options	—	—	66,051	95,567	—	—
Total commodity and other contract notionals	\$ 789	\$ 1,089	\$ 315,734	\$ 396,986	\$ —	\$ —
Credit derivatives ⁽⁵⁾						

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Protection sold	\$—	\$—	\$950,922	\$1,063,858	\$—	\$—
Protection purchased	—	—	981,586	1,100,369	23,628	16,018
Total credit derivatives	\$—	\$—	\$1,932,508	\$2,164,227	\$23,628	\$16,018
Total derivative notionals	\$263,763	\$262,813	\$47,612,050	\$59,016,711	\$125,193	\$131,014

The notional amounts presented in this table do not include hedge accounting relationships under ASC 815 where

(1) Citigroup is hedging the foreign currency risk of a net investment in a foreign operation by issuing a foreign-currency-denominated debt instrument. The notional amount of such debt was \$2,102 million and \$3,752 million at December 31, 2015 and December 31, 2014, respectively.

(2) Derivatives in hedge accounting relationships accounted for under ASC 815 are recorded in either Other assets/Other liabilities or Trading account assets/Trading account liabilities on the Consolidated Balance Sheet.

(3) Management hedges represent derivative instruments used to mitigate certain economic risks, but for which hedge accounting is not applied. These derivatives are recorded in either Other assets/Other liabilities or Trading account assets/Trading account liabilities on the Consolidated Balance Sheet.

Foreign exchange notional contracts include spot contract notionals of \$335 billion and \$849 billion at
(4) December 31, 2015 and December 31, 2014, respectively. Previous presentations of foreign exchange derivative notional contracts did not include spot contracts. There was no impact to the Consolidated Financial Statements related to this updated presentation.

Credit derivatives are arrangements designed to allow one party (protection buyer) to transfer the credit risk of a “reference asset” to another party (protection seller). These arrangements allow a protection seller to assume the
(5) credit risk associated with the reference asset without directly purchasing that asset. The Company enters into credit derivative positions for purposes such as risk management, yield enhancement, reduction of credit concentrations and diversification of overall risk.

The following tables present the gross and net fair values of the Company’s derivative transactions, and the related offsetting amounts permitted under ASC 210-20-45 and ASC 815-10-45, as of December 31, 2015 and December 31, 2014. Under ASC 210-20-45, gross positive fair values are offset against gross negative fair values by counterparty pursuant to enforceable master netting agreements. Under ASC 815-10-45, payables and receivables in respect of cash collateral received from or paid to a given counterparty pursuant to a credit support annex are included in the offsetting amount if a legal opinion supporting enforceability of netting and collateral rights has been obtained. GAAP does not permit similar offsetting for security collateral. The tables also include amounts that are not permitted to be offset under ASC 210-20-45 and ASC 815-10-45, such as security collateral posted or cash collateral posted at third-party custodians, but which would be eligible for offsetting to the extent an event of default occurred and a legal opinion supporting enforceability of the netting and collateral rights has been obtained.

Derivative Mark-to-Market (MTM) Receivables/Payables

In millions of dollars at December 31, 2015

	Derivatives classified in Trading account		Derivatives classified in Other	
	assets / liabilities ⁽¹⁾⁽²⁾⁽³⁾		assets / liabilities ⁽²⁾⁽³⁾	
	Assets	Liabilities	Assets	Liabilities
Derivatives instruments designated as ASC 815 hedges				
Over-the-counter	\$262	\$105	\$2,328	\$106
Cleared	4,607	1,471	5	—
Interest rate contracts	\$4,869	\$1,576	\$2,333	\$106
Over-the-counter	\$2,688	\$364	\$95	\$677
Foreign exchange contracts	\$2,688	\$364	\$95	\$677
Total derivative instruments designated as ASC 815 hedges	\$7,557	\$1,940	\$2,428	\$783
Derivatives instruments not designated as ASC 815 hedges				
Over-the-counter	\$289,124	\$267,761	\$182	\$12
Cleared	120,848	126,532	244	216
Exchange traded	53	35	—	—
Interest rate contracts	\$410,025	\$394,328	\$426	\$228
Over-the-counter	\$126,474	\$133,361	\$—	\$66
Cleared	134	152	—	—
Exchange traded	21	36	—	—
Foreign exchange contracts	\$126,629	\$133,549	\$—	\$66
Over-the-counter	\$14,560	\$20,107	\$—	\$—
Cleared	28	3	—	—
Exchange traded	7,297	6,406	—	—
Equity contracts	\$21,885	\$26,516	\$—	\$—
Over-the-counter	\$16,794	\$18,641	\$—	\$—
Exchange traded	1,216	1,912	—	—
Commodity and other contracts	\$18,010	\$20,553	\$—	\$—
Over-the-counter	\$31,072	\$30,608	\$711	\$245
Cleared	3,803	3,560	131	318
Credit derivatives ⁽⁴⁾	\$34,875	\$34,168	\$842	\$563
Total derivatives instruments not designated as ASC 815 hedges	\$611,424	\$609,114	\$1,268	\$857
Total derivatives	\$618,981	\$611,054	\$3,696	\$1,640
Cash collateral paid/received ⁽⁵⁾⁽⁶⁾	\$4,911	\$13,628	\$8	\$37
Less: Netting agreements ⁽⁷⁾	(524,481)	(524,481)	—	—
Less: Netting cash collateral received/paid ⁽⁸⁾	(43,227)	(42,609)	(1,949)	(53)
Net receivables/payables included on the consolidated balance sheet ⁽⁹⁾	\$56,184	\$57,592	\$1,755	\$1,624
Additional amounts subject to an enforceable master netting agreement but not offset on the Consolidated Balance Sheet				
Less: Cash collateral received/paid	\$(779)	\$(2)	\$—	\$—
Less: Non-cash collateral received/paid	(9,855)	(5,131)	(270)	—
Total net receivables/payables ⁽⁹⁾	\$45,550	\$52,459	\$1,485	\$1,624

(1) The trading derivatives fair values are presented in Note 13 to the Consolidated Financial Statements.

(2) Derivative mark-to-market receivables/payables related to management hedges are recorded in either Other assets/Other liabilities or Trading account assets/Trading account liabilities.

(3) Over-the-counter (OTC) derivatives are derivatives executed and settled bilaterally with counterparties without the use of an organized exchange or central clearing house. Cleared derivatives include derivatives executed bilaterally with a counterparty in the OTC market but then novated to a central clearing house, whereby the central clearing house becomes the counterparty to both of the original counterparties. Exchange traded derivatives include

derivatives executed directly on an organized exchange that provides pre-trade price transparency.

The credit derivatives trading assets comprise \$17,957 million related to protection purchased and \$16,918 million (4) related to protection sold as of December 31, 2015. The credit derivatives trading liabilities comprise \$16,968 million related to protection purchased and \$17,200 million related to protection sold as of December 31, 2015.

For the trading account assets/liabilities, reflects the net amount of the \$47,520 million and \$56,855 million of (5) gross cash collateral paid and received, respectively. Of the gross cash collateral paid, \$42,609 million was used to offset trading derivative liabilities and, of the gross cash collateral received, \$43,227 million was used to offset trading derivative assets.

For cash collateral paid with respect to non-trading derivative assets, reflects the net amount of \$61 million of gross cash collateral paid, of which \$53 million is netted against non-trading derivative positions within Other (6) liabilities. For cash collateral received with respect to non-trading derivative liabilities, reflects the net amount of \$1,986 million of gross cash collateral received, of which \$1,949 million is netted against OTC non-trading derivative positions within Other assets.

Represents the netting of derivative receivable and payable balances with the same counterparty under enforceable (7) netting agreements. Approximately \$391 billion, \$126 billion and \$7 billion of the netting against trading account asset/liability balances is attributable to each of the OTC, cleared and exchange-traded derivatives, respectively.

Represents the netting of cash collateral paid and received by counterparty under enforceable credit support (8) agreements. Substantially all cash collateral received and paid is netted against OTC derivative assets and liabilities, respectively.

(9) The net receivables/payables include approximately \$10 billion of derivative asset and \$10 billion of derivative liability fair values not subject to enforceable master netting agreements, respectively.

In millions of dollars at December 31, 2014	Derivatives classified in Trading account assets / liabilities ⁽¹⁾⁽²⁾⁽³⁾		Derivatives classified in Other assets / liabilities ⁽²⁾⁽³⁾	
	Assets	Liabilities	Assets	Liabilities
Derivatives instruments designated as ASC 815 hedges				
Over-the-counter	\$1,508	\$204	\$3,117	\$414
Cleared	4,300	868	—	25
Interest rate contracts	\$5,808	\$1,072	\$3,117	\$439
Over-the-counter	\$3,885	\$743	\$678	\$588
Foreign exchange contracts	\$3,885	\$743	\$678	\$588
Total derivative instruments designated as ASC 815 hedges	\$9,693	\$1,815	\$3,795	\$1,027
Derivatives instruments not designated as ASC 815 hedges				
Over-the-counter	\$376,778	\$359,689	\$106	\$—
Cleared	255,847	261,499	6	21
Exchange traded	20	22	141	164
Interest rate contracts	\$632,645	\$621,210	\$253	\$185
Over-the-counter	\$151,736	\$157,650	\$—	\$17
Cleared	366	387	—	—
Exchange traded	7	46	—	—
Foreign exchange contracts	\$152,109	\$158,083	\$—	\$17
Over-the-counter	\$20,425	\$28,333	\$—	\$—
Cleared	16	35	—	—
Exchange traded	4,311	4,101	—	—
Equity contracts	\$24,752	\$32,469	\$—	\$—
Over-the-counter	\$19,943	\$23,103	\$—	\$—
Exchange traded	3,577	3,083	—	—
Commodity and other contracts	\$23,520	\$26,186	\$—	\$—
Over-the-counter	\$39,412	\$39,439	\$265	\$384
Cleared	4,106	3,991	13	171
Credit derivatives ⁽⁴⁾	\$43,518	\$43,430	\$278	\$555
Total derivatives instruments not designated as ASC 815 hedges	\$876,544	\$881,378	\$531	\$757
Total derivatives	\$886,237	\$883,193	\$4,326	\$1,784
Cash collateral paid/received ⁽⁵⁾⁽⁶⁾	\$6,523	\$9,846	\$123	\$7
Less: Netting agreements ⁽⁷⁾	(777,178))(777,178))—	—
Less: Netting cash collateral received/paid ⁽⁸⁾	(47,625))(47,769))(1,791))(15)

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Net receivables/payables included on the Consolidated Balance Sheet ⁽⁹⁾	\$67,957	\$68,092	\$2,658	\$1,776
Additional amounts subject to an enforceable master netting agreement but not offset on the Consolidated Balance Sheet				
Less: Cash collateral received/paid	\$(867	)\$(11)\$—	\$—
Less: Non-cash collateral received/paid	(10,043	) (6,264	) (1,293)—
Total net receivables/payables ⁽⁹⁾	\$57,047	\$61,817	\$1,365	\$1,776

(1) The trading derivatives fair values are presented in Note 13 to the Consolidated Financial Statements.

(2) Derivative mark-to-market receivables/payables related to management hedges are recorded in either Other assets/Other liabilities or Trading account assets/Trading account liabilities.

Over-the-counter (OTC) derivatives include derivatives executed and settled bilaterally with counterparties without the use of an organized exchange or central clearing house. Cleared derivatives include derivatives executed bilaterally with a counterparty in the OTC market but then novated to a central clearing house,

whereby the central clearing house becomes the counterparty to both of the original counterparties. Exchange traded derivatives include derivatives executed directly on an organized exchange that provides pre-trade price transparency.

The credit derivatives trading assets comprise \$18,430 million related to protection purchased and \$25,088 million (4) related to protection sold as of December 31, 2014. The credit derivatives trading liabilities comprise \$25,972 million related to protection purchased and \$17,458 million related to protection sold as of December 31, 2014.

For the trading account assets/liabilities, reflects the net amount of the \$54,292 million and \$57,471 million of (5) gross cash collateral paid and received, respectively. Of the gross cash collateral paid, \$47,769 million was used to offset derivative liabilities and, of the gross cash collateral received, \$47,625 million was used to offset derivative assets.

For cash collateral paid with respect to non-trading derivative assets, reflects the net amount of \$138 million of the (6) gross cash collateral paid, of which \$15 million is netted against non-trading derivative positions within Other liabilities. For cash collateral received with respect to non-trading derivative liabilities, reflects the net amount of \$1,798 million of gross cash collateral received of which \$1,791 million is netted against non-trading derivative positions within Other assets.

Represents the netting of derivative receivable and payable balances with the same counterparty under enforceable (7) netting agreements. Approximately \$510 billion, \$264 billion and \$3 billion of the netting against trading account asset/liability balances is attributable to each of the OTC, cleared and exchange-traded derivatives, respectively.

Represents the netting of cash collateral paid and received by counterparty under enforceable credit support (8) agreements. Substantially all cash collateral received is netted against OTC derivative assets. Cash collateral paid of approximately \$46 billion and \$2 billion is netted against OTC and cleared derivative liabilities, respectively.

(9) The net receivables/payables include approximately \$11 billion of derivative asset and \$10 billion of liability fair values not subject to enforceable master netting agreements.

For the years ended December 31, 2015, 2014 and 2013, the amounts recognized in Principal transactions in the Consolidated Statement of Income related to derivatives not designated in a qualifying hedging relationship, as well as the underlying non-derivative instruments, are presented in Note 6 to the Consolidated Financial Statements.

Citigroup presents this disclosure by business classification, showing derivative gains and losses related to its trading activities together with gains and losses related to non-derivative instruments within the same trading portfolios, as this represents the way these portfolios are risk managed.

The amounts recognized in Other revenue in the Consolidated Statement of Income related to derivatives not designated in a qualifying hedging relationship are shown below. The table below does not include any offsetting gains/losses on the economically hedged items to the extent such amounts are also recorded in Other revenue.

In millions of dollars	Gains (losses) included in Other revenue			
	2015	2014	2013	
Interest rate contracts	\$117	\$(227	)\$208	
Foreign exchange	(39)14	(41)
Credit derivatives	476	(150)594)
Total Citigroup	\$554	\$(363)\$(427)

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Accounting for Derivative Hedging

Citigroup accounts for its hedging activities in accordance with ASC 815, Derivatives and Hedging. As a general rule, hedge accounting is permitted where the Company is exposed to a particular risk, such as interest-rate or foreign-exchange risk, that causes changes in the fair value of an asset or liability or variability in the expected future cash flows of an existing asset, liability or a forecasted transaction that may affect earnings.

Derivative contracts hedging the risks associated with changes in fair value are referred to as fair value hedges, while contracts hedging the variability of expected future cash flows are cash flow hedges. Hedges that utilize derivatives or debt instruments to manage the foreign exchange risk associated with equity investments in non-U.S.-dollar-functional-currency foreign subsidiaries (net investment in a foreign operation) are net investment hedges.

If certain hedging criteria specified in ASC 815 are met, including testing for hedge effectiveness, hedge accounting may be applied. The hedge effectiveness assessment methodologies for similar hedges are performed in a similar manner and are used consistently throughout the hedging relationships. For fair value hedges, changes in the value of the hedging derivative, as well as changes in the value of the related hedged item due to the risk being hedged, are reflected in current earnings. For cash flow hedges and net investment hedges, changes in the value of the hedging derivative are reflected in Accumulated other comprehensive income (loss) in Citigroup's stockholders' equity to the extent the hedge is highly effective. Hedge ineffectiveness, in either case, is reflected in current earnings.

For asset/liability management hedging, fixed-rate long-term debt is recorded at amortized cost under GAAP. However, by designating an interest rate swap contract as a hedging instrument and electing to apply ASC 815 fair value hedge accounting, the carrying value of the debt is adjusted for changes in the benchmark interest rate, with such changes in value recorded in current earnings. The related interest-rate swap also is recorded on the balance sheet at fair value, with any changes in fair value also reflected in earnings. Thus, any ineffectiveness resulting from the hedging relationship is captured in current earnings.

Alternatively, for management hedges that do not meet the ASC 815 hedging criteria, the derivative is recorded at fair value on the balance sheet, with the associated changes in fair value recorded in earnings, while the debt continues to be carried at amortized cost. Therefore, current earnings are affected only by the interest rate shifts and other factors that cause a change in the swap's value. This type of hedge is undertaken when hedging requirements cannot be achieved or management decides not to apply ASC 815 hedge accounting.

Another alternative is to elect to carry the debt at fair value under the fair value option. Once the irrevocable election is made upon issuance of the debt, the full change in fair value of the debt is reported in earnings. The related interest rate swap, with changes in fair value, is also reflected in earnings, which provides a natural offset to the debt's fair value change. To the extent the two offsets are not exactly equal because the full change in the fair value of the debt

includes risks not offset by the interest rate swap, the difference is captured in current earnings.

The key requirements to achieve ASC 815 hedge accounting are documentation of a hedging strategy and specific hedge relationships at hedge inception and substantiating hedge effectiveness on an ongoing basis. A derivative must be highly effective in accomplishing the hedge objective of offsetting either changes in the fair value or cash flows of the hedged item for the risk being hedged. Any ineffectiveness in the hedge relationship is recognized in current earnings. The assessment of effectiveness may exclude changes in the value of the hedged item that are unrelated to the risks being hedged. Similarly, the assessment of effectiveness may exclude changes in the fair value of a derivative related to time value that, if excluded, are recognized in current earnings.

Fair Value Hedges

Hedging of Benchmark Interest Rate Risk

Citigroup hedges exposure to changes in the fair value of outstanding fixed-rate issued debt. These hedges are designated as fair value hedges of the benchmark interest rate risk associated with the currency of the hedged liability. The fixed cash flows of the hedged items are converted to benchmark variable-rate cash flows by entering into receive-fixed, pay-variable interest rate swaps. These fair value hedge relationships use either regression or

dollar-offset ratio analysis to assess whether the hedging relationships are highly effective at inception and on an ongoing basis.

Citigroup also hedges exposure to changes in the fair value of fixed-rate assets due to changes in benchmark interest rates, including available-for-sale debt securities and loans. The hedging instruments used are receive-variable, pay-fixed interest rate swaps. These fair value hedging relationships use either regression or dollar-offset ratio analysis to assess whether the hedging relationships are highly effective at inception and on an ongoing basis.

