

CITIGROUP INC  
Form 10-Q  
August 01, 2016

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549  
FORM 10-Q  
QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF  
THE SECURITIES EXCHANGE ACT OF 1934  
For the quarterly period ended June 30, 2016  
Commission file number 1-9924

Citigroup Inc.

(Exact name of registrant as specified in its charter)

Delaware

52-1568099

(State or other jurisdiction of incorporation or organization)

(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)

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 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 <input checked="" type="checkbox"/>	Accelerated filer <input type="checkbox"/>	Non-accelerated filer <input type="checkbox"/> (Do not check if a smaller reporting company)	Smaller reporting company <input type="checkbox"/>
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Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

Number of shares of Citigroup Inc. common stock outstanding on June 30, 2016: 2,905,374,038

Available on the web at [www.citigroup.com](http://www.citigroup.com)

CITIGROUP'S SECOND QUARTER 2016—FORM 10-Q	
OVERVIEW	<u>2</u>
MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	<u>4</u>
Executive Summary	<u>4</u>
Summary of Selected Financial Data	<u>9</u>
SEGMENT AND BUSINESS—INCOME (LOSS) AND REVENUES	<u>11</u>
SEGMENT BALANCE SHEET	<u>13</u>
CITICORP	<u>14</u>
Global Consumer Banking (GCB)	<u>15</u>
North America GCB	<u>17</u>
Latin America GCB	<u>19</u>
Asia GCB	<u>21</u>
Institutional Clients Group	<u>23</u>
Corporate/Other	<u>28</u>
CITI HOLDINGS	<u>29</u>
OFF-BALANCE SHEET ARRANGEMENTS	<u>31</u>
CAPITAL RESOURCES	<u>32</u>
Managing Global Risk Table of Contents	<u>50</u>
MANAGING GLOBAL RISK	<u>51</u>
INCOME TAXES	<u>92</u>
DISCLOSURE CONTROLS AND PROCEDURES	<u>93</u>
DISCLOSURE PURSUANT TO SECTION 219 OF THE IRAN THREAT REDUCTION AND SYRIA HUMAN RIGHTS ACT	<u>93</u>
FORWARD-LOOKING STATEMENTS	<u>94</u>
FINANCIAL STATEMENTS AND NOTES	
TABLE OF CONTENTS	<u>96</u>
CONSOLIDATED FINANCIAL STATEMENTS	<u>98</u>
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS	<u>107</u>
UNREGISTERED SALES OF EQUITY SECURITIES, PURCHASES OF EQUITY SECURITIES, DIVIDENDS	<u>241</u>

## OVERVIEW

This Quarterly Report on Form 10-Q should be read in conjunction with Citigroup's Annual Report on Form 10-K for the year ended December 31, 2015, including the historical audited consolidated financial statements of Citigroup reflecting certain realignments and reclassifications set forth in Citigroup's Current Report on Form 8-K filed with the SEC on June 17, 2016 (2015 Annual Report on Form 10-K), and Citigroup's Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (First Quarter of 2016 Form 10-Q). Additional information about Citigroup is available on Citi's website at [www.citigroup.com](http://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 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](http://www.sec.gov).

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

Throughout this report, "Citigroup," "Citi" and "the Company" refer to Citigroup Inc. and its consolidated subsidiaries.

Citigroup is managed pursuant to the following segments:

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

(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.

3

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

EXECUTIVE SUMMARY

Second Quarter of 2016—Solid Performance in Continued Challenging Environment

Citi reported solid operating results in the second quarter of 2016 despite a continued challenging environment characterized by market volatility, macroeconomic uncertainties and a low interest rate environment. The referendum in the United Kingdom on June 23, 2016 further added to the uncertainty during the quarter, although capital markets activity increased in the days preceding and following the referendum vote, contributing to year-over-year revenue growth in Citi's market sensitive businesses, primarily its markets businesses in the Institutional Clients Group (ICG). As described further throughout this Executive Summary, despite the market environment, Citi showed continued progress in several areas. In North America Global Consumer Banking (GCB), Citi's ongoing investments in Citi-branded cards drove growth in average loans and purchase sales. North America GCB also completed the acquisition of the Costco portfolio and renewed and extended several of its partnership programs, including with American Airlines and The Home Depot. International GCB generated positive operating leverage, highlighted by solid year-over-year growth in Mexico. In ICG, Citi continued to win new mandates and support clients around the world, generating year-over-year growth in treasury and trade solutions and fixed income markets, particularly in rates and currencies.

In Citicorp, loans and deposits both increased 4%. Excluding the impact of foreign currency translation into U.S. dollars for reporting purposes (FX translation), Citicorp loans and deposits both increased 6%. (Citi's results of operations excluding the impact of FX translation are non-GAAP financial measures.) Citi Holdings decreased further, constituting only 2% of Citigroup's net income in the current quarter and 4% of Citigroup's GAAP assets as of the end of the second quarter of 2016. During the quarter, Citi utilized approximately \$900 million in deferred tax assets (DTAs), which contributed to a net increase of \$1.5 billion of regulatory capital, and each of Citigroup's key regulatory capital metrics further increased. For additional information on Citi's DTAs, see "Income Taxes" below. Citi was also pleased to learn that the Federal Reserve Board did not object to the capital plan Citi submitted as part of the 2016 Comprehensive Capital Analysis and Review (CCAR). As a result, and as previously disclosed, Citi intends to return approximately \$10.4 billion of capital to its shareholders over the next four quarters beginning with the third quarter of 2016 (for additional information, see "Equity Security Repurchases" and "Dividends" below). This result, combined with the feedback Citi received during the quarter that neither the Federal Reserve Board nor the FDIC found any deficiencies in Citi's 2015 resolution plan, further demonstrates the progress Citi has made. As noted above, however, while market activity increased following the referendum in the United Kingdom, Citi expects

the operating environment to continue to be challenging, as many risks and uncertainties remain, including significant uncertainties arising from the vote in favor of the United Kingdom's withdrawal from the European Union. For a more detailed discussion of these risks and uncertainties, see each respective business' results of operations, "Managing Global Risk" (including "Country Risk") and "Forward-Looking Statements" below as well as the "Risk Factors" section in Citi's 2015 Annual Report on Form 10-K.

Second Quarter 2016 Summary Results

Citigroup

Citigroup reported net income of \$4.0 billion, or \$1.24 per share, compared to \$4.8 billion, or \$1.51 per share, in the prior-year period. Results in the second quarter of 2015 included \$312 million (\$196 million after-tax) of CVA/DVA. Excluding the impact of CVA/DVA in the prior-year period, Citigroup reported net income of \$4.0 billion in the second quarter of 2016, or \$1.24 per share, compared to \$4.7 billion, or \$1.45 per share, in the prior-year period. (Citi's results of operations excluding the impact of CVA/DVA are non-GAAP financial measures.) The 14% decrease from

the prior-year period was primarily driven by lower revenues and a slightly higher effective tax rate (see “Income Taxes” below), partially offset by lower cost of credit and lower expenses.

Citi’s revenues were \$17.5 billion in the second quarter of 2016, a decrease of 10% from the prior-year period driven by a 5% decline in Citicorp and a 57% decline in Citi Holdings. Excluding CVA/DVA in the second quarter of 2015, revenues were down 8% from the prior-year period, as Citicorp revenues decreased 3% and Citi Holdings revenues also decreased 57%. Excluding CVA/DVA in the second quarter of 2015 and the impact of FX translation (which lowered revenues by approximately \$537 million in the second quarter of 2016 compared to the prior-year period), Citigroup revenues decreased 6% from the prior-year period, driven by a 56% decrease in Citi Holdings, while Citicorp revenues were largely unchanged versus the prior-year period.

#### Expenses

Citigroup expenses decreased 5% versus the prior-year period as lower expenses in Citi Holdings and a benefit from the impact of FX translation were partially offset by ongoing investments in Citicorp. FX translation lowered expenses by approximately \$316 million in the second quarter of 2016 compared to the prior-year period.

Citicorp expenses decreased 1% reflecting efficiency savings and a benefit from the impact of FX translation, partially offset by ongoing investments in the franchise.

Citi Holdings’ expenses were \$858 million, down 37% from the prior-year period, primarily driven by the ongoing decline in Citi Holdings assets, partially offset by a modest increase in legal and related expenses. Citi Holdings’ legal

and related expenses in the second quarter of 2016 were \$116 million, compared to \$79 million in the prior-year period.

#### Credit Costs

Citi's total provisions for credit losses and for benefits and claims of \$1.4 billion decreased 15% from the prior-year period, as lower net credit losses were partially offset by lower net loan loss reserve releases.

Net credit losses of \$1.6 billion declined 16% versus the prior-year period. Consumer net credit losses declined 19% to \$1.5 billion, mostly reflecting continued improvements in North America Citi-branded cards and Citi retail services in Citicorp as well as continued improvement in the North America mortgage portfolio and ongoing divestiture activity within Citi Holdings. Corporate net credit losses increased 33% to \$142 million, mostly related to the energy portfolio, with roughly two-thirds of the corporate net credit losses offset by related reserve releases (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 \$256 million in the second quarter of 2016, compared to a \$453 million release in the prior-year period. Citicorp's net reserve release was \$27 million, compared to a net loan loss reserve release of \$270 million in the prior-year period. The smaller net reserve release in the second quarter of 2016 was primarily driven by the absence of prior-period net loan loss reserve releases in GCB and a smaller net reserve release in ICG. Citi's credit quality largely remained favorable across the franchise during the quarter. The allowance for loan losses attributable to energy and energy-related loans in ICG decreased to 3.9% of funded exposures as of the second quarter of 2016, compared to 4.2% of funded exposures as of the first quarter of 2016, as net credit losses in the portfolio were offset by previously-established reserves.

Citi Holdings' net reserve release increased \$46 million from the prior-year period to \$229 million, primarily reflecting the impact of asset sales in the current quarter.

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

#### Capital

As noted above, Citi continued to grow its regulatory capital during the second quarter of 2016, even as it returned approximately \$1.5 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 14.1% and 12.5% as of June 30, 2016, respectively, compared to 12.5% and 11.4% as of June 30, 2015 (all based on the Basel III Advanced Approaches for determining risk-weighted assets). Citigroup's Supplementary Leverage ratio as of June 30, 2016, on a fully implemented basis, was 7.5%, compared to 6.7% as of June 30, 2015. 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 decreased 17% from the prior-year period to \$3.9 billion. CVA/DVA, recorded in ICG, was \$303 million (\$190 million after-tax) in second quarter of 2015 (for a summary of CVA/DVA by business within ICG, see "Institutional Clients Group" below). Excluding CVA/DVA in the second quarter of 2015, Citicorp's net income decreased 13% from the prior-year period, primarily driven by the lower revenues and higher cost of credit, partially offset by lower expenses.

Citicorp revenues decreased 5% from the prior-year period to \$16.7 billion driven by a 6% decline in GCB revenues, a 1% decline in ICG revenues and lower revenues in Corporate/Other. Excluding CVA/DVA in the second quarter of 2015, Citicorp revenues decreased 3% from the prior-year period, driven by a 6% decrease in GCB revenues, partially offset by a 2% increase in ICG revenues. As referenced above, excluding CVA/DVA in the prior-year period and the impact of FX translation, Citicorp's revenues were approximately unchanged versus the prior-year period, as growth in the ICG franchise was offset by lower GCB revenues as well as the absence of prior-period real estate gains in Corporate/Other.

GCB revenues of \$7.7 billion decreased 6% versus the prior-year period. Excluding the impact of FX translation, GCB revenues decreased 2%, as decreases in North America GCB and Asia GCB were partially offset by an increase in Latin America GCB. North America GCB revenues decreased 3% to \$4.8 billion, driven by lower revenues in Citi-branded cards, Citi retail services and retail banking. Citi-branded cards revenues of \$1.9 billion were down 1% versus the prior-year period, as a modest benefit from the previously disclosed acquisition of the Costco portfolio (acquired June 17, 2016) was offset by the continued impact of higher rewards costs and higher payment rates. Citi retail services revenues of \$1.5 billion decreased 4% versus the prior-year period, primarily driven by the impact of renewing and extending several partnership programs (including The Home Depot as referenced above) as well as the absence of revenues associated with two portfolios sold in the first quarter of 2016. Retail banking revenues decreased 4% from the prior-year period to \$1.3 billion as lower mortgage activity was only partially offset by continued growth in consumer and commercial banking.

North America GCB average deposits of \$182 billion grew 1% year-over-year and average retail banking loans of \$54 billion grew 10%. Average Citi retail services loans of \$43 billion and retail services purchase sales of \$20 billion were each largely unchanged versus the prior-year period. Average Citi-branded card loans of \$67 billion increased 6%, while Citi-branded card purchase sales of \$53 billion increased 15% versus the prior-year period, each including the impact of the Costco portfolio acquisition. For additional information on the results of operations of North America GCB for the second quarter of 2016, including the impact of the Costco acquisition to North America GCB's loans and purchase sales, see "Global Consumer Banking—North America GCB" below.



International GCB revenues (consisting of Latin America GCB and Asia GCB (which includes EMEA GCB for reporting purposes)) decreased 9% versus the prior-year period to \$3.0 billion driven by declines in Latin America GCB (13%) and Asia GCB (7%). Excluding the impact of FX translation, international GCB revenues were approximately unchanged versus the prior-year period. Latin America GCB revenues increased 4% versus the prior-year period, as the impact of growth in retail banking loans, deposits and card purchase sales was partially offset by a continued decline in card balances, driven by ongoing higher payment rates. Asia GCB revenues declined 4% versus the prior-year period, driven by lower wealth management and retail lending revenues, while card revenues were unchanged from the prior-year period. For additional information on the results of operations of Latin America GCB and Asia GCB for the second quarter of 2016, including the impact of FX translation, see “Global Consumer Banking” below. Excluding the impact of FX translation, international GCB average deposits of \$117 billion increased 4%, average retail loans of \$87 billion decreased 1%, investment sales of \$13 billion decreased 28%, average card loans of \$23 billion increased 1% and card purchase sales of \$23 billion increased 3%.

ICG revenues were \$8.8 billion in the second quarter of 2016, down 1% from the prior-year period driven by a 2% increase in Markets and securities services and 5% decline in Banking. Excluding CVA/DVA in the second quarter of 2015, ICG revenues increased 2% driven by a 10% increase in Markets and securities services revenues, partially offset by a 5% decrease in Banking revenues.

Banking revenues of \$4.4 billion (excluding CVA/DVA in the second quarter of 2015 and the impact of mark-to-market gains / (losses) on hedges related to accrual loans within corporate lending (see below)) decreased 2% compared to the prior-year period, primarily driven by lower industry-wide investment banking activity during the current quarter and lower corporate lending revenues, partially offset by growth in treasury and trade solutions.

Investment banking revenues of \$1.2 billion decreased 6% versus the prior-year period. Advisory revenues decreased 7% to \$238 million driven by lower activity in the current quarter. Equity underwriting revenues decreased 41% to \$174 million, largely driven by lower industry-wide equity underwriting activity. Debt underwriting revenues increased 9% to \$805 million, largely reflecting an increase in wallet share.

Private bank revenues decreased 1% (also 1% excluding CVA/DVA in the second quarter of 2015) to \$738 million from the prior-year period, primarily driven by lower capital markets and managed investment revenues. Corporate lending revenues decreased 55% to \$186 million, including \$203 million of mark-to-market losses on hedges related to accrual loans, compared to \$66 million of losses in the prior-year period. Excluding the impact of mark-to-market losses on loan hedges, corporate lending revenues decreased 18% versus the prior-year period, as higher loan volumes were more than offset by an adjustment to the residual value of a lease financing as well as higher hedging costs.

Treasury and trade solutions revenues of \$2.0 billion increased 5% from the prior-year period. Excluding the impact of FX translation, treasury

and trade solutions revenues increased 9% reflecting continued growth in transaction volumes.

Markets and securities services revenues of \$4.7 billion (excluding CVA/DVA in the second quarter of 2015) increased 10% from the prior-year period. Fixed income markets revenues of \$3.5 billion increased 4% (14% excluding CVA/DVA in the second quarter of 2015) from the prior-year period, driven by an increase in corporate client activity in rates and currencies as well as a better trading environment in the current quarter, partially offset by lower revenues in securitized products driven by decreased trading opportunities. Equity markets revenues of \$788 million increased 19% (21% excluding CVA/DVA in the second quarter of 2015) versus the prior-year period. The second quarter of 2015 included a previously disclosed charge to revenues of \$175 million for valuation adjustments related to certain financing transactions. Excluding this adjustment, equity markets revenues decreased 4% driven by lower market activity as well as the comparison to strong trading performance in Asia in the prior-year period. Securities services revenues of \$531 million decreased 7% versus the prior-year period. Excluding the impact of FX translation, securities services revenues declined 3% largely reflecting the absence of revenues from divested businesses. For additional information on the results of operations of ICG for the second quarter of 2016, see “Institutional Clients Group” below.