Hedging of Foreign Exchange Risk

Citigroup hedges the change in fair value attributable to foreign-exchange rate movements in available-for-sale securities that are denominated in currencies other than the functional currency of the entity holding the securities, which may be within or outside the U.S. The hedging instrument employed is generally a forward foreign-exchange contract. In this hedge, the change in fair value of the hedged available-for-sale security attributable to the portion of foreign exchange risk hedged is reported in earnings, and not Accumulated other comprehensive income (loss)—which serves to offset the change in fair value of the forward contract that is also reflected in earnings. Citigroup considers the premium associated with forward contracts (i.e., the differential between spot and contractual forward rates) as the cost of hedging; this is excluded from the assessment of hedge effectiveness and reflected directly in earnings. The dollar-offset method is used to assess hedge effectiveness. Since that assessment is based on changes in fair value attributable to changes in spot rates on both the available-for-sale securities and the forward contracts for the portion of the relationship hedged, the amount of hedge ineffectiveness is not significant.

The following table summarizes the gains (losses) on the Company's fair value hedges:

In millions of dollars	Gains (losses) on fair value hedges ⁽¹⁾		
	Year ended December 31,		
	2015	2014	2013
Gain (loss) on the derivatives in designated and qualifying fair value hedges			
Interest rate contracts	\$(847	)\$1,546	\$(3,288)
Foreign exchange contracts	1,315	1,367	265
Commodity contracts	41	(221)—
Total gain (loss) on the derivatives in designated and qualifying fair value hedges	\$509	\$2,692	\$(3,023)
Gain (loss) on the hedged item in designated and qualifying fair value hedges			
Interest rate hedges	\$792	\$(1,496	)\$3,204
Foreign exchange hedges	(1,258	)(1,422	)(185)
Commodity hedges	(35	)250	—
Total gain (loss) on the hedged item in designated and qualifying fair value hedges	\$(501	)\$2,668	)\$3,019
Hedge ineffectiveness recognized in earnings on designated and qualifying fair value hedges			
Interest rate hedges	\$(47	)\$53	\$(84)
Foreign exchange hedges	(23	)(16	)(4)
Total hedge ineffectiveness recognized in earnings on designated and qualifying fair value hedges	\$(70	)\$37	\$(88)
Net gain (loss) excluded from assessment of the effectiveness of fair value hedges			
Interest rate contracts	\$(8	)\$(3)\$—
Foreign exchange contracts ⁽²⁾	80	(39	)84
Commodity hedges ⁽²⁾	6	29	—
Total net gain (loss) excluded from assessment of the effectiveness of fair value hedges	\$78	\$(13	)\$84

(1) Amounts are included in Other revenue on the Consolidated Statement of Income. The accrued interest income on fair value hedges is recorded in Net interest revenue and is excluded from this table.

Amounts relate to the premium associated with forward contracts (differential between spot and contractual forward rates). These amounts are excluded from the assessment of hedge effectiveness and are reflected directly in earnings.

Cash Flow Hedges

Hedging of Benchmark Interest Rate Risk

Citigroup hedges variable cash flows associated with floating-rate liabilities and the rollover (re-issuance) of liabilities. Variable cash flows from those liabilities are converted to fixed-rate cash flows by entering into receive-variable, pay-fixed interest rate swaps and receive-variable, pay-fixed forward-starting interest rate swaps. Citi also hedges variable cash flows from recognized and forecasted floating-rate assets. Variable cash flows from those assets are converted to fixed-rate cash flows by entering into receive-fixed, pay-variable interest rate swaps. These cash-flow hedging relationships use either regression analysis or dollar-offset ratio analysis to assess whether the hedging relationships are highly effective at inception and on an ongoing basis. When certain variable interest rates, associated with hedged items, do not qualify as benchmark interest rates, Citigroup designates the risk being hedged as the risk of overall changes in the hedged cash flows. Since efforts are made to match the terms of the derivatives to those of the hedged forecasted cash flows as closely as possible, the amount of hedge ineffectiveness is not significant.

Hedging of Foreign Exchange Risk

Citigroup locks in the functional currency equivalent cash flows of long-term debt and short-term borrowings that are denominated in currencies other than the functional currency of the issuing entity. Depending on the risk management objectives, these types of hedges are designated as either cash flow hedges of only foreign exchange risk or cash flow hedges of both foreign exchange and interest rate risk, and the hedging instruments used are foreign exchange cross-currency swaps and forward contracts. These cash flow hedge relationships use dollar-offset ratio analysis to determine whether the hedging relationships are highly effective at inception and on an ongoing basis.

Hedging Total Return

Citigroup generally manages the risk associated with leveraged loans it has originated or in which it participates by transferring a majority of its exposure to the market through SPEs prior to or shortly after funding. Retained exposures to

leveraged loans receivable are generally hedged using total return swaps.

The amount of hedge ineffectiveness on the cash flow hedges recognized in earnings for the years ended December 31, 2015, 2014 and 2013 is not significant. The pretax change in Accumulated other comprehensive income (loss) from cash flow hedges is presented below:

In millions of dollars	Year ended December 31,		
	2015	2014	2013
Effective portion of cash flow hedges included in AOCI			
Interest rate contracts	\$357	\$299	\$749
Foreign exchange contracts	(220)	) (167	) 34
Credit derivatives	—	2	14
Total effective portion of cash flow hedges included in AOCI	\$137	\$134	\$797
Effective portion of cash flow hedges reclassified from AOCI to earnings			
Interest rate contracts	\$(186	) \$(260	) \$(700
Foreign exchange contracts	(146	) (149	) (176
Total effective portion of cash flow hedges reclassified from AOCI to earnings ⁽¹⁾	\$(332	) \$(409	) \$(876

(1) Included primarily in Other revenue and Net interest revenue on the Consolidated Income Statement.

For cash flow hedges, the changes in the fair value of the hedging derivative remaining in Accumulated other comprehensive income (loss) on the Consolidated Balance Sheet will be included in the earnings of future periods to offset the variability of the hedged cash flows when such cash flows affect earnings. The net loss associated with cash

flow hedges expected to be reclassified from Accumulated other comprehensive income (loss) within 12 months of December 31, 2015 is approximately \$0.3 billion. The maximum length of time over which forecasted cash flows are hedged is 10 years.

The after-tax impact of cash flow hedges on AOCI is shown in Note 20 to the Consolidated Financial Statements.

Net Investment Hedges

Consistent with ASC 830-20, Foreign Currency Matters—Foreign Currency Transactions, ASC 815 allows hedging of the foreign currency risk of a net investment in a foreign operation. Citigroup uses foreign currency forwards, options and foreign-currency-denominated debt instruments to manage the foreign exchange risk associated with Citigroup's equity investments in several non-U.S.-dollar-functional-currency foreign subsidiaries. Citigroup records the change in the carrying amount of these investments in the Foreign currency translation adjustment account within Accumulated other comprehensive income (loss). Simultaneously, the effective portion of the hedge of this exposure is also recorded in the Foreign currency translation adjustment account and the ineffective portion, if any, is immediately recorded in earnings.

For derivatives designated as net investment hedges, Citigroup follows the forward-rate method outlined in ASC 815-35-35-16 through 35-26. According to that method, all changes in fair value, including changes related to the forward-rate component of the foreign currency forward contracts and the time value of foreign currency options, are recorded in the Foreign currency translation adjustment account within Accumulated other comprehensive income (loss).

For foreign-currency-denominated debt instruments that are designated as hedges of net investments, the translation gain or loss that is recorded in the Foreign currency translation adjustment account is based on the spot exchange rate between the functional currency of the respective subsidiary and the U.S. dollar, which is the functional currency of Citigroup. To the extent the notional amount of the hedging instrument exactly matches the hedged net investment and the underlying exchange rate of the derivative hedging instrument relates to the exchange rate between the functional currency of the net investment and Citigroup's functional currency (or, in the case of a non-derivative debt instrument, such instrument is denominated in the functional currency of the net investment), no ineffectiveness is recorded in earnings.

The pretax gain (loss) recorded in the Foreign currency translation adjustment account within Accumulated other comprehensive income (loss), related to the effective portion of the net investment hedges, is \$2,475 million, \$2,890 million and \$2,370 million for the years ended December 31, 2015 2014 and 2013, respectively.

Credit Derivatives

Citi is a market maker and trades a range of credit derivatives. Through these contracts, Citi either purchases or writes protection on either a single name or a portfolio of reference credits. Citi also uses credit derivatives to help mitigate credit risk in its corporate and consumer loan portfolios and other cash positions, and to facilitate client transactions. Citi monitors its counterparty credit risk in credit derivative contracts. As of December 31, 2015 and December 31, 2014, approximately 98% of the gross receivables are from counterparties with which Citi maintains collateral agreements. A majority of Citi's top 15 counterparties (by receivable balance owed to Citi) are banks, financial institutions or other dealers. Contracts with these counterparties do not include ratings-based termination events. However, counterparty ratings downgrades may have an incremental effect by lowering the threshold at which Citi may call for additional collateral.

The range of credit derivatives entered into includes credit default swaps, total return swaps, credit options and credit-linked notes.

A credit default swap is a contract in which, for a fee, a protection seller agrees to reimburse a protection buyer for any losses that occur due to a predefined credit event on a reference entity. These credit events are defined by the terms of the derivative contract and the reference credit and are generally limited to the market standard of failure to pay on indebtedness and bankruptcy of the reference credit and, in a more limited range of transactions, debt restructuring. Credit

derivative transactions that reference emerging market entities will also typically include additional credit events to cover the acceleration of indebtedness and the risk of repudiation or a payment moratorium. In certain transactions, protection may be provided on a portfolio of reference entities or asset-backed securities. If there is no credit event, as defined by the specific derivative contract, then the protection seller makes no payments to the protection buyer and receives only the contractually specified fee. However, if a credit event occurs as defined in the specific derivative contract sold, the protection seller will be required to make a payment to the protection buyer. Under certain contracts, the seller of protection may not be required to make a payment until a specified amount of losses has occurred with respect to the portfolio and/or may only be required to pay for losses up to a specified amount.

A total return swap typically transfers the total economic performance of a reference asset, which includes all associated cash flows, as well as capital appreciation or depreciation. The protection buyer receives a floating rate of interest and any depreciation on the reference asset from the protection seller and, in return, the protection seller receives the cash flows associated with the reference asset plus any appreciation. Thus, according to the total return swap agreement, the protection seller will be obligated to make a payment any time the floating interest rate payment

plus any depreciation of the reference asset exceeds the cash flows associated with the underlying asset. A total return swap may terminate upon a default of the reference asset or a credit event with respect to the reference entity subject to the provisions of the related total return swap agreement between the protection seller and the protection buyer.

A credit option is a credit derivative that allows investors to trade or hedge changes in the credit quality of a reference entity. For example, in a credit spread option, the option writer assumes the obligation to purchase or sell credit protection on the reference entity at a specified "strike" spread level. The option purchaser buys the right to sell credit default protection on the reference entity to, or purchase it from, the option writer at the strike spread level. The payments on credit spread options depend either on a particular credit spread or the price of the underlying credit-sensitive asset or other reference. The options usually terminate if a credit event occurs with respect to the underlying reference entity.

A credit-linked note is a form of credit derivative structured as a debt security with an embedded credit default swap. The purchaser of the note effectively provides credit protection to the issuer by agreeing to receive a return that could be negatively affected by credit events on the underlying reference credit. If the reference entity defaults, the note may be cash settled or physically settled by delivery of a debt security of the reference entity. Thus, the maximum amount of the note purchaser's exposure is the amount paid for the credit-linked note.

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The following tables summarize the key characteristics of Citi's credit derivatives portfolio by counterparty and derivative form:

In millions of dollars at December 31, 2015	Fair values		Notionals Protection purchased	Protection sold
	Receivable ⁽¹⁾	Payable ⁽²⁾		
By industry/counterparty				
Banks	\$18,377	\$16,988	\$513,335	\$508,459
Broker-dealers	5,895	6,697	155,195	152,604
Non-financial	128	123	3,969	2,087
Insurance and other financial institutions	11,317	10,923	332,715	287,772
Total by industry/counterparty	\$35,717	\$34,731	\$1,005,214	\$950,922
By instrument				
Credit default swaps and options	\$34,849	\$34,158	\$981,999	\$940,650
Total return swaps and other	868	573	23,215	10,272
Total by instrument	\$35,717	\$34,731	\$1,005,214	\$950,922
By rating				
Investment grade	\$12,694	\$13,142	\$764,040	\$720,521
Non-investment grade	23,023	21,589	241,174	230,401
Total by rating	\$35,717	\$34,731	\$1,005,214	\$950,922
By maturity				
Within 1 year	\$3,871	\$3,559	\$265,632	\$254,225
From 1 to 5 years	27,991	27,488	669,834	639,460
After 5 years	3,855	3,684	69,748	57,237
Total by maturity	\$35,717	\$34,731	\$1,005,214	\$950,922

(1) The fair value amount receivable is composed of \$18,799 million under protection purchased and \$16,918 million under protection sold.

(2) The fair value amount payable is composed of \$17,531 million under protection purchased and \$17,200 million under protection sold.

In millions of dollars at December 31, 2014	Fair values		Notionals Protection purchased	Protection sold
	Receivable ⁽¹⁾	Payable ⁽²⁾		
By industry/counterparty				
Banks	\$24,828	\$23,189	\$574,764	\$604,700
Broker-dealers	8,093	9,309	204,542	199,693
Non-financial	91	113	3,697	1,595
Insurance and other financial institutions	10,784	11,374	333,384	257,870
Total by industry/counterparty	\$43,796	\$43,985	\$1,116,387	\$1,063,858
By instrument				
Credit default swaps and options	\$42,930	\$42,201	\$1,094,199	\$1,054,671
Total return swaps and other	866	1,784	22,188	9,187
Total by instrument	\$43,796	\$43,985	\$1,116,387	\$1,063,858
By rating				
Investment grade	\$17,432	\$17,182	\$824,831	\$786,848
Non-investment grade	26,364	26,803	291,556	277,010

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Total by rating	\$43,796	\$43,985	\$1,116,387	\$1,063,858
By maturity				
Within 1 year	\$4,356	\$4,278	\$250,489	\$229,502
From 1 to 5 years	34,692	35,160	790,251	772,001
After 5 years	4,748	4,547	75,647	62,355
Total by maturity	\$43,796	\$43,985	\$1,116,387	\$1,063,858

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- (1) The fair value amount receivable is composed of \$18,708 million under protection purchased and \$25,088 million under protection sold.
- (2) The fair value amount payable is composed of \$26,527 million under protection purchased and \$17,458 million under protection sold.

Fair values included in the above tables are prior to application of any netting agreements and cash collateral. For notional amounts, Citi generally has a mismatch between the total notional amounts of protection purchased and sold, and it may hold the reference assets directly, rather than entering into offsetting credit derivative contracts as and when desired. The open risk exposures from credit derivative contracts are largely matched after certain cash positions in reference assets are considered and after notional amounts are adjusted, either to a duration-based equivalent basis or to reflect the level of subordination in tranching structures. The ratings of the credit derivatives portfolio presented in the tables and used to evaluate payment/performance risk are based on the assigned internal or external ratings of the referenced asset or entity. Where external ratings are used, investment-grade ratings are considered to be 'Baa/BBB' and above, while anything below is considered non-investment grade. Citi's internal ratings are in line with the related external rating system.

Citigroup evaluates the payment/performance risk of the credit derivatives for which it stands as a protection seller based on the credit rating assigned to the underlying referenced credit. Credit derivatives written on an underlying non-investment grade reference credit represent greater payment risk to the Company. The non-investment grade category in the table above also includes credit derivatives where the underlying referenced entity has been downgraded subsequent to the inception of the derivative.

The maximum potential amount of future payments under credit derivative contracts presented in the table above is based on the notional value of the derivatives. The Company believes that the notional amount for credit protection sold is not representative of the actual loss exposure based on historical experience. This amount has not been reduced by the value of the reference assets and the related cash flows. In accordance with most credit derivative contracts, should a credit event occur, the Company usually is liable for the difference between the protection sold and the value of the reference assets. Furthermore, the notional amount for credit protection sold has not been reduced for any cash collateral paid to a given counterparty, as such payments would be calculated after netting all derivative exposures, including any credit derivatives with that counterparty in accordance with a related master netting agreement. Due to such netting processes, determining the amount of collateral that corresponds to credit derivative exposures alone is not possible. The Company actively monitors open credit-risk exposures and manages this exposure by using a variety of strategies, including purchased credit derivatives, cash collateral or direct holdings of the referenced assets. This risk mitigation activity is not captured in the table above.

Credit-Risk-Related Contingent Features in Derivatives

Certain derivative instruments contain provisions that require the Company to either post additional collateral or immediately settle any outstanding liability balances upon the occurrence of a specified event related to the credit risk of the Company. These events, which are defined by the existing derivative contracts, are primarily downgrades in the credit ratings of the Company and its affiliates. The fair value (excluding CVA) of all derivative instruments with credit-risk-related contingent features that were in a net liability position at both December 31, 2015 and December 31, 2014 was \$22 billion and \$30 billion, respectively. The Company had posted \$19 billion and \$27 billion as collateral for this exposure in the normal course of business as of December 31, 2015 and December 31, 2014, respectively.

A downgrade could trigger additional collateral or cash settlement requirements for the Company and certain affiliates. In the event that Citigroup and Citibank were downgraded a single notch by all three major rating agencies as of December 31, 2015, the Company could be required to post an additional \$1.8 billion as either collateral or settlement of the derivative transactions. Additionally, the Company could be required to segregate with third-party custodians collateral previously received from existing derivative counterparties in the amount of \$0.1 billion upon the single notch downgrade, resulting in aggregate cash obligations and collateral requirements of approximately \$1.9 billion.

Derivatives Accompanied by Financial Asset Transfers

The Company executes total return swaps which provide it with synthetic exposure to substantially all of the economic return of the securities or other financial assets referenced in the contract. In certain cases, the derivative transaction is accompanied by the Company's transfer of the referenced financial asset to the derivative counterparty, most typically in response to the derivative counterparty's desire to hedge, in whole or in part, its synthetic exposure under the derivative contract by holding the referenced asset in funded form. In certain jurisdictions these transactions qualify as sales, resulting in derecognition of the securities transferred (see Note 1 to the Consolidated Financial Statements for further discussion of the related sale conditions for transfers of financial assets). For a significant portion of the transactions, the Company has also executed another total return swap where the Company passes on substantially all of the economic return of the referenced securities to a different third party seeking the exposure. In those cases, the Company is not exposed, on a net basis, to changes in the economic return of the referenced securities.