Corporate/Other revenues were \$126 million, down 66% from the prior-year period, mostly reflecting the absence of real estate gains in the prior-year period, as well as lower debt buyback activity. For additional information on the

results of operations of Corporate/Other for the second quarter of 2016, see “Corporate/Other” below. Citicorp end-of-period loans increased 4% to \$592 billion from the prior-year period, driven by a 5% increase in corporate loans and a 4% increase in consumer loans. Excluding the impact of FX translation, Citicorp loans grew 6%, with 6% growth in both corporate and consumer loans.

#### Citi Holdings

Citi Holdings’ net income was \$93 million in the second quarter of 2016, compared to net income of \$156 million in the prior-year period. CVA/DVA was \$9 million (\$6 million after-tax) in the second quarter of 2015. Excluding the impact of CVA/DVA in the prior-year period, Citi Holdings’ net income was \$93 million, compared to \$150 million in the prior-year period, primarily reflecting lower revenues, partially offset by lower expenses and lower credit costs. Citi Holdings’ revenues were \$843 million down 57% from the prior-year period. Excluding CVA/DVA in the second quarter of 2015, Citi Holdings’ revenues also decreased 57% from the prior-year period, mainly reflecting continued reductions in Citi Holdings assets and lower net gains on asset sales. For additional information on the results of operations of Citi Holdings for the second quarter of 2016, see “Citi Holdings” below.

At the end of the current quarter, Citi Holdings’ assets were \$66 billion, 47% below the prior-year period, and represented approximately 4% of Citi’s total GAAP assets. Citi Holdings’ risk-weighted assets were \$121 billion as of

June 30, 2016, a decrease of 31% from the prior-year period, and represented 10% of Citi's risk-weighted assets under Basel III (based on the Advanced Approaches for determining risk-weighted assets).

7

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## 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	Second Quarter			Six Months		
	2016	2015	% Change	2016	2015	% Change
Net interest revenue	\$11,236	\$11,822	(5 )%	\$22,463	\$23,394	(4 )%
Non-interest revenue	6,312	7,648	(17 )	12,640	15,812	(20 )
Revenues, net of interest expense	\$17,548	\$19,470	(10 )%	\$35,103	\$39,206	(10 )%
Operating expenses	10,369	10,928	(5 )	20,892	21,812	(4 )
Provisions for credit losses and for benefits and claims	1,409	1,648	(15 )	3,454	3,563	(3 )
Income from continuing operations before income taxes	\$5,770	\$6,894	(16 )%	\$10,757	\$13,831	(22 )%
Income taxes	1,723	2,036	(15 )	3,202	4,156	(23 )
Income from continuing operations	\$4,047	\$4,858	(17 )%	\$7,555	\$9,675	(22 )%
Income (loss) from discontinued operations, net of taxes <sup>(1)</sup>	(23 )	6	NM	(25 )	1	NM
Net income before attribution of noncontrolling interests	\$4,024	\$4,864	(17 )%	\$7,530	\$9,676	(22 )%
Net income attributable to noncontrolling interests	26	18	44	31	60	(48 )
Citigroup's net income	\$3,998	\$4,846	(17 )%	\$7,499	\$9,616	(22 )%
Less:						
Preferred dividends—Basic	\$322	\$202	59 %	\$532	\$330	61 %
Dividends and undistributed earnings allocated to employee restricted and deferred shares that contain nonforfeitable rights to dividends, applicable to basic EPS	53	64	(17 )	93	126	(26 )
Income allocated to unrestricted common shareholders for basic and diluted EPS	\$3,623	\$4,580	(21 )%	\$6,874	\$9,160	(25 )%
Earnings per share						
Basic						
Income from continuing operations	\$1.25	\$1.51	(17 )	\$2.36	\$3.03	(22 )
Net income	1.24	1.52	(18 )	2.35	3.03	(22 )
Diluted						
Income from continuing operations	\$1.25	\$1.51	(17 )%	\$2.36	\$3.02	(22 )%
Net income	1.24	1.51	(18 )	2.35	3.02	(22 )
Dividends declared per common share	0.05	0.05	—	0.10	0.06	67

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

## SUMMARY OF SELECTED FINANCIAL DATA—PAGE 2

In millions of dollars, except per-share amounts, ratios and	Citigroup Inc. and Consolidated Subsidiaries			Six Months		
	Second Quarter		% Change	2016	2015	% Change
direct staff	2016	2015		2016	2015	
At June 30:						
Total assets	\$1,818,771	\$1,829,370	(1 )%			
Total deposits	937,852	908,037	3			
Long-term debt	207,448	211,845	(2 )			
Citigroup common stockholders' equity	212,635	205,472	3			
Total Citigroup stockholders' equity	231,888	219,440	6			
Direct staff (in thousands)	220	238	(8 )			
Performance metrics						
Return on average assets	0.89	% 1.06	%	0.84	% 1.05	%
Return on average common stockholders' equity <sup>(2)</sup>	7.0	9.1		6.7	9.2	
Return on average total stockholders' equity <sup>(2)</sup>	7.0	8.9		6.7	9.0	
Efficiency ratio (Total operating expenses/Total revenues)	59	56		60	56	
Basel III ratios—full implementation						
Common Equity Tier 1 Capital <sup>(3)</sup>	12.54	% 11.37	%			
Tier 1 Capital <sup>(3)</sup>	14.12	12.54				
Total Capital <sup>(3)</sup>	16.14	14.14				
Supplementary Leverage ratio <sup>(4)</sup>	7.48	6.72				
Citigroup common stockholders' equity to assets	11.69	% 11.23	%			
Total Citigroup stockholders' equity to assets	12.75	12.00				
Dividend payout ratio <sup>(5)</sup>	4.0	3.3		4.3	2.0	
Book value per common share	\$73.19	\$68.27	7 %			
Tangible book value (TBV) per share <sup>(6)</sup>	\$63.53	\$59.18	7 %			
Ratio of earnings to fixed charges and preferred stock dividends	2.63x	3.05x		2.59x	3.09x	

(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) Citi's regulatory capital ratios reflect full implementation of the U.S. Basel III rules. Risk-weighted assets are based on the Basel III Advanced Approaches for determining total risk-weighted assets.

(4) Citi's Supplementary Leverage ratio reflects full implementation of the U.S. Basel III rules.

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

(6) For information on TBV, see "Capital Resources—Tangible Common Equity, Tangible Book Value Per Share and Book Value Per Share" below.

## SEGMENT AND BUSINESS—INCOME (LOSS) AND REVENUES

## CITIGROUP INCOME

In millions of dollars	Second Quarter			Six Months		
	2016	2015	% Change	2016	2015	% Change
Income (loss) from continuing operations						
<b>CITICORP</b>						
Global Consumer Banking						
North America	\$842	\$1,085	(22 )%	\$1,702	\$2,238	(24 )%
Latin America	184	190	(3 )	340	410	(17 )
Asia <sup>(1)</sup>	297	336	(12 )	512	675	(24 )
Total	\$1,323	\$1,611	(18 )%	\$2,554	\$3,323	(23 )%
Institutional Clients Group						
North America	\$1,059	\$1,079	(2 )%	\$1,643	\$2,106	(22 )%
EMEA	720	695	4	1,119	1,630	(31 )
Latin America	396	430	(8 )	733	805	(9 )
Asia	540	656	(18 )	1,179	1,293	(9 )
Total	\$2,715	\$2,860	(5 )%	\$4,674	\$5,834	(20 )%
Corporate/Other	(89 )	231	NM	(118 )	212	NM
Total Citicorp	\$3,949	\$4,702	(16 )%	\$7,110	\$9,369	(24 )%
Citi Holdings	\$98	\$156	(37 )%	\$445	\$306	45 %
Income from continuing operations	\$4,047	\$4,858	(17 )%	\$7,555	\$9,675	(22 )%
Discontinued operations	\$(23 )	\$6	NM	\$(25 )	\$1	NM
Net income attributable to noncontrolling interests	26	18	44 %	31	60	(48 )%
Citigroup's net income	\$3,998	\$4,846	(17 )%	\$7,499	\$9,616	(22 )%

(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	Second Quarter			Six Months		
	2016	2015	% Change	2016	2015	% Change
<b>CITICORP</b>						
<b>Global Consumer Banking</b>						
North America	\$4,756	\$4,895	(3 )%	\$9,630	\$9,955	(3 )%
Latin America	1,248	1,432	(13 )	2,489	2,864	(13 )
Asia <sup>(1)</sup>	1,729	1,857	(7 )	3,384	3,667	(8 )
Total	\$7,733	\$8,184	(6 )%	\$15,503	\$16,486	(6 )%
<b>Institutional Clients Group</b>						
North America	\$3,478	\$3,523	(1 )%	\$6,524	\$6,914	(6 )%
EMEA	2,615	2,565	2	4,822	5,465	(12 )
Latin America	1,033	1,027	1	2,008	2,018	—
Asia	1,720	1,831	(6 )	3,528	3,626	(3 )
Total	\$8,846	\$8,946	(1 )%	\$16,882	\$18,023	(6 )%
Corporate/Other	126	371	(66 )	400	583	(31 )
Total Citicorp	\$16,705	\$17,501	(5 )%	\$32,785	\$35,092	(7 )%
Citi Holdings	\$843	\$1,969	(57 )%	\$2,318	\$4,114	(44 )%
Total Citigroup Net Revenues	\$17,548	\$19,470	(10 )%	\$35,103	\$39,206	(10 )%

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



SEGMENT BALANCE SHEET<sup>(1)</sup>

In millions of dollars	Global Consumer Banking	Institutional Clients Group	Corporate/Other and consolidating eliminations <sup>(2)</sup>	Subtotal Citicorp	Citi Holdings	Citigroup Parent company- issued long-term debt and stockholders' equity <sup>(3)</sup>	Total Citigroup consolidated
<b>Assets</b>							
Cash and deposits with banks	\$9,730	\$63,802	\$ 75,797	\$149,329	\$ 804	\$—	\$ 150,133
Federal funds sold and securities borrowed or purchased under agreements to resell	213	227,715	—	227,928	755	—	228,683
Trading account assets	5,859	261,906	481	268,246	3,518	—	271,764
Investments	8,178	112,605	229,927	350,710	5,583	—	356,293
Loans, net of unearned income and allowance for loan losses	277,581	304,077	—	581,658	39,553	—	621,211
Other assets	42,136	87,812	47,374	177,322	13,365	—	190,687
Liquidity assets <sup>(4)</sup>	57,856	244,154	(304,566)	(2,556)	2,556	—	—
<b>Total assets</b>	<b>\$401,553</b>	<b>\$1,302,071</b>	<b>\$ 49,013</b>	<b>\$1,752,637</b>	<b>\$ 66,134</b>	<b>\$—</b>	<b>\$1,818,771</b>
<b>Liabilities and equity</b>							
Total deposits	\$301,979	\$606,817	\$ 22,680	\$931,476	\$ 6,376	\$—	\$937,852
Federal funds purchased and securities loaned or sold under agreements to repurchase	3,885	154,076	—	157,961	40	—	158,001
Trading account liabilities	(3)	135,064	555	135,616	691	—	136,307
Short-term borrowings	44	18,362	—	18,406	2	—	18,408
Long-term debt <sup>(3)</sup>	1,448	32,286	20,913	54,647	4,115	148,686	207,448
Other liabilities	18,037	87,108	17,508	122,653	5,081	—	127,734
Net inter-segment funding (lending) <sup>(3)</sup>	76,163	268,358	(13,776)	330,745	49,829	(380,574)	—
<b>Total liabilities</b>	<b>\$401,553</b>	<b>\$1,302,071</b>	<b>\$ 47,880</b>	<b>\$1,751,504</b>	<b>\$ 66,134</b>	<b>\$(231,888)</b>	<b>\$1,585,750</b>
<b>Total equity<sup>(5)</sup></b>	<b>—</b>	<b>—</b>	<b>1,133</b>	<b>1,133</b>	<b>—</b>	<b>231,888</b>	<b>233,021</b>
<b>Total liabilities and equity</b>	<b>\$401,553</b>	<b>\$1,302,071</b>	<b>\$ 49,013</b>	<b>\$1,752,637</b>	<b>\$ 66,134</b>	<b>\$—</b>	<b>\$1,818,771</b>

The supplemental information presented in the table above reflects Citigroup's consolidated GAAP balance sheet (1) by reporting segment as of June 30, 2016. The respective segment information depicts the assets and liabilities managed by each segment as of such date.

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

The total stockholders' equity and the majority of long-term debt of Citigroup reside in the Citigroup parent (3) 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.

(5) Citicorp equity represents noncontrolling interests.



## 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 (consisting of Citi's consumer banking businesses in Mexico) and Asia) and Institutional Clients Group (which includes Banking and Markets and securities services). Citicorp also includes Corporate/Other. At June 30, 2016, Citicorp had approximately \$1.8 trillion of assets and \$932 billion of deposits, representing approximately 96% of Citi's total assets and 99% of Citi's total deposits.

In millions of dollars except as otherwise noted	Second Quarter			Six Months		
	2016	2015	% Change	2016	2015	% Change
Net interest revenue	\$10,687	\$10,622	1 %	\$21,317	\$20,935	2 %
Non-interest revenue	6,018	6,879	(13 )	11,468	14,157	(19 )
Total revenues, net of interest expense	\$16,705	\$17,501	(5 )%	\$32,785	\$35,092	(7 )%
Provisions for credit losses and for benefits and claims						
Net credit losses	\$1,514	\$1,586	(5 )%	\$3,095	\$3,074	1 %
Credit reserve build (release)	(2 )	(220 )	99	191	(250 )	NM
Provision for loan losses	\$1,512	\$1,366	11 %	\$3,286	\$2,824	16 %
Provision for benefits and claims	20	21	(5 )	48	49	(2 )
Provision for unfunded lending commitments	(25 )	(50 )	50	48	(82 )	NM
Total provisions for credit losses and for benefits and claims	\$1,507	\$1,337	13 %	\$3,382	\$2,791	21 %
Total operating expenses	\$9,511	\$9,566	(1 )%	\$19,206	\$19,065	1 %
Income from continuing operations before taxes	\$5,687	\$6,598	(14 )%	\$10,197	\$13,236	(23 )%
Income taxes	1,738	1,896	(8 )	3,087	3,867	(20 )
Income from continuing operations	\$3,949	\$4,702	(16 )%	\$7,110	\$9,369	(24 )%
Income (loss) from discontinued operations, net of taxes	(23 )	6	NM	(25 )	1	NM
Noncontrolling interests	21	18	17	25	59	(58 )
Net income	\$3,905	\$4,690	(17 )%	\$7,060	\$9,311	(24 )%
Balance sheet data (in billions of dollars)						
Total end-of-period (EOP) assets	\$1,753	\$1,705	3 %			
Average assets	\$1,736	\$1,714	1	\$1,718	\$1,717	—
Return on average assets	0.90	%1.10	%	0.83	%1.09	%
Efficiency ratio	57	%55	%	59	%54	%
Total EOP loans	\$592	\$568	4			
Total EOP deposits	\$932	\$896	4			
NM Not meaningful						

## 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 focused on its priority markets in the U.S., Mexico and Asia with 2,681 branches in 19 countries as of June 30, 2016. At June 30, 2016, GCB had approximately \$402 billion of assets and \$302 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.

In millions of dollars except as otherwise noted	Second Quarter			Six Months		
	2016	2015	% Change	2016	2015	% Change
Net interest revenue	\$6,364	\$6,457	(1 )%	\$12,770	\$12,918	(1 )%
Non-interest revenue	1,369	1,727	(21 )	2,733	3,568	(23 )
Total revenues, net of interest expense	\$7,733	\$8,184	(6 )%	\$15,503	\$16,486	(6 )%
Total operating expenses	\$4,304	\$4,338	(1 )%	\$8,712	\$8,643	1 %
Net credit losses	\$1,373	\$1,504	(9 )%	\$2,743	\$2,993	(8 )%
Credit reserve build (release)	24	(97 )	NM	109	(246 )	NM
Provision (release) for unfunded lending commitments	8	(4 )	NM	10	(4 )	NM
Provision for benefits and claims	20	21	(5 )	48	49	(2 )
Provisions for credit losses and for benefits and claims	\$1,425	\$1,424	— %	\$2,910	\$2,792	4 %
Income from continuing operations before taxes	\$2,004	\$2,422	(17 )%	\$3,881	\$5,051	(23 )%
Income taxes	681	811	(16 )	1,327	1,728	(23 )
Income from continuing operations	\$1,323	\$1,611	(18 )%	\$2,554	\$3,323	(23 )%
Noncontrolling interests	1	5	(80 )	3	1	NM
Net income	\$1,322	\$1,606	(18 )%	\$2,551	\$3,322	(23 )%
Balance Sheet data (in billions of dollars)						
Average assets	\$388	\$381	2 %	\$383	\$381	1 %
Return on average assets	1.37	%1.69	%	1.34	%1.76	%
Efficiency ratio	56	%53	%	56	%52	%
Total EOP assets	\$402	\$382	5			
Average deposits	\$299	\$298	—	\$297	\$298	—
Net credit losses as a percentage of average loans	2.02	%2.21	%	2.03	%2.21	%
Revenue by business						
Retail banking	\$3,272	\$3,533	(7 )%	\$6,488	\$7,071	(8 )%
Cards <sup>(1)</sup>	4,461	4,651	(4 )	9,015	9,415	(4 )
Total	\$7,733	\$8,184	(6 )%	\$15,503	\$16,486	(6 )%
Income from continuing operations by business						
Retail banking	\$489	\$549	(11 )%	\$806	\$1,128	(29 )%
Cards <sup>(1)</sup>	834	1,062	(21 )	1,748	2,195	(20 )
Total	\$1,323	\$1,611	(18 )%	\$2,554	\$3,323	(23 )%

Table continues on next page.