These transactions generally involve the transfer of the Company's liquid government bonds, convertible bonds, or publicly traded corporate equity securities from the trading portfolio and are executed with third-party financial institutions. The accompanying derivatives are typically total return swaps. The derivatives are cash settled and subject to ongoing margin requirements.

When the conditions for sale accounting are met, the Company reports the transfer of the referenced financial asset as a sale and separately reports the accompanying derivative

transaction. These transactions generally do not result in a gain or loss on the sale of the security, because the transferred security was held at fair value in the Company's trading portfolio. For transfers of financial assets accounted for by the Company as a sale, where the Company has retained substantially all of the economic exposure to the transferred asset through a total return swap executed in contemplation of the initial sale with the same counterparty and still outstanding as of December 31, 2015, both the asset carrying amounts derecognized and gross cash proceeds received as of the date of derecognition were \$1.0 billion. At December 31, 2015, the fair value of these previously derecognized assets was \$1.0 billion and the fair value of the total return swaps was \$7 million recorded as gross derivative assets and \$35 million recorded as gross derivative liabilities. The balances for the total return swaps are on a gross basis, before the application of counterparty and cash collateral netting, and are included primarily as equity derivatives in the tabular disclosures in this Note.

24. CONCENTRATIONS OF CREDIT RISK

Concentrations of credit risk exist when changes in economic, industry or geographic factors similarly affect groups of counterparties whose aggregate credit exposure is material in relation to Citigroup's total credit exposure. Although Citigroup's portfolio of financial instruments is broadly diversified along industry, product, and geographic lines, material transactions are completed with other financial institutions, particularly in the securities trading, derivatives and foreign exchange businesses.

In connection with the Company's efforts to maintain a diversified portfolio, the Company limits its exposure to any one geographic region, country or individual creditor and monitors this exposure on a continuous basis. At December 31, 2015, Citigroup's most significant concentration of credit risk was with the U.S. government and its agencies. The Company's exposure, which primarily results from trading assets and investments issued by the U.S. government and its agencies, amounted to \$223.0 billion and \$216.3 billion at December 31, 2015 and 2014, respectively. The Mexican and United Kingdom governments and their agencies, which are rated investment grade by both Moody's and S&P, were the next largest exposures. The Company's exposure to Mexico amounted to \$22.5 billion and \$29.7 billion at December 31, 2015 and 2014, respectively, and was composed of investment securities, loans and trading assets. The Company's exposure to the United Kingdom amounted to \$20.4 billion and \$18.0 billion at December 31, 2015 and 2014, respectively, and was composed of investment securities, loans and trading assets. The Company's exposure to states and municipalities amounted to \$29.3 billion and \$31.0 billion at December 31, 2015 and 2014, respectively, and was composed of trading assets, investment securities, derivatives and lending activities.

25. FAIR VALUE MEASUREMENT

ASC 820-10 Fair Value Measurement, defines fair value, establishes a consistent framework for measuring fair value and requires disclosures about fair value measurements. 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. Among other things, the standard requires the Company to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value.

Under ASC 820-10, the probability of default of a counterparty is factored into the valuation of derivative and other positions as well as the impact of Citigroup's own credit risk on derivatives and other liabilities measured at fair value.

Fair Value Hierarchy

ASC 820-10 specifies a hierarchy of inputs based on whether the inputs are observable or unobservable. Observable inputs are developed using market data and reflect market participant assumptions, while unobservable inputs reflect the Company's market assumptions. These two types of inputs have created the following fair value hierarchy:

Level 1: Quoted prices for identical instruments in active markets.

Level 2: Quoted prices for similar instruments in active markets; quoted prices for identical or similar instruments in markets that are not active; and model-derived valuations in which all significant inputs and significant value drivers are observable in active markets.

Level 3: Valuations derived from valuation techniques in which one or more significant inputs or significant value drivers are unobservable.

As required under the fair value hierarchy, the Company considers relevant and observable market inputs in its valuations where possible. The frequency of transactions, the size of the bid-ask spread and the amount of adjustment necessary when comparing similar transactions are all factors in determining the liquidity of markets and the relevance of observed prices in those markets.

The Company's policy with respect to transfers between levels of the fair value hierarchy is to recognize transfers into and out of each level as of the end of the reporting period.

Determination of Fair Value

For assets and liabilities carried at fair value, the Company measures fair value using the procedures set out below, irrespective of whether the assets and liabilities are measured at fair value as a result of an election or whether they are required to be measured at fair value.

When available, the Company uses quoted market prices to determine fair value and classifies such items as Level 1. In some cases where a market price is available, the

Company will make use of acceptable practical expedients (such as matrix pricing) to calculate fair value, in which case the items are classified as Level 2.

The Company may also apply a price-based methodology, which utilizes, where available, quoted prices or other market information obtained from recent trading activity in positions with the same or similar characteristics to the position being valued. The market activity and the amount of the bid-ask spread are among the factors considered in determining the liquidity of markets and the observability of prices from those markets. If relevant and observable prices are available, those valuations may be classified as Level 2. When less liquidity exists for a security or loan, a quoted price is stale, a significant adjustment to the price of a similar security is necessary to reflect differences in the terms of the actual security or loan being valued, or prices from independent sources are insufficient to corroborate the valuation, the "price" inputs are considered unobservable and the fair value measurements are classified as Level 3. If quoted market prices are not available, fair value is based upon internally developed valuation techniques that use, where possible, current market-based parameters, such as interest rates, currency rates and option volatilities. Items valued using such internally generated valuation techniques are classified according to the lowest level input or value driver that is significant to the valuation. Thus, an item may be classified as Level 3 even though there may be some

significant inputs that are readily observable.

Fair value estimates from internal valuation techniques are verified, where possible, to prices obtained from independent vendors or brokers. Vendors' and brokers' valuations may be based on a variety of inputs ranging from observed prices to proprietary valuation models.

The following section describes the valuation methodologies used by the Company to measure various financial instruments at fair value, including an indication of the level in the fair value hierarchy in which each instrument is generally classified. Where appropriate, the description includes details of the valuation models, the key inputs to those models and any significant assumptions.

Market Valuation Adjustments

Generally, the unit of account for a financial instrument is the individual financial instrument. The Company applies market valuation adjustments that are consistent with the unit of account, which does not include adjustment due to the size of the Company's position, except as follows. ASC 820-10 permits an exception, through an accounting policy election, to measure the fair value of a portfolio of financial assets and financial liabilities on the basis of the net open risk position when certain criteria are met. Citi has elected to measure certain portfolios of financial instruments, such as derivatives, that meet those criteria on the basis of the net open risk position. The Company applies market valuation adjustments, including adjustments to account for the size of the net open risk position, consistent with market participant assumptions and in accordance with the unit of account.

Liquidity adjustments are applied to items in Level 2 or Level 3 of the fair-value hierarchy in an effort to ensure that the fair value reflects the price at which the net open risk position could be liquidated. The liquidity adjustment is based on the bid/offer spread for an instrument. When Citi has elected to measure certain portfolios of financial investments, such as derivatives, on the basis of the net open risk position, the liquidity adjustment may be adjusted to take into account the size of the position.

Credit valuation adjustments (CVA) and, effective in the third quarter of 2014, funding valuation adjustments (FVA), are applied to over-the-counter (OTC) derivative instruments in which the base valuation generally discounts expected cash flows using the relevant base interest rate curve for the currency of the derivative (e.g., LIBOR for uncollateralized U.S.-dollar derivatives). As not all counterparties have the same credit risk as that implied by the relevant base curve, a CVA is necessary to incorporate the market view of both counterparty credit risk and Citi's own credit risk in the valuation. FVA reflects a market funding risk premium inherent in the uncollateralized portion of derivative portfolios, and in collateralized derivatives where the terms of the agreement do not permit the reuse of the collateral received.

Citi's CVA and FVA methodology is composed of two steps.

First, the exposure profile for each counterparty is determined using the terms of all individual derivative positions and a Monte Carlo simulation or other quantitative analysis to generate a series of expected cash flows at future points in time. The calculation of this exposure profile considers the effect of credit risk mitigants and sources of funding, including pledged cash or other collateral and any legal right of offset that exists with a counterparty through arrangements such as netting agreements. Individual derivative contracts that are subject to an enforceable master netting agreement with a counterparty are aggregated as a netting set for this purpose, since it is those aggregate net cash flows that are subject to nonperformance risk. This process identifies specific, point-in-time future cash flows that are subject to nonperformance risk and unsecured funding, rather than using the current recognized net asset or liability as a basis to measure the CVA and FVA.

Second, for CVA, market-based views of default probabilities derived from observed credit spreads in the credit default swap (CDS) market are applied to the expected future cash flows determined in step one. Citi's own-credit CVA is determined using Citi-specific CDS spreads for the relevant tenor. Generally, counterparty CVA is determined using CDS spread indices for each credit rating and tenor. For certain identified netting sets where individual analysis is practicable (e.g., exposures to counterparties with liquid CDSs), counterparty-specific CDS spreads are used. For FVA, a term structure of future liquidity spreads is applied to the expected future funding requirement.

The CVA and FVA are designed to incorporate a market view of the credit and funding risk, respectively, inherent in the derivative portfolio. However, most unsecured derivative instruments are negotiated bilateral contracts and are not commonly transferred to third parties. Derivative instruments are normally settled contractually or, if terminated early, are terminated at a value negotiated bilaterally between the counterparties. Thus, the CVA and FVA may not be realized upon a settlement or termination in the normal course of business. In addition, all or a portion of these adjustments may be reversed or otherwise adjusted in future periods in the event of changes in the credit or funding risk associated with the derivative instruments.

The table below summarizes the CVA and FVA applied to the fair value of derivative instruments at December 31, 2015 and 2014:

In millions of dollars	Credit and funding valuation adjustments contra-liability (contra-asset)	
	December 31, 2015	December 31, 2014
Counterparty CVA	\$(1,470	)(1,853
Asset FVA	(584	)(518
Citigroup (own-credit) CVA	471	580
Liability FVA	106	19

Total CVA—derivative instruments	\$(1,477) \$(1,772)
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(1) FVA is included with CVA for presentation purposes.

The table below summarizes pretax gains (losses) related to changes in CVA on derivative instruments, net of hedges, FVA on derivatives and debt valuation adjustments (DVA) on Citi's own fair value option (FVO) liabilities for the years indicated:

In millions of dollars	Credit/funding/debt valuation adjustments gain (loss)		
	2015	2014	2013
Counterparty CVA	\$(115	) \$(43	) \$291
Asset FVA	(66	) (518) —
Own-credit CVA	(28	) (65	) (223
Liability FVA	98	19	—
Total CVA—derivative instruments	\$(111	) \$(607	) \$68
DVA related to own FVO liabilities	\$366	\$217	\$ (410
Total CVA and DVA ⁽¹⁾	\$255	\$ (390	) \$(342

(1) FVA is included with CVA for presentation purposes.

Valuation Process for Fair Value Measurements

Price verification procedures and related internal control procedures are governed by the Citigroup Pricing and Price Verification Policy and Standards, which is jointly owned by Finance and Risk Management.

For fair value measurements of substantially all assets and liabilities held by the Company, individual business units are responsible for valuing the trading account assets and liabilities, and Product Control within Finance performs independent price verification procedures to evaluate those fair value measurements. Product Control is independent of the individual business units and reports to the Global Head of Product Control. It has authority over the valuation of financial assets and liabilities. Fair value measurements of assets and liabilities are determined using various techniques, including, but not limited to, discounted cash flows and internal models, such as option and correlation models.

Based on the observability of inputs used, Product Control classifies the inventory as Level 1, Level 2 or Level 3 of the fair value hierarchy. When a position involves one or more significant inputs that are not directly observable, price verification procedures are performed that may include reviewing relevant historical data, analyzing profit and loss, valuing each component of a structured trade individually, and benchmarking, among others.

Reports of inventory that is classified within Level 3 of the fair value hierarchy are distributed to senior management in Finance, Risk and the business. This inventory is also discussed in Risk Committees and in monthly meetings with senior trading management. As deemed necessary, reports may go to the Audit Committee of the Board of Directors or to the full Board of Directors. Whenever an adjustment is needed to bring the price of an asset or liability to its exit price, Product Control reports it to management along with other price verification results.

In addition, the pricing models used in measuring fair value are governed by an independent control framework. Although the models are developed and tested by the individual business units, they are independently validated by the Model Validation Group within Risk Management and reviewed by Finance with respect to their impact on the price verification procedures. The purpose of this independent control framework is to assess model risk arising from models' theoretical soundness, calibration techniques where needed, and the appropriateness of the model for a specific product in a defined market. To ensure their continued applicability, models are independently reviewed annually. In addition, Risk Management approves and maintains a list of products permitted to be valued under each approved model for a given business.

Securities Purchased Under Agreements to Resell and Securities Sold Under Agreements to Repurchase

No quoted prices exist for these instruments, so fair value is determined using a discounted cash-flow technique. Cash flows are estimated based on the terms of the contract, taking into account any embedded derivative or other features. These cash flows are discounted using interest rates appropriate to the maturity of the instrument as well as the nature of the underlying collateral. Generally, when such instruments are recorded at fair value, they are classified within Level 2 of the fair value hierarchy, as the inputs used in the valuation are readily observable. However, certain

long-dated positions are classified within Level 3 of the fair value hierarchy.

Trading Account Assets and Liabilities—Trading Securities and Trading Loans

When available, the Company uses quoted market prices in active markets to determine the fair value of trading securities; such items are classified as Level 1 of the fair value hierarchy. Examples include government securities and exchange-traded equity securities.

For bonds and secondary market loans traded over the counter, the Company generally determines fair value utilizing valuation techniques, including discounted cash flows, price-based and internal models, such as Black-Scholes and Monte Carlo simulation. Fair value estimates from these internal valuation techniques are verified, where possible, to prices obtained from independent sources, including third-party vendors. Vendors compile prices from various sources and may apply matrix pricing for similar bonds or loans where no price is observable. A price-based methodology utilizes, where available, quoted prices or other market information obtained from recent trading activity of assets with similar characteristics to the bond or loan being valued. The yields used in discounted cash flow models are derived from the same price information. Trading securities and loans priced using such methods are generally classified as Level 2. However, when less liquidity exists for a security or loan, a quoted price is stale, a significant adjustment to the price of a similar security or loan is necessary to reflect differences in the terms of the actual security or loan being valued, or prices from independent sources are insufficient to corroborate valuation, a loan or

security is generally classified as Level 3. The price input used in a price-based methodology may be zero for a security, such as a subprime CDO, that is not receiving any principal or interest and is currently written down to zero. When the Company's principal market for a portfolio of loans is the securitization market, the Company uses the securitization price to determine the fair value of the portfolio. The securitization price is determined from the assumed proceeds of a hypothetical securitization in the current market, adjusted for transformation costs (i.e., direct costs other than transaction costs) and securitization uncertainties such as market conditions and liquidity. As a result of the severe reduction in the level of activity in certain securitization markets since the second half of 2007, observable securitization prices for certain directly comparable portfolios of loans have not been readily available. Therefore, such portfolios of loans are generally classified as Level 3 of the fair value hierarchy. However, for other loan securitization markets, such as commercial real estate loans, price verification of the hypothetical securitizations has been possible, since these markets have remained active. Accordingly, this loan portfolio is classified as Level 2 of the fair value hierarchy.

For most of the lending and structured direct subprime exposures, fair value is determined utilizing observable transactions where available, other market data for similar assets in markets that are not active and other internal

valuation techniques. The valuation of certain asset-backed security (ABS) CDO positions utilizes prices based on the underlying assets of the ABS CDO.

Trading Account Assets and Liabilities—Derivatives

Exchange-traded derivatives, measured at fair value using quoted (i.e., exchange) prices in active markets, where available, are classified as Level 1 of the fair value hierarchy.

Derivatives without a quoted price in an active market and derivatives executed over the counter are valued using internal valuation techniques. These derivative instruments are classified as either Level 2 or Level 3 depending upon the observability of the significant inputs to the model.

The valuation techniques and inputs depend on the type of derivative and the nature of the underlying instrument. The principal techniques used to value these instruments are discounted cash flows and internal models, including Black-Scholes and Monte Carlo simulation.

The key inputs depend upon the type of derivative and the nature of the underlying instrument and include interest rate yield curves, foreign-exchange rates, volatilities and correlation. The Company uses overnight indexed swap (OIS) curves as fair value measurement inputs for the valuation of certain collateralized derivatives. Citi uses the relevant benchmark curve for the currency of the derivative (e.g., the London Interbank Offered Rate for U.S. dollar derivatives) as the discount rate for uncollateralized derivatives.

As referenced above, during the third quarter of 2014, Citi incorporated FVA into the fair value measurements due to what it believes to be an industry migration toward incorporating the market's view of funding risk premium in OTC derivatives. The charge incurred in connection with the implementation of FVA was reflected in Principal transactions as a change in accounting estimate. Citi's FVA methodology leverages the existing CVA methodology to estimate a funding exposure profile. The calculation of this exposure profile considers collateral agreements where the terms do not permit the firm to reuse the collateral received, including where counterparties post collateral to third-party custodians.

Investments

The investments category includes available-for-sale debt and marketable equity securities whose fair values are generally determined by utilizing similar procedures described for trading securities above or, in some cases, using vendor pricing as the primary source.

Also included in investments are nonpublic investments in private equity and real estate entities. Determining the fair value of nonpublic securities involves a significant degree of management judgment, as no quoted prices exist and such securities are generally thinly traded. In addition, there may be transfer restrictions on private equity securities. The Company's process for determining the fair value of such securities utilizes commonly accepted valuation techniques, including comparables analysis. In determining the fair value of nonpublic securities, the Company also considers events

such as a proposed sale of the investee company, initial public offerings, equity issuances or other observable transactions.

Private equity securities are generally classified as Level 3 of the fair value hierarchy.

In addition, the Company holds investments in certain alternative investment funds that calculate NAV per share, including hedge funds, private equity funds and real estate funds. Investments in funds are generally classified as non-marketable equity securities carried at fair value. The fair values of these investments are estimated using the NAV per share of the Company's ownership interest in the funds where it is not probable that the investment will be realized at a price other than the NAV. Consistent with the provisions of ASU No. 2015-07 these investments have not been categorized within the fair value hierarchy and are not included in the tables below. See Note 13 to the Consolidated Financial Statements for additional information.