Foreign currency (FX) translation impact						
Total revenue—as reported	\$7,733	\$8,184	(6 )%	\$15,503	\$16,486	(6 )%
Impact of FX translation <sup>(2)</sup>	—	(299 )		—	(597 )	
Total revenues—ex-FX	\$7,733	\$7,885	(2 )%	\$15,503	\$15,889	(2 )%
Total operating expenses—as reported	\$4,304	\$4,338	(1 )%	\$8,712	\$8,643	1 %
Impact of FX translation <sup>(2)</sup>	—	(135 )		—	(276 )	
Total operating expenses—ex-FX	\$4,304	\$4,203	2 %	\$8,712	\$8,367	4 %
Total provisions for LLR & PBC—as reported	\$1,425	\$1,424	— %	\$2,910	\$2,792	4 %
Impact of FX translation <sup>(2)</sup>	—	(57 )		—	(121 )	
Total provisions for LLR & PBC—ex-FX	\$1,425	\$1,367	4 %	\$2,910	\$2,671	9 %
Net income—as reported	\$1,322	\$1,606	(18)%	\$2,551	\$3,322	(23)%
Impact of FX translation <sup>(2)</sup>	—	(73 )		—	(135 )	
Net income—ex-FX	\$1,322	\$1,533	(14)%	\$2,551	\$3,187	(20)%

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

(2) Reflects the impact of FX translation into U.S. dollars at the second quarter of 2016 average exchange rates for all periods presented.

(3) Presentation of this metric excluding FX translation is a non-GAAP financial measure.

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, Costco and Hilton Worldwide) within Citi-branded cards as well as its co-brand and private label relationships within Citi retail services. As of June 30, 2016, North America GCB's 729 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 June 30, 2016, North America GCB had approximately 10.8 million retail banking customer accounts, \$54.8 billion of retail banking loans and \$183.3 billion of deposits. In addition, North America GCB had approximately 120.7 million Citi-branded and Citi retail services credit card accounts (including approximately 8 million as a result of Citi's completion of the acquisition of the Costco portfolio on June 17, 2016) with \$120.8 billion in outstanding card loan balances (including approximately \$11 billion as a result of the Costco portfolio acquisition).

In millions of dollars, except as otherwise noted	Second Quarter		%	Six Months		%	
	2016	2015	Change	2016	2015	Change	
Net interest revenue	\$4,377	\$4,312	2	% \$8,819	\$8,648	2	%
Non-interest revenue	379	583	(35)	) 811	1,307	(38)	)
Total revenues, net of interest expense	\$4,756	\$4,895	(3)	)% \$9,630	\$9,955	(3)	)%
Total operating expenses	\$2,432	\$2,316	5	% \$4,938	\$4,657	6	%
Net credit losses	\$953	\$999	(5)	)% \$1,885	\$1,959	(4)	)%
Credit reserve build (release)	50	(108)	) NM	129	(207)	) NM	
Provision for unfunded lending commitments	7	—	NM	8	1	NM	
Provisions for benefits and claims	8	9	(11)	) 17	19	(11)	)
Provisions for credit losses and for benefits and claims	\$1,018	\$900	13	% \$2,039	\$1,772	15	%
Income from continuing operations before taxes	\$1,306	\$1,679	(22)	)% \$2,653	\$3,526	(25)	)%
Income taxes	464	594	(22)	) 951	1,288	(26)	)
Income from continuing operations	\$842	\$1,085	(22)	)% \$1,702	\$2,238	(24)	)%
Noncontrolling interests	(1)	) —	(100)	(1)	) 1	NM	
Net income	\$843	\$1,085	(22)	)% \$1,703	\$2,237	(24)	)%
Balance Sheet data (in billions of dollars)							
Average assets	\$219	\$207	6	% \$216	\$208	4	%
Return on average assets	1.55	%2.10	%	1.59	%2.17	%	
Efficiency ratio	51	%47	%	51	%47	%	
Average deposits	\$182.1	\$179.9	1	\$181.4	\$180.2	1	
Net credit losses as a percentage of average loans	2.34	%2.58	%	2.33	%2.54	%	
Revenue by business							
Retail banking	\$1,330	\$1,379	(4)	)% \$2,637	\$2,793	(6)	)%
Citi-branded cards	1,907	1,933	(1)	) 3,787	3,942	(4)	)
Citi retail services	1,519	1,583	(4)	) 3,206	3,220	—	
Total	\$4,756	\$4,895	(3)	)% \$9,630	\$9,955	(3)	)%
Income from continuing operations by business							
Retail banking	\$178	\$207	(14)	)% \$276	\$417	(34)	)%
Citi-branded cards	334	499	(33)	) 700	1,038	(33)	)
Citi retail services	330	379	(13)	) 726	783	(7)	)
Total	\$842	\$1,085	(22)	)% \$1,702	\$2,238	(24)	)%

NM Not meaningful



## 2Q16 vs. 2Q15

Net income decreased by 22% due to lower revenues, higher expenses and a net loan loss reserve build, partially offset by lower net credit losses.

Revenues decreased 3%, reflecting lower revenues in retail banking, Citi-branded cards and Citi retail services. Retail banking revenues decreased 4%. The decrease was primarily driven by a decline in mortgage gain on sale revenues due to lower mortgage originations and lower mortgage servicing revenues. This decline in retail banking revenues was partially offset by continued growth in consumer and commercial banking, including growth in average loans (10%) and average checking deposits (9%), as well as improvement in spreads driven by improved deposit mix and higher interest rates.

Cards revenues decreased 3%. In Citi-branded cards, revenues decreased 1%, primarily reflecting the continued impact of higher rewards costs and higher customer payment rates, partially offset by a modest benefit from the previously disclosed acquisition of the Costco portfolio. Average active accounts grew 10% (5% excluding the Costco portfolio acquisition), average loans grew 6% (3% excluding Costco) and purchase sales grew 15% (10% excluding Costco), in each case driven by the continued investment spending (discussed below).

Citi retail services revenues decreased 4%. The decrease was primarily due to the impact of renewing and extending several partnerships in a competitive environment, principally that with The Home Depot, as well as the absence of revenues associated with two portfolios sold in the first quarter of 2016. Purchase sales and average loans were largely unchanged. North America GCB expects revenues within Citi retail services to remain relatively unchanged to the current quarter level during at least the remainder of 2016 as expected overall volume growth is likely to be offset by the impact of absorbing the more competitive terms of the partnership renewals.

Expenses increased 5%, primarily due to the continued investment spending (including for the Costco portfolio acquisition and continued marketing investments, among other areas), partially offset by efficiency savings. North America GCB expects continued higher expenses related to Costco and other Citi-branded cards investments in the near term. In addition, during the second quarter of 2016, Citi renewed and extended its partnership with American Airlines. North America GCB currently expects the impact of the renewal could lower pretax earnings in Citi-branded cards modestly during the remainder of 2016, primarily due to higher expenses.

Provisions increased 13%, largely due to a net loan loss reserve build (\$57 million), compared to a loan loss reserve release in the prior-year period (\$108 million), partially offset by lower net credit losses (5%) in each of Citi-branded cards and Citi retail services. The net loan loss reserve build was driven by Citi-branded cards due to volume growth and the impact of the Costco portfolio. North America GCB expects to incur net loan loss reserve builds in Citi-branded cards in the near term due in part to the need to establish loan loss

reserves related to new loans originated in the Costco portfolio.

For information on Citi's energy and energy-related exposures within commercial banking within North America GCB, see "Credit Risk—Commercial Credit" below.

## 2016 YTD vs. 2015 YTD

Year-to-date, North America GCB has experienced similar trends to those described above. Net income decreased 24% due to lower revenues, higher expenses and a net loan loss reserve build, partially offset by lower net credit losses.

Revenues decreased 3%, reflecting lower revenues in retail banking and Citi-branded cards, while Citi retail services revenues were largely unchanged. Retail banking revenues decreased 6%. Excluding the previously disclosed \$110 million gain on sale of branches in Texas in the first quarter of 2015, revenues decreased 2%, driven by the same factors described above. Cards revenues decreased 2%. In Citi-branded cards, revenues decreased 4%, driven by the same factors described above. Citi retail services revenues were largely unchanged, primarily due to gains on sales of two cards portfolios in the first quarter of 2016, offset by the impact of the partnership renewals.

Expenses increased 6%, primarily due to higher repositioning charges and the continued investment spending, higher volume-related expenses and higher regulatory and compliance costs, partially offset by ongoing cost reduction initiatives, including as a result of the business' branch rationalization strategy.



Provisions increased 15%, largely due to a net loan loss reserve build (\$137 million), compared to a net loan loss reserve release in the prior-year period (\$206 million), partially offset by lower net credit losses (4%) largely in Citi-branded cards. The net loan loss reserve build was driven by energy and energy-related exposures in the commercial banking portfolio within retail banking in the first quarter of 2016 as well as volume growth and the impact of the Costco portfolio, as described above.

## 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 in Mexico through Banco Nacional de Mexico, or Banamex, Mexico's second-largest bank.

At June 30, 2016, Latin America GCB had 1,491 retail branches in Mexico, with approximately 28.4 million retail banking customer accounts, \$19.5 billion in retail banking loans and \$28.2 billion in deposits. In addition, the business had approximately 5.7 million Citi-branded card accounts with \$5.0 billion in outstanding loan balances.

In millions of dollars, except as otherwise noted	Second Quarter			Six Months		
	2016	2015	% Change	2016	2015	% Change
Net interest revenue	\$871	\$991	(12 )%	\$1,734	\$1,981	(12 )%
Non-interest revenue	377	441	(15 )	755	883	(14 )
Total revenues, net of interest expense	\$1,248	\$1,432	(13 )%	\$2,489	\$2,864	(13 )%
Total operating expenses	\$726	\$846	(14 )%	\$1,446	\$1,643	(12 )%
Net credit losses	\$260	\$316	(18 )%	\$538	\$672	(20 )%
Credit reserve build (release)	(2 )	19	NM	15	11	36
Provision (release) for unfunded lending commitments	1	—	100	2	(3 )	NM
Provision for benefits and claims	12	12	—	31	30	3
Provisions for credit losses and for benefits and claims (LLR & PBC)	\$271	\$347	(22 )%	\$586	\$710	(17 )%
Income from continuing operations before taxes	\$251	\$239	5 %	\$457	\$511	(11 )%
Income taxes	67	49	37	117	101	16
Income from continuing operations	\$184	\$190	(3 )%	\$340	\$410	(17 )%
Noncontrolling interests	1	2	(50 )	2	2	—
Net income	\$183	\$188	(3 )%	\$338	\$408	(17 )%
Balance Sheet data (in billions of dollars)						
Average assets	\$50	\$55	(9 )%	\$50	\$56	(11 )%
Return on average assets	1.47	%1.37	%	1.36	%1.47	%
Efficiency ratio	58	%59	%	58	%57	%
Average deposits	\$27.4	\$28.7	(5 )	\$27.6	\$29.0	(5 )
Net credit losses as a percentage of average loans	4.25	%4.66	%	4.38	%4.95	%
Revenue by business						
Retail banking	\$865	\$975	(11 )%	\$1,733	\$1,947	(11 )%
Citi-branded cards	383	457	(16 )	756	917	(18 )
Total	\$1,248	\$1,432	(13 )%	\$2,489	\$2,864	(13 )%
Income from continuing operations by business						
Retail banking	\$107	\$121	(12 )%	\$206	\$269	(23 )%
Citi-branded cards	77	69	12	134	141	(5 )
Total	\$184	\$190	(3 )%	\$340	\$410	(17 )%
FX translation impact						
Total revenues—as reported	\$1,248	\$1,432	(13 )%	\$2,489	\$2,864	(13 )%
Impact of FX translation <sup>(1)</sup>	—	(234 )		—	(453 )	
Total revenues—ex-FX	\$1,248	\$1,198	4 %	\$2,489	\$2,411	3 %
Total operating expenses—as reported	\$726	\$846	(14 )%	\$1,446	\$1,643	(12 )%
Impact of FX translation <sup>(1)</sup>	—	(85 )		—	(171 )	
Total operating expenses—ex-FX	\$726	\$761	(5 )%	\$1,446	\$1,472	(2 )%
Provisions for LLR & PBC—as reported	\$271	\$347	(22 )%	\$586	\$710	(17 )%
Impact of FX translation <sup>(1)</sup>	—	(49 )		—	(104 )	
Provisions for LLR & PBC—ex-FX	\$271	\$298	(9 )%	\$586	\$606	(3 )%
Net income—as reported	\$183	\$188	(3 )%	\$338	\$408	(17 )%

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Impact of FX translation <sup>(1)</sup>	—	(71 )	—	(130 )
Net income— <del>ex-FX</del>	\$183	\$117	56 %	\$338 \$278 22 %

(1) Reflects the impact of FX translation into U.S. dollars at the second quarter of 2016 average exchange rates for all periods presented.

(2) Presentation of this metric excluding FX translation is a non-GAAP financial measure.

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.

#### 2Q16 vs. 2Q15

Net income increased 56%, driven by higher revenues, lower expenses and lower cost of credit.

Revenues increased 4%, primarily due to higher revenues in retail banking, partially offset by lower revenues in cards. Retail banking revenues increased 7% driven by volume growth, including an increase in average loans (8%), average deposits (10%) and deposit spreads, partially offset by a decline in loan spreads. Cards revenues decreased 3% driven by continued lower volumes (average loans down 1%), although increased purchase sales (7%) are expected to begin to lead to increased card loan growth during the remainder of 2016, despite continuing pressure from higher payment rates.

Expenses decreased 5%, primarily due to lower legal and related costs, lower repositioning charges, the impact of business divestitures and ongoing efficiency savings.

Provisions decreased 9%, driven by a lower net loan loss reserve build and lower net credit losses. The net loan loss reserve build decreased \$18 million, primarily due to releases related to the commercial banking portfolio and mortgages. Net credit losses decreased 5%, largely reflecting lower net credit losses in the cards portfolio due to a focus on higher credit quality customers.

#### 2016 YTD vs. 2015 YTD

Year-to-date, Latin America GCB has experienced similar trends to those described above. Net income increased 22%, driven by the same factors described above.

Revenues increased 3%, primarily due to higher revenues in retail banking, partially offset by lower revenues in cards. Retail banking revenues increased 6%, driven by the same factors described above as well as the impact of business divestitures. Cards revenues decreased 3%, driven by continued higher payment rates resulting from the business' focus on higher credit quality customers which also drove a decline in average loans (2%).

Expenses decreased 2%, primarily due to lower legal and related expenses, the impact of business divestitures and ongoing efficiency savings, partially offset by repositioning charges, higher marketing costs and higher volume-related costs.

Provisions decreased 3% as lower net credit losses were partially offset by a higher net loan loss reserve build. Net credit losses decreased 7%, largely reflecting lower net credit losses in the cards and payroll portfolios due to the focus on higher credit quality customers. The net loan loss reserve build increased \$10 million, primarily due to a net loan loss reserve build for cards and a lower release related to the commercial banking portfolio.

## 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 June 30, 2016, Citi's most significant revenues in the region were from Singapore, Hong Kong, Korea, Australia, Taiwan, India, Indonesia, Thailand, Malaysia and the Philippines. In addition, EMEA GCB, reported within Asia GCB, provides traditional retail banking and Citi-branded card products to retail customers, primarily in Poland, Russia and the United Arab Emirates.

At June 30, 2016, on a combined basis, the businesses had 461 retail branches, approximately 17.1 million retail banking customer accounts, \$67.5 billion in retail banking loans and \$90.5 billion in deposits. In addition, the businesses had approximately 16.6 million Citi-branded card accounts with \$17.6 billion in outstanding loan balances.