Short-Term Borrowings and Long-Term Debt

Where fair value accounting has been elected, the fair value of non-structured liabilities is determined by utilizing internal models using the appropriate discount rate for the applicable maturity. Such instruments are generally classified as Level 2 of the fair value hierarchy when all significant inputs are readily observable.

The Company determines the fair value of hybrid financial instruments, including structured liabilities, using the appropriate derivative valuation methodology (described above in “Trading account assets and liabilities—derivatives”) given the nature of the embedded risk profile. Such instruments are classified as Level 2 or Level 3 depending on the observability of significant inputs to the model.

Alt-A Mortgage Securities

The Company classifies its Alt-A mortgage securities as held-to-maturity, available-for-sale or trading investments. The securities classified as trading and available-for-sale are recorded at fair value with changes in fair value reported in current earnings and AOCI, respectively. For these purposes, Citi defines Alt-A mortgage securities as non-agency residential mortgage-backed securities (RMBS) where (i) the underlying collateral has weighted average FICO scores between 680 and 720 or (ii) for instances where FICO scores are greater than 720, RMBS have 30% or less of the underlying collateral composed of full documentation loans.

Similar to the valuation methodologies used for other trading securities and trading loans, the Company generally determines the fair values of Alt-A mortgage securities utilizing internal valuation techniques. Fair value estimates from internal valuation techniques are verified, where possible, to prices obtained from independent vendors.

Consensus data providers compile prices from various sources. Where available, the Company may also make use of quoted prices for recent trading activity in securities with the same or similar characteristics to the security being valued.

The valuation techniques used for Alt-A mortgage securities, as with other mortgage exposures, are price-based and yield analysis. The primary market-derived input is yield. Cash flows are based on current collateral performance with prepayment rates and loss projections reflective of current economic conditions of housing price change, unemployment rates, interest rates, borrower attributes and other market indicators.

Alt-A mortgage securities that are valued using these methods are generally classified as Level 2. However, Alt-A mortgage securities backed by Alt-A mortgages of lower quality or subordinated tranches in the capital structure are mostly classified as Level 3 due to the reduced liquidity that exists for such positions, which reduces the reliability of prices available from independent sources.

Items Measured at Fair Value on a Recurring Basis

The following tables present for each of the fair value hierarchy levels the Company's assets and liabilities that are measured at fair value on a recurring basis at December 31, 2015 and December 31, 2014. The Company's hedging of positions that have been classified in the Level 3 category is not limited to other financial instruments (hedging

instruments) that have been classified as Level 3, but also instruments classified as Level 1 or Level 2 of the fair value hierarchy. The effects of these hedges are presented gross in the following tables:

Fair Value Levels

In millions of dollars at December 31, 2015	Level 1 ⁽¹⁾	Level 2 ⁽¹⁾	Level 3	Gross inventory	Netting ⁽²⁾	Net balance
Assets						
Federal funds sold and securities borrowed or purchased under agreements to resell	\$—	\$177,538	\$1,337	\$178,875	\$(40,911)	\$137,964
Trading non-derivative assets						
Trading mortgage-backed securities						
U.S. government-sponsored agency guaranteed Residential	—	24,023	744	24,767	—	24,767
Commercial	—	1,059	1,326	2,385	—	2,385
Total trading mortgage-backed securities	—	2,338	517	2,855	—	2,855
U.S. Treasury and federal agency securities	\$—	\$27,420	\$2,587	\$30,007	\$—	\$30,007
State and municipal	\$14,208	\$3,587	\$1	\$17,796	\$—	\$17,796
Foreign government	—	2,345	351	2,696	—	2,696
Corporate	35,715	20,697	197	56,609	—	56,609
Equity securities	302	13,759	376	14,437	—	14,437
Asset-backed securities	50,429	2,382	3,684	56,495	—	56,495
Other trading assets	—	1,217	2,739	3,956	—	3,956
Total trading non-derivative assets	—	9,293	2,483	11,776	—	11,776
Trading derivatives						
Interest rate contracts	\$9	\$412,802	\$2,083	\$414,894		
Foreign exchange contracts	5	128,189	1,123	129,317		
Equity contracts	2,422	17,866	1,597	21,885		
Commodity contracts	204	16,706	1,100	18,010		
Credit derivatives	—	31,082	3,793	34,875		
Total trading derivatives	\$2,640	\$606,645	\$9,696	\$618,981		
Cash collateral paid ⁽³⁾				\$4,911		
Netting agreements					\$(524,481)	
Netting of cash collateral received					(43,227)	
Total trading derivatives	\$2,640	\$606,645	\$9,696	\$623,892	\$(567,708)	\$56,184
Investments						
Mortgage-backed securities						
U.S. government-sponsored agency guaranteed Residential	\$—	\$39,575	\$139	\$39,714	\$—	\$39,714
Commercial	—	5,982	4	5,986	—	5,986
Total investment mortgage-backed securities	—	569	2	571	—	571
U.S. Treasury and federal agency securities	\$—	\$46,126	\$145	\$46,271	\$—	\$46,271
State and municipal	\$111,536	\$11,375	\$4	\$122,915	\$—	\$122,915
	—	9,267	2,192	11,459	—	11,459

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Foreign government	42,073	49,868	260	92,201	—	92,201
Corporate	3,605	11,595	603	15,803	—	15,803
Equity securities	430	71	124	625	—	625
Asset-backed securities	—	8,578	596	9,174	—	9,174
Other debt securities	—	688	—	688	—	688
Non-marketable equity securities ⁽⁴⁾	—	58	1,135	1,193	—	1,193
Total investments	\$157,644	\$137,626	\$5,059	\$300,329	\$—	\$300,329

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In millions of dollars at December 31, 2015	Level 1 ⁽¹⁾	Level 2 ⁽¹⁾	Level 3	Gross inventory	Netting ⁽²⁾	Net balance
Loans ⁽⁵⁾	\$—	\$2,839	\$2,166	\$5,005	\$—	\$5,005
Mortgage servicing rights	—	—	1,781	1,781	—	1,781
Non-trading derivatives and other financial assets measured on a recurring basis, gross	\$—	\$7,882	\$180	\$8,062		
Cash collateral paid ⁽⁶⁾				8		
Netting of cash collateral received					\$(1,949)	
Non-trading derivatives and other financial assets measured on a recurring basis	\$—	\$7,882	\$180	\$8,070	\$(1,949)	\$6,121
Total assets	\$260,938	\$1,013,230	\$32,637	\$1,311,724	\$(610,568)	\$701,156
Total as a percentage of gross assets ⁽⁷⁾	20.0	%77.5	%2.5	%		
Liabilities						
Interest-bearing deposits	\$—	\$1,156	\$434	\$1,590	\$—	\$1,590
Federal funds purchased and securities loaned or sold under agreements to repurchase	—	76,507	1,247	77,754	(40,911)	36,843
Trading account liabilities						
Securities sold, not yet purchased	\$48,452	\$9,176	\$199	\$57,827	\$—	\$57,827
Other trading liabilities	—	2,093	—	2,093	—	2,093
Total trading liabilities	\$48,452	\$11,269	\$199	\$59,920	\$—	\$59,920
Trading derivatives						
Interest rate contracts	\$5	\$393,321	\$2,578	\$395,904		
Foreign exchange contracts	6	133,404	503	133,913		
Equity contracts	2,244	21,875	2,397	26,516		
Commodity contracts	263	17,329	2,961	20,553		
Credit derivatives	—	30,682	3,486	34,168		
Total trading derivatives	\$2,518	\$596,611	\$11,925	\$611,054		
Cash collateral received ⁽⁸⁾				\$13,628		
Netting agreements					\$(524,481)	
Netting of cash collateral paid					(42,609)	
Total trading derivatives	\$2,518	\$596,611	\$11,925	\$624,682	\$(567,090)	\$57,592
Short-term borrowings	\$—	\$1,198	\$9	\$1,207	\$—	\$1,207
Long-term debt	—	18,342	6,951	25,293	—	25,293
Non-trading derivatives and other financial liabilities measured on a recurring basis, gross	\$—	\$1,626	\$14	\$1,640		
Cash collateral received ⁽⁹⁾				37		
Netting of cash collateral paid					\$(53)	
Total non-trading derivatives and other financial liabilities measured on a recurring basis	\$—	\$1,626	\$14	\$1,677	\$(53)	\$1,624
Total liabilities	\$50,970	\$706,709	\$20,779	\$792,123	\$(608,054)	\$184,069
Total as a percentage of gross liabilities ⁽⁷⁾	6.5	%90.8	%2.7	%		

In 2015, the Company transferred assets of approximately \$3.3 billion from Level 1 to Level 2, respectively, primarily related to foreign government securities and equity securities not traded in active markets. In 2015, the Company transferred assets of approximately \$4.4 billion from Level 2 to Level 1, respectively, primarily related to foreign government bonds and equity securities traded with sufficient frequency to constitute a liquid market. In 2015, the Company transferred liabilities of approximately \$0.6 billion from Level 2 to Level 1. In 2015, the Company transferred liabilities of approximately \$0.4 billion from Level 1 to Level 2.

- Represents netting of: (i) the amounts due under securities purchased under agreements to resell and the amounts
- (2) owed under securities sold under agreements to repurchase; and (ii) derivative exposures covered by a qualifying master netting agreement and cash collateral offsetting.
 - (3) Reflects the net amount of \$47,520 million of gross cash collateral paid, of which \$42,609 million was used to offset trading derivative liabilities.
Amounts exclude \$0.9 billion investments measured at Net Asset Value (NAV) in accordance with ASU No.
 - (4) 2015-07, Fair Value Measurement (Topic 820): Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent). See Note 1 to the Consolidated Financial Statements.
 - (5) There is no allowance for loan losses recorded for loans reported at fair value.
 - (6) Reflects the net amount of \$61 million of gross cash collateral paid, of which \$53 million was used to offset non-trading derivative liabilities.
Because the amount of the cash collateral paid/received has not been allocated to the Level 1, 2 and 3 subtotals,
 - (7) these percentages are calculated based on total assets and liabilities measured at fair value on a recurring basis, excluding the cash collateral paid/received on derivatives.
 - (8) Reflects the net amount of \$56,855 million of gross cash collateral received, of which \$43,227 million was used to offset trading derivative assets.
 - (9) Reflects the net amount of \$1,986 million of gross cash collateral received, of which \$1,949 million was used to offset non-trading derivative assets.

Fair Value Levels

In millions of dollars at December 31, 2014	Level 1 ⁽¹⁾	Level 2 ⁽¹⁾	Level 3	Gross inventory	Netting ⁽²⁾	Net balance
Assets						
Federal funds sold and securities borrowed or purchased under agreements to resell	\$—	\$187,922	\$3,398	\$191,320	\$(47,129)	\$144,191
Trading non-derivative assets						
Trading mortgage-backed securities						
U.S. government-sponsored agency guaranteed Residential	—	25,968	1,085	27,053	—	27,053
Commercial	—	2,158	2,680	4,838	—	4,838
Total trading mortgage-backed securities	—	3,903	440	4,343	—	4,343
U.S. Treasury and federal agency securities	\$—	\$32,029	\$4,205	\$36,234	\$—	\$36,234
State and municipal	\$15,991	\$4,483	\$—	\$20,474	\$—	\$20,474
Foreign government	—	3,161	241	3,402	—	3,402
Corporate	37,995	26,736	206	64,937	—	64,937
Equity securities	1,337	25,640	820	27,797	—	27,797
Asset-backed securities	51,346	4,281	2,219	57,846	—	57,846
Other trading assets	—	1,252	3,294	4,546	—	4,546
Total trading non-derivative assets	—	9,221	4,372	13,593	—	13,593
Total trading non-derivative assets	\$106,669	\$106,803	\$15,357	\$228,829	\$—	\$228,829
Trading derivatives						
Interest rate contracts	\$74	\$634,318	\$4,061	\$638,453		
Foreign exchange contracts	—	154,744	1,250	155,994		
Equity contracts	2,748	19,969	2,035	24,752		
Commodity contracts	647	21,850	1,023	23,520		
Credit derivatives	—	40,618	2,900	43,518		
Total trading derivatives	\$3,469	\$871,499	\$11,269	\$886,237		
Cash collateral paid ⁽³⁾				\$6,523		
Netting agreements					\$(777,178)	
Netting of cash collateral received ⁽⁴⁾⁽⁸⁾					(47,625)	
Total trading derivatives	\$3,469	\$871,499	\$11,269	\$892,760	\$(824,803)	\$67,957
Investments						
Mortgage-backed securities						
U.S. government-sponsored agency guaranteed Residential	\$—	\$36,053	\$38	\$36,091	\$—	\$36,091
Commercial	—	8,355	8	8,363	—	8,363
Total investment mortgage-backed securities	—	553	1	554	—	554
U.S. Treasury and federal agency securities	\$—	\$44,961	\$47	\$45,008	\$—	\$45,008
State and municipal	\$110,710	\$12,974	\$6	\$123,690	\$—	\$123,690
Foreign government	—	10,519	2,180	12,699	—	12,699
Corporate	37,280	52,739	678	90,697	—	90,697
Equity securities	1,739	9,746	672	12,157	—	12,157
Asset-backed securities	1,770	274	681	2,725	—	2,725
Other debt securities	—	11,957	549	12,506	—	12,506
Non-marketable equity securities ⁽⁵⁾	—	661	—	661	—	661
Total investments	—	233	1,460	1,693	—	1,693
Total investments	\$151,499	\$144,064	\$6,273	\$301,836	\$—	\$301,836

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In millions of dollars at December 31, 2014	Level 1 ⁽¹⁾	Level 2 ⁽¹⁾	Level 3	Gross inventory	Netting ⁽²⁾	Net balance
Loans ⁽⁶⁾	\$—	\$2,793	\$3,108	\$5,901	\$—	\$5,901
Mortgage servicing rights	—	—	1,845	1,845	—	1,845
Non-trading derivatives and other financial assets measured on a recurring basis, gross	\$—	\$9,352	\$78	\$9,430		
Cash collateral paid ⁽⁷⁾				123		
Netting of cash collateral received ⁽⁸⁾					\$(1,791)	
Non-trading derivatives and other financial assets measured on a recurring basis	\$—	\$9,352	\$78	\$9,553	\$(1,791)	\$7,762
Total assets	\$261,637	\$1,322,433	\$41,328	\$1,632,044	\$(873,723)	\$758,321
Total as a percentage of gross assets ⁽⁷⁾	16.1	%81.4	%2.5	%		
Liabilities						
Interest-bearing deposits	\$—	\$1,198	\$486	\$1,684	\$—	\$1,684
Federal funds purchased and securities loaned or sold under agreements to repurchase	—	82,811	1,043	83,854	(47,129)	36,725
Trading account liabilities						
Securities sold, not yet purchased	59,463	11,057	424	70,944	—	70,944
Other trading liabilities	—	—	—	—	—	—
Total trading liabilities	\$59,463	\$11,057	\$424	\$70,944	\$—	\$70,944
Trading account derivatives						
Interest rate contracts	\$77	\$617,933	\$4,272	\$622,282		
Foreign exchange contracts	—	158,354	472	158,826		
Equity contracts	2,955	26,616	2,898	32,469		
Commodity contracts	669	22,872	2,645	26,186		
Credit derivatives	—	39,787	3,643	43,430		
Total trading derivatives	\$3,701	\$865,562	\$13,930	\$883,193		
Cash collateral received ⁽⁸⁾				\$9,846		
Netting agreements					\$(777,178)	
Netting of cash collateral paid ⁽³⁾					(47,769)	
Total trading derivatives	\$3,701	\$865,562	\$13,930	\$893,039	\$(824,947)	\$68,092
Short-term borrowings	\$—	\$1,152	\$344	\$1,496	\$—	\$1,496
Long-term debt	—	18,890	7,290	26,180	—	26,180
Non-trading derivatives and other financial liabilities measured on a recurring basis, gross	\$—	\$1,777	\$7	\$1,784		
Cash collateral received ⁽⁹⁾				7		
Netting of cash collateral paid ⁽⁷⁾					\$(15)	
Non-trading derivatives and other financial liabilities measured on a recurring basis	\$—	\$1,777	\$7	\$1,791	\$(15)	\$1,776
Total liabilities	\$63,164	\$982,447	\$23,524	\$1,078,988	\$(872,091)	\$206,897
Total as a percentage of gross liabilities ⁽⁴⁾	5.9	%91.9	%2.2	%		

(1) In 2014, the Company transferred assets of approximately \$4.1 billion from Level 1 to Level 2, primarily related to foreign government securities not traded with sufficient frequency to constitute an active market and Citi refining its methodology for certain equity contracts to reflect the prevalence of off-exchange trading. In 2014, the Company transferred assets of approximately \$4.2 billion from Level 2 to Level 1, primarily related to foreign government bonds traded with sufficient frequency to constitute a liquid market. In 2014, the Company transferred liabilities of approximately \$1.4 billion from Level 1 to Level 2, as Citi refined its methodology for certain equity contracts to reflect the prevalence of off-exchange trading. In 2014, there were no material liability transfers from

Level 2 to Level 1.

(2) Represents netting of (i) the amounts due under securities purchased under agreements to resell and the amounts owed under securities sold under agreements to repurchase; and (ii) derivative exposures covered by a qualifying master netting agreement and cash collateral offsetting.

(3) Reflects the net amount of \$54,292 million of gross cash collateral paid, of which \$47,769 million was used to offset trading derivative liabilities.

(4) Because the amount of the cash collateral paid/received has not been allocated to the Level 1, 2 and 3 subtotals, these percentages are calculated based on total assets and liabilities measured at fair value on a recurring basis, excluding the cash collateral paid/received on derivatives.

(5) Amounts exclude \$1.1 billion investments measured at Net Asset Value (NAV) in accordance with ASU No. 2015-07, Fair Value Measurement (Topic 820): Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent). See Note 1 to the Consolidated Financial Statements.

(6) There is no allowance for loan losses recorded for loans reported at fair value.

(7) Reflects the net amount of \$138 million of gross cash collateral paid, of which \$15 million was used to offset non-trading derivative liabilities.

(8) Reflects the net amount of \$57,471 million of gross cash collateral received, of which \$47,625 million was used to offset trading derivative assets.

(9) Reflects the net amount of \$1,798 million of gross cash collateral received, of which \$1,791 million was used to offset non-trading derivative assets.