In millions of dollars, except as otherwise noted <sup>(1)</sup>	Second Quarter		%	Six Months		%
	2016	2015	Change	2016	2015	Change
Net interest revenue	\$1,116	\$1,154	(3 )%	\$2,217	\$2,289	(3 )%
Non-interest revenue	613	703	(13 )	1,167	1,378	(15 )
Total revenues, net of interest expense	\$1,729	\$1,857	(7 )%	\$3,384	\$3,667	(8 )%
Total operating expenses	\$1,146	\$1,176	(3 )%	\$2,328	\$2,343	(1 )%
Net credit losses	\$160	\$189	(15 )%	\$320	\$362	(12 )%
Credit reserve build (release)	(24 )	(8 )	NM	(35 )	(50 )	30
Provision (release) for unfunded lending commitments	—	(4 )	100	—	(2 )	100
Provisions for credit losses	\$136	\$177	(23 )%	\$285	\$310	(8 )%
Income from continuing operations before taxes	\$447	\$504	(11 )%	\$771	\$1,014	(24 )%
Income taxes	150	168	(11 )	259	339	(24 )
Income from continuing operations	\$297	\$336	(12 )%	\$512	\$675	(24 )%
Noncontrolling interests	1	3	(67 )	2	(2 )	NM
Net income	\$296	\$333	(11 )%	\$510	\$677	(25 )%
Balance Sheet data (in billions of dollars)						
Average assets	\$119	\$119	—	\$118	\$117	1
Return on average assets	1.00	%1.12	%	0.87	%1.17	%
Efficiency ratio	66	%63	%	69	%64	%
Average deposits	\$89.4	\$89.3	—	\$88.3	\$88.8	(1 )
Net credit losses as a percentage of average loans	0.76	%0.84	%	0.76	%0.81	%
Revenue by business						
Retail banking	\$1,077	\$1,179	(9 )%	\$2,118	\$2,331	(9 )%
Citi-branded cards	652	678	(4 )	1,266	1,336	(5 )
Total	\$1,729	\$1,857	(7 )%	\$3,384	\$3,667	(8 )%
Income from continuing operations by business						
Retail banking	\$204	\$221	(8 )%	\$324	\$442	(27 )%
Citi-branded cards	93	115	(19 )	188	233	(19 )
Total	\$297	\$336	(12 )%	\$512	\$675	(24 )%

## FX translation impact

Total revenues—as reported	\$1,729	\$1,857	(7)%	\$3,384	\$3,667	(8)%
Impact of FX translation <sup>(2)</sup>	—	(65)		—	(144)	
Total revenues—ex-FX	\$1,729	\$1,792	(4)%	\$3,384	\$3,523	(4)%
Total operating expenses—as reported	\$1,146	\$1,176	(3)%	\$2,328	\$2,343	(1)%
Impact of FX translation <sup>(2)</sup>	—	(50)		—	(105)	
Total operating expenses—ex-FX	\$1,146	\$1,126	2%	\$2,328	\$2,238	4%
Provisions for loan losses—as reported	\$136	\$177	(23)%	\$285	\$310	(8)%
Impact of FX translation <sup>(2)</sup>	—	(8)		—	(17)	
Provisions for loan losses—ex-FX	\$136	\$169	(20)%	\$285	\$293	(3)%
Net income—as reported	\$296	\$333	(11)%	\$510	\$677	(25)%
Impact of FX translation <sup>(2)</sup>	—	(2)		—	(5)	
Net income—ex-FX	\$296	\$331	(11)%	\$510	\$672	(24)%

(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 second quarter of 2016 average exchange rates for all periods presented.

(3) Presentation of this metric excluding FX translation is a non-GAAP financial measure.

NM Not 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.

## 2Q16 vs. 2Q15

Net income decreased 11%, primarily due to lower revenues and higher expenses, partially offset by lower cost of credit.

Revenues decreased 4%, primarily due to lower retail banking revenues as cards revenues were unchanged. Retail banking revenues decreased 6%, mainly due to a decline (16%) in investment sales revenues within the wealth management business due to lower client activity, particularly in Hong Kong, China, Korea and Taiwan. Retail banking revenues excluding wealth management declined 2%, largely reflecting the repositioning of the portfolio away from lower return mortgage loans as well as de-risking in the commercial portfolio towards the end of 2015, partially offset by growth in higher return personal loans (3%). This decrease in revenues was also partially offset by growth in insurance revenues as well as deposit products (3% increase in average deposits), despite continued optimization of the branch footprint. Asia GCB expects wealth management revenues within its retail banking business could continue to be impacted by market uncertainty during the remainder of 2016.

Cards revenues were largely unchanged. While the overall negative impact from regulatory changes in the region continued to abate, growth in purchase sales slowed during the current quarter, in part due to actions the business took to lower the value of rewards on certain products in Australia in response to regulation that capped interchange rates. Purchase sales were also negatively impacted by slower economic growth in the region. The slower purchase sales growth and a reduction in promotional rate balances resulted in more modest loan growth (increase of 1%) in the current quarter.

Expenses increased 2%, primarily due to higher repositioning costs and higher regulatory and compliance costs, partially offset by efficiency savings.

Provisions decreased 20%, primarily due to a higher net loan loss reserve release and lower net credit losses.

## 2016 YTD vs. 2015 YTD

Year-to-date, Asia GCB has experienced similar trends to those described above. Net income decreased 24% due to lower revenues and higher expenses, partially offset by lower cost of credit.

Revenues decreased 4%, primarily due to the slowdown in investment sales revenues, lower retail lending revenues and lower cards revenues. Retail banking revenues decreased 6%, driven by the same factors described above. Cards revenues decreased 1%, primarily due to spread compression and slower purchase sales growth, mostly offset by the stabilizing payment rates and modest loan growth (2%) across the region.

Expenses increased 4%, driven by the same factors described above.

Provisions decreased 3%, primarily due to lower net credit losses, partially offset by a lower net loan loss reserve release.

## 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 certain 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 and long-term and short-term debt 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 100 countries and jurisdictions. At June 30, 2016, ICG had approximately \$1.3 trillion of assets and \$607 billion of deposits, while two of its businesses, securities services and issuer services, managed approximately \$15.3 trillion of assets under custody compared to \$15.5 trillion at the end of the prior-year period. The decline in assets under custody from the prior-year period was primarily due to business divestitures.

In millions of dollars, except as otherwise noted	Second Quarter			Six Months		%
	2016	2015	Change	2016	2015	Change
Commissions and fees	\$955	\$990	(4 )%	\$1,958	\$1,987	(1 )%
Administration and other fiduciary fees	638	663	(4 )	1,235	1,276	(3 )
Investment banking	1,029	1,120	(8 )	1,769	2,254	(22 )
Principal transactions	1,911	1,793	7	3,485	3,990	(13 )
Other <sup>(1)</sup>	46	193	(76 )	38	450	(92 )
Total non-interest revenue	\$4,579	\$4,759	(4 )%	\$8,485	\$9,957	(15 )%
Net interest revenue (including dividends)	4,267	4,187	2	8,397	8,066	4
Total revenues, net of interest expense	\$8,846	\$8,946	(1 )%	\$16,882	\$18,023	(6 )%
Total operating expenses	\$4,760	\$4,842	(2 )%	\$9,629	\$9,494	1 %
Net credit losses	\$141	\$82	72 %	\$352	\$81	NM
Credit reserve build (release)	(26 )	(123 )	79	82	(4 )	NM
Provision (release) for unfunded lending commitments	(33 )	(46 )	28	38	(78 )	NM
Provisions for credit losses	\$82	\$(87 )	NM	\$472	\$(1 )	NM
Income from continuing operations before taxes	\$4,004	\$4,191	(4 )%	\$6,781	\$8,530	(21 )%
Income taxes	1,289	1,331	(3 )	2,107	2,696	(22 )
Income from continuing operations	\$2,715	\$2,860	(5 )%	\$4,674	\$5,834	(20 )%
Noncontrolling interests	17	15	13	27	50	(46 )
Net income	\$2,698	\$2,845	(5 )%	\$4,647	\$5,784	(20 )%
Average assets (in billions of dollars)	\$1,299	\$1,284	1 %	\$1,285	\$1,282	— %
Return on average assets	0.84	%0.89	%	0.73	%0.91	%
Efficiency ratio	54	%54	%	57	%53	%
CVA/DVA-after-tax	\$—	\$190	(100 )%	\$—	\$146	(100 )%
Net income ex-CVA/DVA <sup>(2)</sup>	\$2,698	\$2,655	2 %	\$4,647	\$5,638	(18 )%
Revenues by region						
North America	\$3,478	\$3,523	(1 )%	\$6,524	\$6,914	(6 )%



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EMEA	2,615	2,565	2	4,822	5,465	(12 )
Latin America	1,033	1,027	1	2,008	2,018	—
Asia	1,720	1,831	(6 )	3,528	3,626	(3 )
Total	\$8,846	\$8,946	(1 )%	\$16,882	\$18,023	(6 )%

23

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Income from continuing operations by region							
North America	\$1,059	\$1,079	(2 )	%	\$1,643	\$2,106	(22)%
EMEA	720	695	4		1,119	1,630	(31)
Latin America	396	430	(8 )		733	805	(9 )
Asia	540	656	(18)		1,179	1,293	(9 )
Total	\$2,715	\$2,860	(5 )	%	\$4,674	\$5,834	(20)%
Average loans by region (in billions of dollars)							
North America	\$133	\$121	10	%	\$130	\$118	10 %
EMEA	67	63	6		65	62	5
Latin America	42	41	2		43	41	5
Asia	61	63	(3 )		61	63	(3 )
Total	\$303	\$288	5	%	\$299	\$284	5 %
EOP deposits by business (in billions of dollars)							
Treasury and trade solutions	\$405	\$397	2	%			
All other ICG businesses	202	191	6				
Total	\$607	\$588	3	%			

(1) First quarter of 2016 includes a previously disclosed charge of approximately \$180 million primarily reflecting the write down of Citi's net investment in Venezuela as a result of changes in the exchange rate during the quarter.