Changes in Level 3 Fair Value Category

The following tables present the changes in the Level 3 fair value category for the years ended December 31, 2015 and 2014. As discussed above, the Company classifies financial instruments as Level 3 of the fair value hierarchy when there is reliance on at least one significant unobservable input to the valuation model. In addition to these unobservable inputs, the valuation models for Level 3 financial instruments typically also rely on a number of inputs that are readily observable either directly or indirectly. The gains and losses presented below include changes in the fair value related to both observable and unobservable inputs.

The Company often hedges positions with offsetting positions that are classified in a different level. For example, the gains and losses for assets and liabilities in the Level 3 category presented in the tables below do not reflect the effect of offsetting losses and gains on hedging instruments that have been classified by the Company in the Level 1 and Level 2 categories. In addition, the Company hedges items classified in the Level 3 category with instruments also classified in Level 3 of the fair value hierarchy. The effects of these hedges are presented gross in the following tables:

Level 3 Fair Value Rollforward

In millions of dollars	Dec. 31, 2014	Net realized/unrealized gains (losses) incl. in					Purchases	Issuances	Sales	Settlements	Dec. 31, 2015	Unrealized gains (losses) still held ⁽³⁾
		Principal transactions	Other ⁽¹⁾	into Level 3 ⁽²⁾	out of Level 3	Transfers						
Assets												
Federal funds sold and securities borrowed or purchased under agreements to resell	\$3,398	\$(147)	\$—	\$279	\$(2,856)	\$784	\$—	\$—	\$(121)	\$1,337	\$(5)	
Trading non-derivative assets												
Trading mortgage-backed securities												
U.S. government-sponsored agency guaranteed	1,085	24	—	872	(1,277)	796	—	(756)	—	744	(4)	
Residential	2,680	254	—	370	(480)	1,574	—	(3,072)	—	1,326	(101)	
Commercial	440	18	—	252	(157)	697	—	(733)	—	517	(7)	
Total trading mortgage-backed securities	\$4,205	\$296	\$—	\$1,494	\$(1,914)	\$3,067	\$—	\$(4,561)	\$—	\$2,587	\$(112)	
U.S. Treasury and federal agency securities	\$—	\$—	\$—	\$2	\$(1)	\$1	\$—	\$(1)	\$—	\$1	\$—	
State and municipal	241	—	—	67	(35)	183	—	(105)	—	351	(7)	
Foreign government	206	(10)	—	53	(100)	271	—	(169)	(54)	197	6	
Corporate	820	111	—	186	(288)	802	—	(1,244)	(11)	376	(29)	
Equity securities	2,219	547	—	344	(371)	1,377	—	(432)	—	3,684	464	
Asset-backed securities	3,294	141	—	663	(282)	4,426	—	(5,503)	—	2,739	(174)	
Other trading assets	4,372	180	—	968	(3,290)	2,504	51	(2,110)	(192)	2,483	(45)	

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Total trading non-derivative assets	\$15,357	\$1,265	\$—	\$3,777	\$(6,281)	\$12,631	\$51	\$(14,125)	\$(257)	\$12,418	\$103
Trading derivatives, net ⁽⁴⁾											
Interest rate contracts	\$(211)	\$(492)	\$—	\$(124)	\$15	\$24	\$—	\$141	\$152	\$(495)	\$553
Foreign exchange contracts	778	(245)	—	(11)	27	393	—	(381)	59	620	(12)
Equity contracts	(863)	148	—	(126)	66	496	—	(334)	(187)	(800)	41
Commodity contracts	(1,622)	(753)	—	214	(28)	—	—	—	328	(1,861)	(257)
Credit derivatives	(743)	555	—	9	61	1	—	(3)	427	307	442
Total trading derivatives, net ⁽⁴⁾	\$(2,661)	\$(787)	\$—	\$(38)	\$141	\$914	\$—	\$(577)	\$779	\$(2,229)	\$767

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In millions of dollars	Dec. 31, 2014	Net realized/unrealized gains (losses) Transfers							Dec. 31, 2015	Unrealized gains (losses) still held ⁽³⁾	
		Principal transactions	Other ⁽¹⁾	into Level 3 ⁽²⁾	out of Level 3	Purchases	Issuances	Sales			Settlements
Investments											
Mortgage-backed securities											
U.S.											
government-sponsored agency guaranteed	\$38	\$—	\$29	\$171	\$(118)	\$62	\$—	\$(43)	\$—	\$139	\$(2)
Residential	8	—	(1)	4	—	11	—	(18)	—	4	—
Commercial	1	—	—	4	(3)	—	—	—	—	2	—
Total investment mortgage-backed securities	\$47	\$—	\$28	\$179	\$(121)	\$73	\$—	\$(61)	\$—	\$145	\$(2)
U.S. Treasury and federal agency securities											
State and municipal	2,180	—	(23)	834	(721)	842	—	(671)	(249)	2,192	9
Foreign government	678	—	45	(5)	(270)	601	—	(519)	(270)	260	(1)
Corporate	672	—	(7)	15	(52)	144	—	(134)	(35)	603	(4)
Equity securities	681	—	(22)	12	(14)	7	—	(540)	—	124	(120)
Asset-backed securities	549	—	(17)	45	(58)	202	—	(125)	—	596	14
Other debt securities	—	—	—	—	—	10	—	(10)	—	—	—
Non-marketable equity securities	1,460	—	(50)	76	6	5	—	(58)	(304)	1,135	26
Total investments	\$6,273	\$—	\$(46)	\$1,156	\$(1,230)	\$1,890	\$—	\$(2,126)	\$(858)	\$5,059	\$(78)
Loans											
Mortgage servicing rights	1,845	—	110	—	—	—	214	(38)	(350)	1,781	(390)
Other financial assets measured on a recurring basis	78	—	100	201	(66)	6	208	(85)	(262)	180	582
Liabilities											
Interest-bearing deposits											
Federal funds purchased and securities loaned or sold under agreements to repurchase	1,043	(23)	—	—	—	—	—	302	(121)	1,247	134
Trading account liabilities											
Securities sold, not yet purchased	424	88	—	311	(231)	—	—	385	(602)	199	(25)
Short-term borrowings	344	11	—	23	(30)	—	1	—	(318)	9	(4)

Long-term debt	7,290	539	—	2,311	(3,958)	—	3,407	—	(1,560)	6,951	(347)
Other financial liabilities measured on a recurring basis	7	—	(11)	10	(4)	(5)	5	2	(12)	14	(4)

- Changes in fair value for available-for-sale investments are recorded in Accumulated other comprehensive income (1)(loss), unless related to other-than-temporary impairment, while gains and losses from sales are recorded in Realized gains (losses) from sales of investments on the Consolidated Statement of Income.
- (2) Unrealized gains (losses) on MSRs are recorded in Other revenue on the Consolidated Statement of Income.
- Represents the amount of total gains or losses for the period, included in earnings (and Accumulated other comprehensive income (loss) for changes in fair value of available-for-sale investments), attributable to the change in fair value relating to assets and liabilities classified as Level 3 that are still held at December 31, 2015.
- (4) Total Level 3 derivative assets and liabilities have been netted in these tables for presentation purposes only.

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In millions of dollars	Dec. 31, 2013	Net realized/unrealized gains (losses) incl. in				Purchases	Issuances	Settlements	Dec. 31, 2014	Unrealized gains (losses) still held ⁽³⁾	
		Principal transactions	Other ⁽¹⁾	into Level 3 ⁽²⁾	out of Level 3						
Assets											
Federal funds sold and securities borrowed or purchased under agreements to resell	\$3,566	\$(61)	\$—	\$84	\$(8)	\$75	\$—	\$—	\$(258)	\$3,398	\$133
Trading non-derivative assets											
Trading mortgage-backed securities											
U.S. government-sponsored agency guaranteed	1,094	117	—	854	(966)	714	26	(695)	\$(59)	1,085	8
Residential	2,854	457	—	442	(514)	2,582	—	(3,141)	—	2,680	132
Commercial	256	17	—	187	(376)	758	—	(402)	—	440	(4)
Total trading mortgage-backed securities	\$4,204	\$591	\$—	\$1,483	\$(1,856)	\$4,054	\$26	\$(4,238)	\$(59)	\$4,205	\$136
U.S. Treasury and federal agency securities	\$—	\$3	\$—	\$—	\$—	\$7	\$—	\$(10)	\$—	\$—	\$—
State and municipal	222	10	—	150	(105)	34	—	(70)	—	241	1
Foreign government	416	(56)	—	130	(253)	676	—	(707)	—	206	5
Corporate	1,835	(127)	—	465	(502)	1,988	—	(2,839)	—	820	(139)
Equity securities	1,057	87	—	142	(209)	1,437	—	(295)	—	2,219	337
Asset-backed securities	4,342	876	—	158	(332)	3,893	—	(5,643)	—	3,294	3
Other trading assets	3,184	269	—	2,637	(2,278)	5,427	—	(4,490)	\$(377)	4,372	31
Total trading non-derivative assets	\$15,260	\$1,653	\$—	\$5,165	\$(5,535)	\$17,516	\$26	\$(18,292)	\$(436)	\$15,357	\$374
Trading derivatives, net ⁽⁴⁾											
Interest rate contracts	\$839	\$(818)	\$—	\$24	\$(98)	\$113	\$—	\$(162)	\$(109)	\$(211)	\$(414)
Foreign exchange contracts	695	92	—	47	(39)	59	—	(59)	\$(17)	778	56
Equity contracts	(858)	482	—	(916)	766	435	—	(279)	\$(493)	(863)	(274)
Commodity contracts	(1,393)	\$(338)	—	92	(12)	—	—	29	29	(1,622)	(174)
Credit derivatives	(274)	\$(567)	—	4	(156)	103	—	(3)	150	(743)	(369)
Total trading derivatives, net ⁽⁴⁾	\$(991)	\$(1,149)	\$—	\$(749)	\$461	\$710	\$—	\$(503)	\$(440)	\$(2,661)	\$(1,175)
Investments											
Mortgage-backed securities	\$187	\$—	\$52	\$60	\$(203)	\$17	\$—	\$(73)	\$(2)	\$38	\$(8)

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U.S. government-sponsored agency guaranteed												
Residential	102	—	33	31	(2)17	—	(173)—	8	—	
Commercial	—	—	(6	)4	(7	)10	—	—	—	1	—
Total investment mortgage-backed securities	\$289	\$—	\$79	\$95	\$(212)\$44	\$—	\$(246)\$(2)\$47	\$(8)
U.S. Treasury and federal agency securities	\$8	\$—	\$—	\$—	\$—	\$—	\$—	\$(2	)\$—	\$6	\$—
State and municipal	1,643	—	(64	)811	(584	)923	—	(549	)—	2,180	49
Foreign government	344	—	(27)286	(105)851	—	(490)181)678	(17)
Corporate	285	—	(6)26	(143)728	—	(218)—	672	(4)
Equity securities	815	—	111	19	(19)10	—	(255)—	681	(78)
Asset-backed securities	1,960	—	41	—	(47)95	—	(195)1,305)549	(18)
Other debt securities	50	—	(1	)—	—	116	—	(115	)50)—	—	
Non-marketable equity securities	2,508	—	211	67	—	416	—	(768)974)1,460	81	
Total investments	\$7,902	\$—	\$344	\$1,304	\$(1,110)	\$3,183	\$—	\$(2,838)\$(2,512)	\$6,273	\$5	

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In millions of dollars	Dec. 31, 2013	Net realized/unrealized gains (losses) incl. in		Transfers into out of		Purchases	Issuances	Sales	Settlements	Dec. 31, 2014	Unrealized gains (losses) still held ⁽³⁾
		Principal transactions	Other ⁽¹⁾⁽²⁾	Level 3	Level 3						
Loans	\$4,143	\$—	\$(233)	\$92	\$6	\$951	\$197	\$(895)	\$(1,153)	\$3,108	\$37
Mortgage servicing rights	2,718	—	(390)	—	—	—	217	(317)	(383)	1,845	(390)
Other financial assets measured on a recurring basis	181	—	100	(83)	—	3	178	(18)	(283)	78	14
Liabilities											
Interest-bearing deposits	\$890	\$—	\$357	\$5	\$(12)	\$—	\$127	\$—	\$(167)	\$486	\$(69)
Federal funds purchased and securities loaned or sold under agreements to repurchase	902	(6)	—	54	—	78	—	220	(217)	1,043	(34)
Trading account liabilities											
Securities sold, not yet purchased	590	(81)	—	79	(111)	—	—	534	(749)	424	(58)
Short-term borrowings	29	(31)	—	323	(12)	—	49	—	(76)	344	(8)
Long-term debt	7,621	109	49	2,701	(4,206)	—	3,893	—	(2,561)	7,290	(446)
Other financial liabilities measured on a recurring basis	10	—	(5)	7	(3)	(2)	1	(3)	(8)	7	(4)

Changes in fair value of available-for-sale investments are recorded in Accumulated other comprehensive income (1)(loss), unless related to other-than-temporary impairment, while gains and losses from sales are recorded in Realized gains (losses) from sales of investments on the Consolidated Statement of Income.

(2) Unrealized gains (losses) on MSR's are recorded in Other revenue on the Consolidated Statement of Income.

Represents the amount of total gains or losses for the period, included in earnings (and Accumulated other comprehensive income (loss) for changes in fair value of available-for-sale investments), attributable to the change in fair value relating to assets and liabilities classified as Level 3 that are still held at December 31, 2014.

(4) Total Level 3 derivative assets and liabilities have been netted in these tables for presentation purposes only.

Level 3 Fair Value Rollforward

The following were the significant Level 3 transfers for the period December 31, 2014 to December 31, 2015: Transfers of Federal Funds sold and securities borrowed or purchased under agreements to resell of \$2.9 billion from Level 3 to Level 2 related to shortening of the remaining tenor of certain reverse repos. There is more transparency and observability for repo curves used in the valuation of structured reverse repos with tenors up to five years; thus, these positions are generally classified as Level 2.

Transfers of U.S. government-sponsored agency guaranteed MBS in Trading account assets of \$0.9 billion from Level 2 to Level 3, and of \$1.3 billion from Level 3 to Level 2 primarily related to changes in observability due to market

trading activity.

• Transfers of other trading assets of \$1.0 billion from Level 2 to Level 3, and of \$3.3 billion from Level 3 to Level 2 primarily related to trading loans for which there were changes in volume of and transparency into market quotations.

• Transfers of Long-term debt of \$2.3 billion from Level 2 to Level 3, and of \$4.0 billion from Level 3 to Level 2, mainly related to structured debt, reflecting certain unobservable inputs becoming less significant and certain underlying market inputs being more observable.

The following were the significant Level 3 transfers for the period December 31, 2013 to December 31, 2014:

• Transfers of Long-term debt of \$2.7 billion from Level 2 to Level 3, and of \$4.2 billion from Level 3 to Level 2, mainly related to structured debt, reflecting changes in the significance of unobservable inputs as well as certain underlying market inputs becoming less or more observable.

• Transfers of other trading assets of \$2.6 billion from Level 2 to Level 3, and of \$2.3 billion from Level 3 to Level 2, related to trading loans, reflecting changes in the volume of market quotations.

Valuation Techniques and Inputs for Level 3 Fair Value Measurements

The Company's Level 3 inventory consists of both cash securities and derivatives of varying complexity. The valuation methodologies used to measure the fair value of these positions include discounted cash flow analysis, internal models and comparative analysis. A position is classified within Level 3 of the fair value hierarchy when at least one input is unobservable and is considered significant to its valuation. The specific reason an input is deemed unobservable varies. For example, at least one significant input to the pricing model is not observable in the market, at least one significant input has been adjusted to make it more representative of the position being valued, or the price quote available does not reflect sufficient trading activities.

The following tables present the valuation techniques covering the majority of Level 3 inventory and the most significant unobservable inputs used in Level 3 fair value measurements. Differences between this table and amounts presented in the Level 3 Fair Value Rollforward table represent individually immaterial items that have been measured using a variety of valuation techniques other than those listed.

Valuation Techniques and Inputs for Level 3 Fair Value Measurements

As of December 31, 2015	Fair value ⁽¹⁾ (in millions)	Methodology	Input	Low ⁽²⁾⁽³⁾	High ⁽²⁾⁽³⁾	Weighted average ⁽⁴⁾	
Assets							
Federal funds sold and securities borrowed or purchased under agreements to resell	\$ 1,337	Model-based	IR log-normal volatility	29.02	% 137.02	% 37.90	%
			Interest rate	—	% 2.03	% 0.27	%
Mortgage-backed securities	\$ 1,287	Price-based	Price	\$3.45	\$ 109.21	\$ 78.25	
	1,377	Yield analysis	Yield	0.50	% 14.07	% 4.83	%
State and municipal, foreign government, corporate and other debt securities	\$ 3,761	Price-based	Price	\$—	\$ 217.00	\$ 79.41	
	1,719	Cash flow	Credit spread	20 bps	600 bps	251 bps	
Equity securities ⁽⁵⁾	\$ 3,499	Model-based	WAL	1.5 years	1.5 years	1.5 years	
			Redemption rate	41.21	% 41.21	% 41.21	%
Asset-backed securities	\$ 3,075	Price-based	Price	\$5.55	\$ 100.21	\$ 71.57	
Non-marketable equity	\$ 633	Comparables analysis	EBITDA multiples	6.80	x 10.80	x 9.05	x
	473	Price-based	Discount to price	—	% 90.00	% 10.89	%
			Price-to-book ratio	0.19x	1.09x	0.60x	
			Price	\$—	\$ 132.78	\$ 46.66	
Derivatives—gross							
Interest rate contracts (gross)	\$ 4,553	Model-based	IR log-normal volatility	17.41	% 137.02	% 37.60	%
			Mean reversion	(5.52)	)% 20.00	% 0.71	%
Foreign exchange contracts (gross)	\$ 1,326	Model-based	Foreign exchange (FX) volatility	0.38	% 25.73	% 11.63	%
	275	Cash flow	Interest rate	7.50	% 7.50	% 7.50	%
			Forward price	1.48	% 138.09	% 56.80	%
			Credit spread	3 bps	515 bps	235 bps	
			IR-IR correlation	(51.00))% 77.94	% 32.91	%

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Equity contracts (gross) ⁽⁷⁾	\$3,976	Model-based	IR-FX correlation	(20.30)% 60.00	% 48.85	%
			Equity volatility	11.87	% 49.57	% 27.33	%
			Equity-FX correlation	(88.17	)% 65.00	% (21.09)%
			Equity forward	82.72	% 100.53	% 95.20	%
			Equity-equity correlation	(80.54	)% 100.00	% 49.54	%
Commodity contracts (gross)	\$4,061	Model-based	Forward price	35.09	% 299.32	% 112.98	%
			Commodity volatility	5.00	% 83.00	% 24.00	%
			Commodity correlation	(57.00)% 91.00	% 30.00	%
Credit derivatives (gross)	\$5,849	Model-based	Recovery rate	1.00	% 75.00	% 32.49	%

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As of December 31, 2015	Fair value ⁽¹⁾ (in millions)	Methodology	Input	Low ⁽²⁾⁽³⁾	High ⁽²⁾⁽³⁾	Weighted average ⁽⁴⁾	
	1,424	Price-based	Credit correlation	5.00	% 90.00	% 43.48	%
			Price	\$0.33	\$ 101.00	\$ 61.52	
			Credit spread	1 bps	967 bps	133 bps	
			Upfront points	7.00	% 99.92	% 66.75	%
Nontrading derivatives and other financial assets and liabilities measured on a recurring basis (gross) ⁽⁶⁾	\$ 194	Model-based	Recovery rate	7.00	% 40.00	% 10.72	%
			Redemption rate	27.00	% 99.50	% 74.80	%
			Interest rate	5.26	% 5.28	% 5.27	%
Loans	\$ 750	Price-based	Yield	1.50	% 4.50	% 2.52	%
	892	Model-based	Price	\$—	\$ 106.98	\$ 40.69	
	524	Cash flow	Credit spread	29 bps	500 bps	105 bps	
Mortgage servicing rights	\$ 1,690	Cash flow	Yield	—	% 23.32	% 6.83	%
			WAL	3.38 years	7.48 years	5.5 years	
Liabilities							
Interest-bearing deposits	\$ 434	Model-based	Equity-IR correlation	23.00	% 39.00	% 34.51	%
			Forward price	35.09	% 299.32	% 112.72	%
			Commodity correlation	(57.00)	)% 91.00	% 30.00	%
			Commodity volatility	5.00	% 83.00	% 24.00	%
Federal funds purchased and securities loaned or sold under agreements to repurchase	\$ 1,245	Model-based	Interest rate	1.27	% 2.02	% 1.92	%
Trading account liabilities							
Securities sold, not yet purchased	\$ 152	Price-based	Price	\$—	\$ 217.00	\$ 87.78	
Short-term borrowings and long-term debt	\$ 7,004	Model-based	Mean reversion	(5.52)	)% 20.00	% 7.80	%
			Equity volatility	9.55	% 42.56	% 22.26	%
			Equity forward	82.72	% 100.80	% 94.48	%
			Equity-equity correlation	(80.54))% 100.00	% 49.16	%
			Forward price	35.09	% 299.32	% 106.32	%
			Equity-FX correlation	(88.20))% 56.85	% (31.76))%

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As of December 31, 2014	Fair value ⁽¹⁾ (in millions)	Methodology	Input	Low ⁽²⁾⁽³⁾	High ⁽²⁾⁽³⁾	Weighted average ⁽⁴⁾	
Assets							
Federal funds sold and securities borrowed or purchased under agreements to resell	\$3,156	Model-based	Interest rate	1.27	% 1.97	% 1.80	%
Mortgage-backed securities	\$2,874	Price-based	Price	\$—	\$ 127.87	\$ 81.43	
	1,117	Yield analysis	Yield	0.01	% 19.91	% 5.89	%
State and municipal, foreign government, corporate and other debt securities	\$5,937	Price-based	Price	\$—	\$ 124.00	\$ 90.62	
	1,860	Cash flow	Credit spread	25 bps	600 bps	233 bps	
Equity securities ⁽⁵⁾	\$2,163	Price-based	Price ⁽⁵⁾	\$—	\$ 141.00	\$ 91.00	
	679	Cash flow	Yield	4.00	% 5.00	% 4.50	%
			WAL	0.01	3.14	1.07 years	
			years	years	years		
Asset-backed securities	\$3,607	Price-based	Price	\$—	\$ 105.50	\$ 67.01	
Non-marketable equity	\$ 1,224	Price-based	Discount to price	—	% 90.00	% 4.04	%
	1,055	Comparables analysis	EBITDA multiples	2.90	x 13.10	x 9.77	x
			PE ratio	8.10	x 13.10	x 8.43	x
			Price-to-book ratio	0.99	x 1.56	x 1.15	x
Derivatives—gross							
Interest rate contracts (gross)	\$8,309	Model-based	Interest rate (IR) log-normal volatility	18.05	% 90.65	% 30.21	%
			Mean reversion	1.00	% 20.00	% 10.50	%
Foreign exchange contracts (gross)	\$ 1,428	Model-based	Foreign exchange (FX) volatility	0.37	% 58.40	% 8.57	%
	294	Cash flow	Interest rate	3.72	% 8.27	% 5.02	%
			IR-FX correlation	40.00	% 60.00	% 50.00	%
Equity contracts (gross) ⁽⁷⁾	\$4,431	Model-based	Equity volatility	9.56	% 82.44	% 24.61	%
	502	Price-based	Equity forward	84.10	% 100.80	% 94.10	%
			Equity-FX correlation	(88.20)	)% 48.70	%(25.17))%
			Equity-equity correlation	(66.30)	)% 94.80	%(36.87))%
			Price	\$0.01	\$ 144.50	\$ 93.05	
Commodity contracts (gross)	\$3,606	Model-based	Commodity volatility	5.00	% 83.00	% 24.00	%
			Commodity correlation	(57.00)	)% 91.00	%(30.00))%
			Forward price	35.34	% 268.77	% 101.74	%
Credit derivatives (gross)	\$4,944	Model-based	Recovery rate	13.97	% 75.00	% 37.62	%
	1,584	Price-based	Credit correlation	—	% 95.00	% 58.76	%
			Price	\$ 1.00	\$ 144.50	\$ 53.86	

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			Credit spread	1 bps	3,380 bps	180 bps	
			Upfront points	0.39	100.00	52.26	
Non-trading derivatives and other financial assets and liabilities measured on a recurring basis (gross) ⁽⁶⁾	\$74	Model-based	Redemption rate	13.00	% 99.50	% 68.73	%
			Forward Price	107.00	% 107.10	% 107.05	%
Loans	\$1,095	Cash flow	Yield	1.60	% 4.50	% 2.23	%
	832	Model-based	Price	\$4.72	\$106.55	\$98.56	
	740	Price-based	Credit spread	35 bps	500 bps	199 bps	
	441	Yield analysis					

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As of December 31, 2014	Fair value ⁽¹⁾ (in millions)	Methodology	Input	Low ⁽²⁾⁽³⁾	High ⁽²⁾⁽³⁾	Weighted average ⁽⁴⁾	
Mortgage servicing rights	\$ 1,750	Cash flow	Yield	5.19	% 21.40	% 10.25	%
			WAL	3.31	7.89	5.17 years	
				years	years		
Liabilities							
Interest-bearing deposits	\$ 486	Model-based	Equity-IR correlation	34.00	% 37.00	% 35.43	%
			Commodity correlation	(57.00	)% 91.00	% 30.00	%
			Commodity volatility	5.00	% 83.00	% 24.00	%
			Forward price	35.34	% 268.77	% 101.74	%
Federal funds purchased and securities loaned or sold under agreements to repurchase	\$ 1,043	Model-based	Interest rate	0.74	% 2.26	% 1.90	%
Trading account liabilities							
Securities sold, not yet purchased	\$ 251	Model-based	Credit-IR correlation	(70.49	)% 8.81	% 47.17	%
	\$ 142	Price-based	Price	\$—	\$ 117.00	\$ 70.33	
Short-term borrowings and long-term debt	\$ 7,204	Model-based	IR log-normal volatility	18.05	% 90.65	% 30.21	%
			Mean reversion	1.00	% 20.00	% 10.50	%
			Equity volatility	10.18	% 69.65	% 23.72	%
			Credit correlation	87.50	% 87.50	% 87.50	%
			Equity forward	89.50	% 100.80	% 95.80	%
			Forward price	35.34	% 268.77	% 101.80	%
			Commodity correlation	(57.00	)% 91.00	% 30.00	%
			Commodity volatility	5.00	% 83.00	% 24.00	%

(1) The fair value amounts presented in these tables represent the primary valuation technique or techniques for each class of assets or liabilities.

(2) Some inputs are shown as zero due to rounding.

(3) When the low and high inputs are the same, there is either a constant input applied to all positions, or the methodology involving the input applies to only one large position.

(4) Weighted averages are calculated based on the fair values of the instruments.

(5) For equity securities, the price and fund NAV inputs are expressed on an absolute basis, not as a percentage of the notional amount.

(6) Both trading and nontrading account derivatives—assets and liabilities—are presented on a gross absolute value basis.

(7) Includes hybrid products.

Sensitivity to Unobservable Inputs and Interrelationships between Unobservable Inputs

The impact of key unobservable inputs on the Level 3 fair value measurements may not be independent of one another. In addition, the amount and direction of the impact on a fair value measurement for a given change in an unobservable input depends on the nature of the instrument as well as whether the Company holds the instrument as an asset or a liability. For certain instruments, the pricing, hedging and risk management are sensitive to the correlation between various inputs rather than on the analysis and aggregation of the individual inputs.

The following section describes the sensitivities and interrelationships of the most significant unobservable inputs used by the Company in Level 3 fair value measurements.

Correlation

Correlation is a measure of the extent to which two or more variables change in relation to each other. A variety of correlation-related assumptions are required for a wide range of instruments, including equity and credit baskets, foreign-exchange options, CDOs backed by loans or bonds, mortgages, subprime mortgages and many other instruments. For almost all of these instruments, correlations are not observable in the market and must be calculated using historical information. Estimating correlation can be especially difficult where it may vary over time. Calculating correlation information from market data requires significant assumptions regarding the informational efficiency of the market (for example, swaption markets). Changes in correlation levels can have a major impact, favorable or unfavorable, on the value of an instrument, depending on its nature. A change in the default correlation of the fair value of the underlying bonds comprising a CDO structure would affect the fair value of the senior tranche. For example, an increase in the default correlation of the underlying bonds would reduce the fair value of the senior tranche, because highly correlated instruments produce larger losses in the event of default and a part of these losses would become attributable to the senior tranche. That same change in default correlation would have a different impact on junior tranches of the same structure.

Volatility

Volatility represents the speed and severity of market price changes and is a key factor in pricing options. Typically, instruments can become more expensive if volatility increases. For example, as an index becomes more volatile, the cost to Citi of maintaining a given level of exposure increases because more frequent rebalancing of the portfolio is required. Volatility generally depends on the tenor of the underlying instrument and the strike price or level defined in the contract. Volatilities for certain combinations of tenor and strike are not observable. The general relationship between changes in the value of a portfolio to changes in volatility also depends on changes in interest rates and the level of the underlying index. Generally, long option positions (assets) benefit from increases in volatility, whereas short option positions (liabilities) will suffer losses. Some instruments are more sensitive to changes in volatility than others. For example, an

at-the-money option would experience a larger percentage change in its fair value than a deep-in-the-money option. In addition, the fair value of an option with more than one underlying security (for example, an option on a basket of bonds) depends on the volatility of the individual underlying securities as well as their correlations.

Yield

Adjusted yield is generally used to discount the projected future principal and interest cash flows on instruments, such as asset-backed securities. Adjusted yield is impacted by changes in the interest rate environment and relevant credit spreads.

In some circumstances, the yield of an instrument is not observable in the market and must be estimated from historical data or from yields of similar securities. This estimated yield may need to be adjusted to capture the characteristics of the security being valued. In other situations, the estimated yield may not represent sufficient market liquidity and must be adjusted as well. Whenever the amount of the adjustment is significant to the value of the security, the fair value measurement is classified as Level 3.

Prepayment

Voluntary unscheduled payments (prepayments) change the future cash flows for the investor and thereby change the fair value of the security. The effect of prepayments is more pronounced for residential mortgage-backed securities. An increase in prepayments—in speed or magnitude—generally creates losses for the holder of these securities. Prepayment is generally negatively correlated with delinquency and interest rate. A combination of low prepayment and high delinquencies amplify each input's negative impact on mortgage securities' valuation. As prepayment speeds change, the weighted average life of the security changes, which impacts the valuation either positively or negatively, depending upon the nature of the security and the direction of the change in the weighted average life.

Recovery

Recovery is the proportion of the total outstanding balance of a bond or loan that is expected to be collected in a liquidation scenario. For many credit securities (such as asset-backed securities), there is no directly observable market input for recovery, but indications of recovery levels are available from pricing services. The assumed recovery of a security may differ from its actual recovery that will be observable in the future. The recovery rate impacts the valuation of credit securities. Generally, an increase in the recovery rate assumption increases the fair value of the security. An increase in loss severity, the inverse of the recovery rate, reduces the amount of principal available for distribution and, as a result, decreases the fair value of the security.

Credit Spread

Credit spread is a component of the security representing its credit quality. Credit spread reflects the market perception of changes in prepayment, delinquency and recovery rates, therefore capturing the impact of other variables on the fair value. Changes in credit spread affect the fair value of

securities differently depending on the characteristics and maturity profile of the security. For example, credit spread is a more significant driver of the fair value measurement of a high yield bond as compared to an investment grade bond. Generally, the credit spread for an investment grade bond is also more observable and less volatile than its high yield counterpart.

Qualitative Discussion of the Ranges of Significant Unobservable Inputs

The following section describes the ranges of the most significant unobservable inputs used by the Company in Level 3 fair value measurements. The level of aggregation and the diversity of instruments held by the Company lead to a wide range of unobservable inputs that may not be evenly distributed across the Level 3 inventory.

Correlation

There are many different types of correlation inputs, including credit correlation, cross-asset correlation (such as equity-interest rate correlation), and same-asset correlation (such as interest rate-interest rate correlation). Correlation inputs are generally used to value hybrid and exotic instruments. Generally, same-asset correlation inputs have a narrower range than cross-asset correlation inputs. However, due to the complex and unique nature of these instruments, the ranges for correlation inputs can vary widely across portfolios.

Volatility

Similar to correlation, asset-specific volatility inputs vary widely by asset type. For example, ranges for foreign exchange volatility are generally lower and narrower than equity volatility. Equity volatilities are wider due to the nature of the equities market and the terms of certain exotic instruments. For most instruments, the interest rate volatility input is on the lower end of the range; however, for certain structured or exotic instruments (such as market-linked deposits or exotic interest rate derivatives), the range is much wider.

Yield

Ranges for the yield inputs vary significantly depending upon the type of security. For example, securities that typically have lower yields, such as municipal bonds, will fall on the lower end of the range, while more illiquid securities or securities with lower credit quality, such as certain residual tranche asset-backed securities, will have much higher yield inputs.

Credit Spread

Credit spread is relevant primarily for fixed income and credit instruments; however, the ranges for the credit spread input can vary across instruments. For example, certain fixed income instruments, such as certificates of deposit, typically have lower credit spreads, whereas certain derivative instruments with high-risk counterparties are typically subject to higher credit spreads when they are uncollateralized or have a longer tenor. Other instruments, such as credit default swaps, also have credit spreads that vary with the attributes of the

underlying obligor. Stronger companies have tighter credit spreads, and weaker companies have wider credit spreads.

Price

The price input is a significant unobservable input for certain fixed income instruments. For these instruments, the price input is expressed as a percentage of the notional amount, with a price of \$100 meaning that the instrument is valued at par. For most of these instruments, the price varies between zero to \$100, or slightly above \$100. Relatively illiquid assets that have experienced significant losses since issuance, such as certain asset-backed securities, are at the lower end of the range, whereas most investment grade corporate bonds will fall in the middle to the higher end of the range. For certain structured debt instruments with embedded derivatives, the price input may be above \$100 to reflect the embedded features of the instrument (for example, a step-up coupon or a conversion option).

The price input is also a significant unobservable input for certain equity securities; however, the range of price inputs varies depending on the nature of the position, the number of shares outstanding and other factors.

Mean Reversion

A number of financial instruments require an estimate of the rate at which the interest rate reverts to its long term average. Changes in this estimate can significantly affect the fair value of these instruments. However, sometimes there is insufficient external market data to calibrate this parameter, especially when pricing more complex instruments. The level of mean reversion affects the correlation between short and long term interest rates. The fair values of more complex instruments, such as Bermudan swaptions (options with multiple exercise dates) and constant maturity spread options or structured debts with these embedded features, are more sensitive to the changes in this correlation as compared to less complex instruments, such as caps and floors.

Items Measured at Fair Value on a Nonrecurring Basis

Certain assets and liabilities are measured at fair value on a nonrecurring basis and therefore are not included in the tables above. These include assets measured at cost that have been written down to fair value during the periods as a result of an impairment. In addition, these assets include loans held-for-sale and other real estate owned that are measured at the lower of cost or market.

The following table presents the carrying amounts of all assets that were still held for which a nonrecurring fair value measurement was recorded:

In millions of dollars	Fair value	Level 2	Level 3
December 31, 2015			
Loans held-for-sale	\$ 10,326	\$ 6,752	\$ 3,574
Other real estate owned	107	15	92
Loans ⁽¹⁾	1,173	836	337
Total assets at fair value on a nonrecurring basis	\$ 11,606	\$ 7,603	\$ 4,003

In millions of dollars	Fair value	Level 2	Level 3
December 31, 2014			
Loans held-for-sale	\$ 4,152	\$ 1,084	\$ 3,068
Other real estate owned	102	21	81
Loans ⁽¹⁾	3,367	2,881	486
Total assets at fair value on a nonrecurring basis	\$ 7,621	\$ 3,986	\$ 3,635

(1) Represents impaired loans held for investment whose carrying amount is based on the fair value of the underlying collateral, primarily real estate secured loans.

The fair value of loans-held-for-sale is determined where possible using quoted secondary-market prices. If no such quoted price exists, the fair value of a loan is determined using quoted prices for a similar asset or assets, adjusted for the specific attributes of that loan. Fair value for the other real estate owned is based on appraisals. For loans whose carrying amount is based on the fair value of the underlying collateral, the fair values depend on the type of collateral. Fair value of the collateral is typically estimated based on quoted market prices if available, appraisals or other internal valuation techniques.

Where the fair value of the related collateral is based on an unadjusted appraised value, the loan is generally classified as Level 2. Where significant adjustments are made to the appraised value, the loan is classified as Level 3.

Additionally, for corporate loans, appraisals of the collateral are often based on sales of similar assets; however, because the prices of similar assets require significant adjustments to reflect the unique features of the underlying collateral, these fair value measurements are generally classified as Level 3.

Valuation Techniques and Inputs for Level 3 Nonrecurring Fair Value Measurements

The following tables present the valuation techniques covering the majority of Level 3 nonrecurring fair value measurements and the most significant unobservable inputs used in those measurements:

As of December 31, 2015	Fair value ⁽¹⁾ (in millions)	Methodology	Input	Low ⁽⁵⁾	High	Weighted average ⁽²⁾	
Loans held-for-sale	\$ 3,486	Price-based	Price	\$—	\$ 100.00	\$ 81.05	
Other real estate owned	90	Price-based	Discount to price ⁽⁴⁾	0.34	% 13.00	% 2.86	%
	2		Appraised value	\$—	\$ 8,518,230	\$ 3,813,045	
Loans ⁽³⁾	\$ 157	Recovery analysis	Recovery rate	11.79	% 60.00	% 23.49	%
	87	Price-based		13.00	% 34.00	% 7.99	%

Discount to
price⁽⁴⁾

- (1) The fair value amounts presented in this table represent the primary valuation technique or techniques for each class of assets or liabilities.
- (2) Weighted averages are calculated based on the fair values of the instruments.
- (3) Represents loans held for investment whose carrying amounts are based on the fair value of the underlying collateral.
- (4) Includes estimated costs to sell.
- (5) Some inputs are shown as zero due to rounding.

As of December 31, 2014	Fair value ⁽¹⁾ (in millions)	Methodology	Input	Low	High	Weighted average ⁽²⁾
Loans held-for-sale	\$2,740	Price-based	Price	\$92.00	\$100.00	\$99.54
			Credit spread	5 bps	358 bps	175 bps
Other real estate owned	\$76	Price-based	Appraised value	\$11,000	\$11,124,137	\$4,730,129
			Discount to price ⁽⁴⁾	13.00	%64.00	%28.80
Loans ⁽³⁾	\$437	Price-based	Discount to price ⁽⁴⁾	13.00	%34.00	%28.92

(1) The fair value amounts presented in this table represent the primary valuation technique or techniques for each class of assets or liabilities.

(2) Weighted averages are based on the fair values of the instruments.

(3) Represents loans held for investment whose carrying amounts are based on the fair value of the underlying collateral.

(4) Includes estimated costs to sell.

Nonrecurring Fair Value Changes

The following table presents total nonrecurring fair value measurements for the period, included in earnings, attributable to the change in fair value relating to assets that were still held:

In millions of dollars	Year ended December 31, 2015
Loans held-for-sale	\$(79)
Other real estate owned	(17)
Loans ⁽¹⁾	(142)
Total nonrecurring fair value gains (losses)	\$(238)

(1) Represents loans held for investment whose carrying amount is based on the fair value of the underlying collateral, primarily real estate loans.

In millions of dollars	Year ended December 31, 2014
Loans held-for-sale	\$34
Other real estate owned	(16)
Loans ⁽¹⁾	(533)
Total nonrecurring fair value gains (losses)	\$(515)

(1) Represents loans held for investment whose carrying amount is based on the fair value of the underlying collateral, primarily real estate loans.

Estimated Fair Value of Financial Instruments Not Carried at Fair Value

The table below presents the carrying value and fair value of Citigroup's financial instruments that are not carried at fair value. The table below therefore excludes items measured at fair value on a recurring basis presented in the tables above.

The disclosure also excludes leases, affiliate investments, pension and benefit obligations and insurance policy claim reserves. In addition, contract-holder fund amounts exclude certain insurance contracts. Also, as required, the disclosure excludes the effect of taxes, any premium or discount that could result from offering for sale at one time the entire holdings of a particular instrument, excess fair value associated with deposits with no fixed maturity, and other expenses that would be incurred in a market transaction. In addition, the table excludes the values of non-financial assets and liabilities, as well as a wide range of franchise, relationship and intangible values, which are integral to a full assessment of Citigroup's financial position and the value of its net assets.

The fair value represents management's best estimates based on a range of methodologies and assumptions. The

carrying value of short-term financial instruments not accounted for at fair value, as well as receivables and payables arising in the ordinary course of business, approximates fair value because of the relatively short period of time between their origination and expected realization. Quoted market prices are used when available for investments and for liabilities, such as long-term debt not carried at fair value. For loans not accounted for at fair value, cash flows are discounted at quoted secondary market rates or estimated market rates if available. Otherwise, sales of comparable loan portfolios or current market origination rates for loans with similar terms and risk characteristics are used. Expected credit losses are either embedded in the estimated future cash flows or incorporated as an adjustment to the discount rate used. The value of collateral is also considered. For liabilities such as long-term debt not accounted for at fair value and without quoted market prices, market borrowing rates of interest are used to discount contractual cash flows.

In billions of dollars	December 31, 2015		Estimated fair value		
	Carrying value	Estimated fair value	Level 1	Level 2	Level 3
Assets					
Investments	\$41.7	\$42.7	\$3.5	\$36.4	\$2.8
Federal funds sold and securities borrowed or purchased under agreements to resell	81.7	81.7	—	77.4	4.3
Loans ⁽¹⁾⁽²⁾	597.5	595.7	—	6.0	589.7
Other financial assets ⁽²⁾⁽³⁾	186.5	186.5	6.9	126.2	53.4
Liabilities					
Deposits	\$906.3	\$896.7	\$—	\$749.4	\$147.3
Federal funds purchased and securities loaned or sold under agreements to repurchase	109.7	109.7	—	109.4	0.3
Long-term debt ⁽⁴⁾	176.0	180.8	—	153.8	27.0
Other financial liabilities ⁽⁵⁾	97.6	97.6	—	18.0	79.6

In billions of dollars	December 31, 2014		Estimated fair value		
	Carrying value	Estimated fair value	Level 1	Level 2	Level 3
Assets					
Investments	\$30.5	\$32.2	\$4.5	\$25.2	\$2.5
Federal funds sold and securities borrowed or purchased under agreements to resell	98.4	98.4	—	89.7	8.7
Loans ⁽¹⁾⁽²⁾	620.0	617.6	—	5.6	612.0
Other financial assets ⁽²⁾⁽³⁾	213.8	213.8	8.3	151.9	53.6

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Liabilities					
Deposits	\$897.6	\$894.4	\$—	\$766.7	\$127.7
Federal funds purchased and securities loaned or sold under agreements to repurchase	136.7	136.7	—	136.5	0.2
Long-term debt ⁽⁴⁾	196.9	202.5	—	172.7	29.8
Other financial liabilities ⁽⁵⁾	136.2	136.2	—	41.4	94.8

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The carrying value of loans is net of the Allowance for loan losses of \$12.6 billion for December 31, 2015 and (1) \$16.0 billion for December 31, 2014. In addition, the carrying values exclude \$2.4 billion and \$2.7 billion of lease finance receivables at December 31, 2015 and December 31, 2014, respectively.

(2) Includes items measured at fair value on a nonrecurring basis.

Includes cash and due from banks, deposits with banks, brokerage receivables, reinsurance recoverable and other (3) financial instruments included in Other assets on the Consolidated Balance Sheet, for all of which the carrying value is a reasonable estimate of fair value.

(4) The carrying value includes long-term debt balances under qualifying fair value hedges.

Includes brokerage payables, separate and variable accounts, short-term borrowings (carried at cost) and other (5) financial instruments included in Other liabilities on the Consolidated Balance Sheet, for all of which the carrying value is a reasonable estimate of fair value.

Fair values vary from period to period based on changes in a wide range of factors, including interest rates, credit quality and market perceptions of value, and as existing assets and liabilities run off and new transactions are entered into. The estimated fair values of loans reflect changes in credit status since the loans were made, changes in interest rates in the case of fixed-rate loans, and premium values at origination of certain loans.

The estimated fair values of the Company's corporate unfunded lending commitments at December 31, 2015 and December 31, 2014 were liabilities of \$7.0 billion and \$5.5 billion, respectively, substantially all of which are classified as Level 3. The Company does not estimate the fair values of consumer unfunded lending commitments, which are generally cancellable by providing notice to the borrower.

26. FAIR VALUE ELECTIONS

The Company may elect to report most financial instruments and certain other items at fair value on an instrument-by-instrument basis with changes in fair value reported in earnings. The election is made upon the initial recognition of an eligible financial asset, financial liability or firm commitment or when certain specified reconsideration events occur. The fair value election may not be revoked once an election is made. The changes in fair value are recorded in

current earnings. Additional discussion regarding the applicable areas in which fair value elections were made is presented in Note 25 to the Consolidated Financial Statements.

All servicing rights are recognized initially at fair value. The Company has elected fair value accounting for its mortgage servicing rights. See Note 22 to the Consolidated Financial Statements for further discussions regarding the accounting and reporting of MSRs.

The following table presents the changes in fair value gains and losses associated with those items for which the fair value option was elected:

In millions of dollars	Changes in fair value gains (losses) for the years ended December 31,	
	2015	2014
Assets		
Federal funds sold and securities borrowed or purchased under agreements to resell		
selected portfolios of securities purchased under agreements to resell and securities borrowed	\$(153)	)\$(154)
Trading account assets	(305)	)190
Investments	57	30
Loans		
Certain corporate loans ⁽¹⁾	(192)	)(135)
Certain consumer loans ⁽¹⁾	3	(41)
Total loans	\$(189)	)\$(176)
Other assets		
MSRs	\$104	\$(344)
Certain mortgage loans held for sale ⁽²⁾	331	474
Total other assets	\$435	\$130
Total assets	\$(155)	)\$20
Liabilities		
Interest-bearing deposits	\$(94)	)\$(77)
Federal funds purchased and securities loaned or sold under agreements to repurchase		
selected portfolios of securities sold under agreements to repurchase and securities loaned	3	(5)
Trading account liabilities	(60)	)29
Short-term borrowings	(59)	)8
Long-term debt	343	(307)
Total liabilities	\$133	\$(352)

⁽¹⁾ Includes mortgage loans held by mortgage loan securitization VIEs consolidated upon the adoption of ASC 810, Consolidation (SFAS 167), on January 1, 2010.

⁽²⁾

Includes gains (losses) associated with interest rate lock-commitments for those loans that have been originated and elected under the fair value option.

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Own Debt Valuation Adjustments

Own debt valuation adjustments are recognized on Citi's liabilities for which the fair value option has been elected using Citi's credit spreads observed in the bond market. The fair value of liabilities for which the fair value option is elected (other than non-recourse and similar liabilities) is impacted by the narrowing or widening of the Company's credit spreads. The estimated change in the fair value of these liabilities due to such changes in the Company's own credit risk (or instrument-specific credit risk) was a gain of \$367 million and \$218 million for the years ended December 31, 2015 and 2014, respectively. Changes in fair value resulting from changes in instrument-specific credit risk were estimated by incorporating the Company's current credit spreads observable in the bond market into the relevant valuation technique used to value each liability as described above.

The Fair Value Option for Financial Assets and Financial Liabilities

Selected Portfolios of Securities Purchased Under Agreements to Resell, Securities Borrowed, Securities Sold Under Agreements to Repurchase, Securities Loaned and Certain Non-Collateralized Short-Term Borrowings

The Company elected the fair value option for certain portfolios of fixed-income securities purchased under agreements to resell and fixed-income securities sold under agreements to repurchase, securities borrowed, securities loaned, and certain non-collateralized short-term borrowings held primarily by broker-dealer entities in the United States, United Kingdom and Japan. In each case, the election was made because the related interest-rate risk is managed on a portfolio basis, primarily with derivative instruments that are accounted for at fair value through earnings.

Changes in fair value for transactions in these portfolios are recorded in Principal transactions. The related interest revenue and interest expense are measured based on the contractual rates specified in the transactions and are reported as interest revenue and expense in the Consolidated Statement of Income.

Certain Loans and Other Credit Products

Citigroup has elected the fair value option for certain originated and purchased loans, including certain unfunded loan products, such as guarantees and letters of credit, executed by Citigroup's lending and trading businesses. None of these credit products are highly leveraged financing commitments. Significant groups of transactions include loans and unfunded loan products that are expected to be either sold or securitized in the near term, or transactions where the economic risks are hedged with derivative instruments, such as purchased credit default swaps or total return swaps where the Company pays the total return on the underlying loans to a third party. Citigroup has elected the fair value option to mitigate accounting mismatches in cases where hedge accounting is complex and to achieve operational simplifications. Fair value was not elected for most lending transactions across the Company.

The following table provides information about certain credit products carried at fair value:

In millions of dollars	December 31, 2015		December 31, 2014	
	Trading assets	Loans	Trading assets	Loans
Carrying amount reported on the Consolidated Balance Sheet	\$9,314	\$5,005	\$10,290	\$5,901
Aggregate unpaid principal balance in excess of (less than) fair value	980	280	234	125
Balance of non-accrual loans or loans more than 90 days past due	5	2	13	3
Aggregate unpaid principal balance in excess of fair value for non-accrual loans or loans more than 90 days past due	13	1	28	1

In addition to the amounts reported above, \$2,113 million and \$2,335 million of unfunded commitments related to certain credit products selected for fair value accounting were outstanding as of December 31, 2015 and 2014, respectively.

Changes in the fair value of funded and unfunded credit products are classified in Principal transactions in the Company's Consolidated Statement of Income. Related interest revenue is measured based on the contractual interest rates and reported as Interest revenue on Trading account assets or loan interest depending on the balance sheet classifications of the credit products. The changes in fair value for the years ended December 31, 2015 and 2014 due to instrument-specific credit risk totaled to a loss of \$221 million and \$155 million, respectively.

Certain Investments in Unallocated Precious Metals

Citigroup invests in unallocated precious metals accounts (gold, silver, platinum and palladium) as part of its commodity and foreign currency trading activities or to economically hedge certain exposures from issuing structured liabilities. Under ASC 815, the investment is bifurcated into a debt host contract and a commodity forward derivative instrument. Citigroup elects the fair value option for the debt host contract, and reports the debt host contract within Trading account assets on the Company's Consolidated Balance Sheet. The total carrying amount of debt host contracts across unallocated precious metals accounts was approximately \$0.6 billion and \$1.2 billion at December 31, 2015 and 2014, respectively. The amounts are expected to fluctuate based on trading activity in future periods.

As part of its commodity and foreign currency trading activities, Citi sells (buys) unallocated precious metals investments and executes forward purchase (sale) derivative contracts with trading counterparties. When Citi sells an unallocated precious metals investment, Citi's receivable from its depository bank is repaid and Citi derecognizes its investment in the unallocated precious metal. The forward purchase (sale) contract with the trading counterparty indexed to unallocated precious metals is accounted for as a derivative, at fair value through earnings. As of December 31, 2015, there were approximately \$10.6 billion and \$9.2 billion notional amounts of such forward purchase and forward sale derivative contracts outstanding, respectively.

Certain Investments in Private Equity and Real Estate Ventures and Certain Equity Method and Other Investments

Citigroup invests in private equity and real estate ventures for the purpose of earning investment returns and for capital appreciation. The Company has elected the fair value option for certain of these ventures, because such investments are considered similar to many private equity or hedge fund activities in Citi's investment companies, which are reported at fair value. The fair value option brings consistency in the accounting and evaluation of these investments. All investments (debt and equity) in such private equity and real estate entities are accounted for at fair value. These investments are classified as Investments on Citigroup's Consolidated Balance Sheet.

Changes in the fair values of these investments are classified in Other revenue in the Company's Consolidated Statement of Income.

Citigroup also elects the fair value option for certain non-marketable equity securities whose risk is managed with derivative instruments that are accounted for at fair value through earnings. These securities are classified as Trading account assets on Citigroup's Consolidated Balance Sheet. Changes in the fair value of these securities and the related derivative instruments are recorded in Principal transactions.

Certain Mortgage Loans HFS

Citigroup has elected the fair value option for certain purchased and originated prime fixed-rate and conforming adjustable-rate first mortgage loans HFS. These loans are intended for sale or securitization and are hedged with derivative instruments. The Company has elected the fair value option to mitigate accounting mismatches in cases where hedge accounting is complex and to achieve operational simplifications.

The following table provides information about certain mortgage loans HFS carried at fair value:

In millions of dollars	December 31, 2015	December 31, 2014
Carrying amount reported on the Consolidated Balance Sheet	\$745	\$1,447
Aggregate fair value in excess of unpaid principal balance	20	67
Balance of non-accrual loans or loans more than 90 days past due	—	—
Aggregate unpaid principal balance in excess of fair value for non-accrual loans or loans more than 90 days past due	—	—

The changes in the fair values of these mortgage loans are reported in Other revenue in the Company's Consolidated Statement of Income. There was no net change in fair value during the years ended December 31, 2015 and 2014 due to instrument-specific credit risk. Related interest income continues to be measured based on the contractual interest rates and reported as Interest revenue in the Consolidated Statement of Income.

Certain Structured Liabilities

The Company has elected the fair value option for certain structured liabilities whose performance is linked to structured interest rates, inflation, currency, equity, referenced credit or commodity risks. The Company elected the fair value option, because these exposures are considered to be trading-related positions and, therefore, are managed on a fair value basis. These positions will continue to be classified as debt, deposits or derivatives (Trading account liabilities) on the Company's Consolidated Balance Sheet according to their legal form.

The following table provides information about the carrying value of structured notes, disaggregated by type of embedded derivative instrument:

In billions of dollars	December 31, 2015	December 31, 2014
Interest rate linked	\$9.6	\$10.9
Foreign exchange linked	0.3	0.3
Equity linked	9.9	8.0
Commodity linked	1.4	1.4
Credit linked	1.6	2.5
Total	\$22.8	\$23.1

The change in the fair value of these structured liabilities is reported in Principal transactions in the Company's Consolidated Statement of Income. Changes in the fair value of these structured liabilities include an economic component for accrued interest, which is included in the change in fair value reported in Principal transactions.

Certain Non-Structured Liabilities

The Company has elected the fair value option for certain non-structured liabilities with fixed and floating interest rates. The Company has elected the fair value option where the interest-rate risk of such liabilities is economically hedged with derivative contracts or the proceeds are used to purchase financial assets that will also be accounted for at fair value through earnings. The election has been made to mitigate accounting mismatches and to achieve operational simplifications. These positions are reported in Short-term borrowings and Long-term debt on the Company's Consolidated Balance Sheet. The change in the fair value of these non-structured liabilities is reported in Principal transactions in the Company's Consolidated Statement of Income. Related interest expense on non-structured liabilities is measured based on the contractual interest rates and reported as Interest expense in the Consolidated Statement of Income.

The following table provides information about long-term debt carried at fair value:

In millions of dollars	December 31, 2015	December 31, 2014
Carrying amount reported on the Consolidated Balance Sheet	\$25,293	\$26,180
Aggregate unpaid principal balance in excess of (less than) fair value	1,569	(151)

The following table provides information about short-term borrowings carried at fair value:

In millions of dollars	December 31, 2015	December 31, 2014
Carrying amount reported on the Consolidated Balance Sheet	\$1,207	\$1,496
Aggregate unpaid principal balance in excess of (less than) fair value	130	31

27. PLEDGED ASSETS, COLLATERAL, GUARANTEES AND COMMITMENTS

Pledged Assets

In connection with the Company's financing and trading activities, the Company has pledged assets to collateralize its obligations under repurchase agreements, secured financing agreements, secured liabilities of consolidated VIEs and other borrowings. The approximate carrying values of the significant components of pledged assets recognized on the Company's Consolidated Balance Sheet included:

In millions of dollars	2015	2014
Investment securities	\$210,604	\$173,015
Loans	203,568	214,530
Trading account assets	97,205	111,832
Total	\$511,377	\$499,377

In addition, included in Cash and due from banks at December 31, 2015 and 2014 were \$5.0 billion and \$6.2 billion, respectively, of cash segregated under federal and other brokerage regulations or deposited with clearing organizations.

Collateral

At December 31, 2015 and 2014, the approximate fair value of collateral received by the Company that may be resold or repledged, excluding the impact of allowable netting, was \$347.5 billion and \$346.7 billion, respectively. This collateral was received in connection with resale agreements, securities borrowings and loans, derivative transactions and margined broker loans.

At December 31, 2015 and 2014, a substantial portion of the collateral received by the Company had been sold or repledged in connection with repurchase agreements, securities sold, not yet purchased, securities borrowings and loans, pledges to clearing organizations, segregation requirements under securities laws and regulations, derivative transactions and bank loans.

In addition, at December 31, 2015 and 2014, the Company had pledged \$405 billion and \$378 billion, respectively, of collateral that may not be sold or repledged by the secured parties.

Lease Commitments

Rental expense (principally for offices and computer equipment) was \$1.3 billion, \$1.4 billion and \$1.5 billion for the years ended December 31, 2015, 2014 and 2013, respectively.

Future minimum annual rentals under noncancellable leases, net of sublease income, are as follows:

In millions of dollars	
2016	\$1,238
2017	1,002
2018	778
2019	698
2020	567
Thereafter	4,483
Total	\$8,766

Guarantees

Citi provides a variety of guarantees and indemnifications to its customers to enhance their credit standing and enable them to complete a wide variety of business transactions. For certain contracts meeting the definition of a guarantee, the guarantor must recognize, at inception, a liability for the fair value of the obligation undertaken in issuing the guarantee.

In addition, the guarantor must disclose the maximum potential amount of future payments that the guarantor could be required to make under the guarantee, if there were a total

default by the guaranteed parties. The determination of the maximum potential future payments is based on the notional amount of the guarantees without consideration of possible recoveries under recourse provisions or from collateral held or pledged. As such, Citi believes such amounts bear no relationship to the anticipated losses, if any, on these guarantees.

The following tables present information about Citi's guarantees:

In billions of dollars at December 31, 2015 except carrying value in millions	Maximum potential amount of future payments			Carrying value (in millions of dollars)
	Expire within 1 year	Expire after 1 year	Total amount outstanding	
Financial standby letters of credit	\$23.8	\$73.0	\$96.8	\$153
Performance guarantees	7.4	4.1	11.5	24
Derivative instruments considered to be guarantees	3.6	74.9	78.5	1,779
Loans sold with recourse	—	0.2	0.2	17
Securities lending indemnifications ⁽¹⁾	79.0	—	79.0	—
Credit card merchant processing ⁽¹⁾	84.2	—	84.2	—
Custody indemnifications and other	—	51.7	51.7	56
Total	\$198.0	\$203.9	\$401.9	\$2,029

In billions of dollars at December 31, 2014 except carrying value in millions	Maximum potential amount of future payments			Carrying value (in millions of dollars)
	Expire within 1 year	Expire after 1 year	Total amount outstanding	
Financial standby letters of credit	\$25.4	\$73.0	\$98.4	\$242
Performance guarantees	7.1	4.8	11.9	29
Derivative instruments considered to be guarantees	12.5	79.2	91.7	2,806
Loans sold with recourse	—	0.2	0.2	15
Securities lending indemnifications ⁽¹⁾	115.9	—	115.9	—
Credit card merchant processing ⁽¹⁾	86.0	—	86.0	—
Custody indemnifications and other	—	48.9	48.9	54
Total	\$246.9	\$206.1	\$453.0	\$3,146

⁽¹⁾ The carrying values of securities lending indemnifications and credit card merchant processing were not material for either period presented, as the probability of potential liabilities arising from these guarantees is minimal.

Financial Standby Letters of Credit

Citi issues standby letters of credit, which substitute its own credit for that of the borrower. If a letter of credit is drawn down, the borrower is obligated to repay Citi. Standby letters of credit protect a third party from defaults on contractual obligations. Financial standby letters of credit include (i) guarantees of payment of insurance premiums and reinsurance risks that support industrial revenue bond underwriting; (ii) settlement of payment obligations to clearing houses, including futures and over-the-counter derivatives clearing (see further discussion below); (iii) support options and purchases of securities in lieu of escrow deposit accounts; and (iv) letters of credit that backstop loans, credit facilities, promissory notes and trade acceptances.

Performance Guarantees

Performance guarantees and letters of credit are issued to guarantee a customer's tender bid on a construction or systems-installation project or to guarantee completion of such projects in accordance with contract terms. They are also issued to support a customer's obligation to supply specified products, commodities, or maintenance or warranty services to a third party.

Derivative Instruments Considered to Be Guarantees

Derivatives are financial instruments whose cash flows are based on a notional amount and an underlying instrument, reference credit or index, where there is little or no initial investment, and whose terms require or permit net settlement. For a discussion of Citi's derivatives activities, see Note 23 to the Consolidated Financial Statements. Derivative instruments considered to be guarantees include only those instruments that require Citi to make payments to the counterparty based on changes in an underlying instrument that is related to an asset, a liability or an equity security held by the guaranteed party. More specifically, derivative instruments considered to be guarantees include certain over-the-counter written put options where the counterparty is not a bank, hedge fund or broker-dealer (such counterparties are considered to be dealers in these markets and may, therefore, not hold the underlying

instruments). Credit derivatives sold by Citi are excluded from the tables above as they are disclosed separately in Note 23 to the Consolidated Financial Statements. In instances where Citi's maximum potential future payment is unlimited, the notional amount of the contract is disclosed.

Loans Sold with Recourse

Loans sold with recourse represent Citi's obligations to reimburse the buyers for loan losses under certain circumstances. Recourse refers to the clause in a sales agreement under which a seller/lender will fully reimburse the buyer/investor for any losses resulting from the purchased loans. This may be accomplished by the seller taking back

any loans that become delinquent.

In addition to the amounts shown in the tables above, Citi has recorded a repurchase reserve for its potential repurchases or make-whole liability regarding residential mortgage representation and warranty claims related to its whole loan sales to the U.S. government-sponsored enterprises (GSEs) and, to a lesser extent, private investors. The repurchase reserve was approximately \$152 million and \$224 million at December 31, 2015 and 2014, respectively, and these amounts are included in Other liabilities on the Consolidated Balance Sheet.

Securities Lending Indemnifications

Owners of securities frequently lend those securities for a fee to other parties who may sell them short or deliver them to another party to satisfy some other obligation. Banks may administer such securities lending programs for their clients. Securities lending indemnifications are issued by the bank to guarantee that a securities lending customer will be made whole in the event that the security borrower does not return the security subject to the lending agreement and collateral held is insufficient to cover the market value of the security.

Credit Card Merchant Processing

Credit card merchant processing guarantees represent the Company's indirect obligations in connection with:
(i) providing transaction processing services to various merchants with respect to its private-label cards; and

(ii) potential liability for bank card transaction processing services. The nature of the liability in either case arises as a result of a billing dispute between a merchant and a cardholder that is ultimately resolved in the cardholder's favor. The merchant is liable to refund the amount to the cardholder. In general, if the credit card processing company is unable to collect this amount from the merchant, the credit card processing company bears the loss for the amount of the credit or refund paid to the cardholder.

With regard to (i) above, Citi has the primary contingent liability with respect to its portfolio of private-label merchants. The risk of loss is mitigated as the cash flows between Citi and the merchant are settled on a net basis, and Citi has the right to offset any payments with cash flows otherwise due to the merchant. To further mitigate this risk, Citi may delay settlement, require a merchant to make an escrow deposit, include event triggers to provide Citi with more financial and operational control in the event of the financial deterioration of the merchant or require various credit enhancements (including letters of credit and bank guarantees). In the unlikely event that a private-label merchant is unable to deliver products, services or a refund to its private-label cardholders, Citi is contingently liable to credit or refund cardholders.

With regard to (ii) above, Citi has a potential liability for bank card transactions where Citi provides the transaction processing services as well as those where a third party provides the services and Citi acts as a secondary guarantor, should that processor fail to perform.

Citi's maximum potential contingent liability related to both bank card and private-label merchant processing services is estimated to be the total volume of credit card transactions that meet the requirements to be valid charge-back transactions at any given time. At December 31, 2015 and 2014, this maximum potential exposure was estimated to be \$84 billion and \$86 billion, respectively.

However, Citi believes that the maximum exposure is not representative of the actual potential loss exposure based on its historical experience. This contingent liability is unlikely to arise, as most products and services are delivered when purchased and amounts are refunded when items are returned to merchants. Citi assesses the probability and amount of its contingent liability related to merchant processing based on the financial strength of the primary guarantor, the extent and nature of unresolved charge-backs and its historical loss experience. At December 31, 2015 and 2014, the losses incurred and the carrying amounts of Citi's contingent obligations related to merchant processing activities were immaterial.

Custody Indemnifications

Custody indemnifications are issued to guarantee that custody clients will be made whole in the event that a third-party subcustodian or depository institution fails to safeguard clients' assets.

Other Guarantees and Indemnifications

Credit Card Protection Programs

Citi, through its credit card businesses, provides various cardholder protection programs on several of its card products, including programs that provide insurance coverage for rental cars, coverage for certain losses associated with purchased products, price protection for certain purchases and protection for lost luggage. These guarantees are not included in the table, since the total outstanding amount of the guarantees and Citi's maximum exposure to loss cannot be quantified. The protection is limited to certain types of purchases and losses, and it is not possible to quantify the purchases that would qualify for these benefits at any given time. Citi assesses the probability and amount of its potential liability related to these programs based on the extent and nature of its historical loss experience. At December 31, 2015 and 2014, the actual and estimated losses incurred and the carrying value of Citi's obligations related to these programs were immaterial.

Other Representation and Warranty Indemnifications

In the normal course of business, Citi provides standard representations and warranties to counterparties in contracts in connection with numerous transactions and also provides indemnifications, including indemnifications that protect

the counterparties to the contracts in the event that additional taxes are owed, due either to a change in the tax law or an adverse interpretation of the tax law. Counterparties to these transactions provide Citi with comparable indemnifications. While such representations, warranties and indemnifications are essential components of many contractual relationships, they do not represent the underlying business purpose for the transactions. The indemnification clauses are often standard contractual terms related to Citi's own performance under the terms of a contract and are entered into in the normal course of business based on an assessment that the risk of loss is remote. Often these clauses are intended to ensure that terms of a contract are met at inception. No compensation is received for these standard representations and warranties, and it is not possible to determine their fair value because they rarely, if ever, result in a payment. In many cases, there are no stated or notional amounts included in the indemnification clauses, and the contingencies potentially triggering the obligation to indemnify have not occurred and are not expected to occur. As a result, these indemnifications are not included in the tables above.

Value-Transfer Networks

Citi is a member of, or shareholder in, hundreds of value-transfer networks (VTNs) (payment, clearing and settlement systems as well as exchanges) around the world. As a condition of membership, many of these VTNs require that members stand ready to pay a pro rata share of the losses incurred by the organization due to another member's default on its obligations. Citi's potential obligations may be limited to its membership interests in the VTNs, contributions to the VTN's funds, or, in limited cases, the obligation may be unlimited. The maximum exposure cannot be estimated as this would require an assessment of future claims that have not yet

occurred. Citi believes the risk of loss is remote given historical experience with the VTNs. Accordingly, Citi's participation in VTNs is not reported in the guarantees tables above, and there are no amounts reflected on the Consolidated Balance Sheet as of December 31, 2015 or 2014 for potential obligations that could arise from Citi's involvement with VTN associations.

Long-Term Care Insurance Indemnification

In the sale of an insurance subsidiary, the Company provided an indemnification to an insurance company for policyholder claims and other liabilities relating to a book of long-term care (LTC) business (for the entire term of the LTC policies) that is fully reinsured by another insurance company. The reinsurer has funded two trusts with securities whose fair value (approximately \$6.3 billion at December 31, 2015, compared to \$6.2 billion at December 31, 2014) is designed to cover the insurance company's statutory liabilities for the LTC policies. The assets in these trusts are evaluated and adjusted periodically to ensure that the fair value of the assets continues to cover the estimated statutory liabilities related to the LTC policies, as those statutory liabilities change over time.

If the reinsurer fails to perform under the reinsurance agreement for any reason, including insolvency, and the assets in the two trusts are insufficient or unavailable to the ceding insurance company, then Citi must indemnify the ceding insurance company for any losses actually incurred in connection with the LTC policies. Since both events would have to occur before Citi would become responsible for any payment to the ceding insurance company pursuant to its indemnification obligation, and the likelihood of such events occurring is currently not probable, there is no liability reflected in the Consolidated Balance Sheet as of December 31, 2015 and 2014 related to this indemnification. Citi continues to closely monitor its potential exposure under this indemnification obligation.

Futures and Over-the-Counter Derivatives Clearing

Citi provides clearing services for clients executing exchange-traded futures and over-the-counter (OTC) derivatives contracts with central counterparties (CCPs). Based on all relevant facts and circumstances, Citi has concluded that it acts as an agent for accounting purposes in its role as clearing member for these client transactions. As such, Citi does not reflect the underlying exchange-traded futures or OTC derivatives contracts in its Consolidated Financial Statements. See Note 23 for a discussion of Citi's derivatives activities that are reflected in its Consolidated Financial Statements.

As a clearing member, Citi collects and remits cash and securities collateral (margin) between its clients and the respective CCP. There are two types of margin: initial margin and variation margin. Where Citi obtains benefits from or controls cash initial margin (e.g., retains an interest spread), cash initial margin collected from clients and remitted to the CCP is reflected within Brokerage Payables (payables to customers) and Brokerage Receivables (receivables from brokers, dealers and clearing organizations), respectively. However, for OTC derivatives contracts where Citi has contractually agreed with the client that (i) Citi will pass through to the client all interest paid by the CCP on cash initial margin; (ii) Citi will not utilize its right as clearing member to transform cash margin into other assets; and (iii) Citi does not guarantee and is not liable to the client for the performance of the CCP, cash initial margin collected from clients and remitted to the CCP is not reflected on Citi's Consolidated Balance Sheet. The total amount of cash initial margin collected and remitted in this manner was approximately \$4.3 billion and \$3.2 billion as of December 31, 2015 and 2014, respectively.

Variation margin due from clients to the respective CCP, or from the CCP to clients, reflects changes in the value of the client's derivative contracts for each trading day. As a clearing member, Citi is exposed to the risk of non-performance by clients (e.g., failure of a client to post variation margin to the CCP for negative changes in the value of the client's derivative contracts). In the event of non-performance by a client, Citi would move to close out the client's positions. The CCP would typically utilize initial margin posted by the client and held by the CCP, with any remaining shortfalls required to be paid by Citi as clearing member. Citi generally holds incremental cash or securities margin posted by the client, which would typically be expected to be sufficient to mitigate Citi's credit risk in the event the client fails to perform.

As required by ASC 860-30-25-5, securities collateral posted by clients is not recognized on Citi's Consolidated Balance Sheet.

Carrying Value—Guarantees and Indemnifications

At December 31, 2015 and 2014, the total carrying amounts of the liabilities related to the guarantees and indemnifications included in the tables above amounted to approximately \$2.0 billion and \$3.1 billion, respectively. The carrying value of financial and performance guarantees is included in Other liabilities, as is the carrying value of the liability for loans sold with recourse.

Collateral

Cash collateral available to Citi to reimburse losses realized under these guarantees and indemnifications amounted to \$52 billion and \$63 billion at December 31, 2015 and 2014, respectively. Securities and other marketable assets held as collateral amounted to \$33 billion and \$59 billion at December 31, 2015 and 2014, respectively. The majority of collateral is held to reimburse losses realized under securities lending indemnifications. Additionally, letters of credit in favor of Citi held as collateral amounted to \$4.2 billion and \$4.0 billion at December 31, 2015 and 2014, respectively. Other property may also be available to Citi to cover losses under certain guarantees and indemnifications; however, the value of such property has not been determined.

Performance risk

Citi evaluates the performance risk of its guarantees based on the assigned referenced counterparty internal or external ratings. Where external ratings are used, investment-grade ratings are considered to be Baa/BBB and above, while anything below is considered non-investment grade. Citi's internal ratings are in line with the related external rating system. On certain underlying referenced assets or entities, ratings are not available. Such referenced assets are included in the "not rated" category. The maximum potential amount of the future payments related to the outstanding guarantees is determined to be the notional amount of these contracts, which is the par amount of the assets guaranteed.

Presented in the tables below are the maximum potential amounts of future payments that are classified based upon internal and external credit ratings. As previously mentioned, the determination of the maximum potential future payments is based on the notional amount of the guarantees without consideration of possible recoveries under recourse provisions or from collateral held or pledged. As such, Citi believes such amounts bear no relationship to the anticipated losses, if any, on these guarantees.

In billions of dollars at December 31, 2015	Maximum potential amount of future payments			Total
	Investment grade	Non-investment grade	Not rated	
Financial standby letters of credit	\$69.2	\$ 15.4	\$12.2	\$96.8
Performance guarantees	6.6	4.1	0.8	11.5
Derivative instruments deemed to be guarantees	—	—	78.5	78.5
Loans sold with recourse	—	—	0.2	0.2
Securities lending indemnifications	—	—	79.0	79.0
Credit card merchant processing	—	—	84.2	84.2