(2) Excludes CVA/DVA in the second quarter and six months of 2015, consistent with current period presentation. For additional information, see Notes 1 and 22 to the Consolidated Financial Statements.

NM Not Meaningful

ICG Revenue Details—Excluding CVA/DVA and Gain/(Loss) on Loan Hedges<sup>(1)</sup>

In millions of dollars	Second Quarter			Six Months		% Change
	2016	2015	% Change	2016	2015	
Investment banking revenue details						
Advisory	\$238	\$257	(7 )%	\$465	\$552	(16 )%
Equity underwriting	174	296	(41 )	292	527	(45 )
Debt underwriting	805	737	9	1,335	1,413	(6 )
Total investment banking	\$1,217	\$1,290	(6 )%	\$2,092	\$2,492	(16 )%
Treasury and trade solutions	2,048	1,955	5	3,999	3,845	4
Corporate lending—excluding gain (loss) on loan hedges <sup>(2)</sup>	389	476	(18 )	844	952	(11 )
Private bank	738	747	(1 )	1,484	1,456	2
Total banking revenues (ex-CVA/DVA and gain (loss) on loan hedges) <sup>(1)</sup>	\$4,392	\$4,468	(2 )%	\$8,419	\$8,745	(4 )%
Corporate lending—gain/(loss) on loan hedges <sup>(2)</sup>	\$(203 )	\$(66 )	NM	\$(269 )	\$(14 )	NM
Total banking revenues (ex-CVA/DVA and including gain (loss) on loan hedges) <sup>(1)</sup>	\$4,189	\$4,402	(5 )%	\$8,150	\$8,731	(7 )%
Fixed income markets	\$3,468	\$3,047	14 %	\$6,553	\$6,531	— %
Equity markets	788	649	21	1,494	1,516	(1 )
Securities services	531	570	(7 )	1,093	1,113	(2 )
Other <sup>(3)</sup>	(130 )	(25 )	NM	(408 )	(102 )	NM
Total Markets and securities services (ex-CVA/DVA) <sup>(1)</sup>	\$4,657	\$4,241	10 %	\$8,732	\$9,058	(4 )%
Total ICG (ex-CVA/DVA)	\$8,846	\$8,643	2 %	\$16,882	\$17,789	(5 )%
CVA/DVA (excluded as applicable in lines above)	—	303	NM	—	234	NM
Fixed income markets	—	289	NM	—	214	NM
Equity markets	—	15	NM	—	17	NM
Private bank	—	(1 )	NM	—	3	NM
Total revenues, net of interest expense	\$8,846	\$8,946	(1 )%	\$16,882	\$18,023	(6 )%

(1) Excludes CVA/DVA in the second quarter and six months of 2015, consistent with current period presentation. For additional information, see Notes 1 and 22 to the Consolidated Financial Statements.

(2) Hedges on accrual loans reflect the mark-to-market on credit derivatives used to economically hedge the corporate loan accrual portfolio. The fixed premium costs of these hedges are netted against the corporate lending revenues to reflect the cost of credit protection.

(3) First quarter of 2016 includes the previously disclosed charge of approximately \$180 million primarily reflecting the write down of Citi's net investment in Venezuela as a result of changes in the exchange rate during the quarter.

NM Not meaningful

The discussion of the results of operations for ICG below excludes the impact of CVA/DVA for the second quarter and year-to-date 2015. 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.

#### 2Q16 vs. 2Q15

Net income increased 2%, primarily driven by higher revenues and lower expenses, partially offset by higher credit costs.

Revenues increased 2%, reflecting higher revenues in Markets and securities services (increase of 10%), partially offset by lower revenues in Banking (decrease of 5%, decrease of 2% 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, including normal seasonal trends during the remainder of 2016.

#### Within Banking:

Investment banking revenues decreased 6%, largely reflecting an industry-wide slowdown in activity levels, particularly in equity underwriting, partially offset by an increase in wallet share across all products. Advisory revenues decreased 7%, primarily reflecting the lower overall M&A market. Equity underwriting revenues decreased 41% driven by the lower market activity. Debt underwriting revenues increased 9%, driven by North America and EMEA, primarily due to the increase in wallet share.

Treasury and trade solutions revenues increased 5%. Excluding the impact of FX translation, revenues increased 9% due to continued growth in transaction volumes, continued growth in deposit balances across all regions, improved spreads, particularly in EMEA and Latin America, and overall growth in the trade business. End-of-period deposit balances increased 2% (3% excluding the impact of FX translation), while average trade loans decreased 4% (3% excluding the impact of FX translation), as the business maintained origination volumes while reducing lower spread assets and increasing asset sales to optimize returns.

Corporate lending revenues decreased 55%. Excluding the impact of gains/(losses) on hedges on accrual loans, revenues decreased 18%, driven by an adjustment to the residual value of a lease financing as well as higher hedging costs.

Private bank revenues decreased 1%, reflecting weakness in Latin America and Asia, primarily due to a decline in managed investments and lower capital markets activities, partially offset by growth in deposit balances and loan volumes.

#### Within Markets and securities services:

Fixed income markets revenues increased 14%, with higher revenues in all regions. Rates and currencies (both G10 products and local markets) drove these results, with revenues up 25% year-over-year, including particularly strong performance following the U.K. referendum on June 23, 2016, as well as a more favorable trading environment. The business experienced continued growth in activity throughout the current quarter with the corporate client base, which comprises over 40% of direct client revenues in rates and currencies. The increase in rates and currencies revenues was partially offset by lower spread products revenues, mostly reflecting a decline in securitized markets revenues, particularly in North America. The decline in spread products revenues was partially offset by an increase in credit markets and municipals revenues, driven by higher client activity as compared to the prior-year period.

Equity markets revenues increased 21%, primarily reflecting the absence of the charge for valuation adjustments related to certain financing transactions (see "Executive Summary" above). Excluding the adjustment, revenues decreased 4%, reflecting the impact of lower client volumes and strong trading performance in Asia in the prior-year period.

Securities services revenues decreased 7%. Excluding the impact of FX translation, revenues decreased 3%, primarily reflecting the absence of revenues from divestitures as well as lower assets under custody due to lower market valuations. Excluding the impact of FX translation and divestitures, revenues increased 2%.

Expenses decreased 2% as repositioning savings, lower legal and related costs and a benefit from FX translation were partially offset by higher repositioning charges.

Provisions increased \$169 million to \$82 million due to higher net credit losses and a lower net loan loss reserve release (\$59 million compared to \$169 million in the prior-year period). Net credit losses increased 72% to \$141 million, with approximately two-thirds of these losses offset by related reserve releases. The cost of credit related to energy and energy-related exposures was de minimis in the current quarter as net credit losses were offset by previously existing loan loss reserves and the portfolio benefited from stabilization of oil prices and increased capital markets activity by clients (for additional information on Citi's corporate energy and energy-related exposures, see "Credit Risk—Corporate Credit" below.) Despite the stabilization of oil prices during the current quarter, and the resulting positive impact on ICG cost of credit, the business remains cautious as to the energy sector, and the environment remains uncertain. Depending on these factors, ICG could see total provisions increase from current quarter levels during the remainder of 2016.

2016 YTD vs. 2015 YTD

Net income decreased 18%, primarily driven by lower revenues, higher credit costs and higher expenses.

Revenues decreased 5%, reflecting lower revenues in Markets and securities services (decrease of 4%) and lower revenues in Banking (decrease of 7%, decrease of 4% excluding the gains/(losses) on hedges on accrual loans).

Within Banking:

Investment banking revenues decreased 16%, largely reflecting the industry-wide slowdown in activity levels during the first half of 2016. Advisory revenues decreased 16%, reflecting strong performance in the prior-year period as well as the lower market activity. Equity underwriting revenues decreased 45%, in line with the decline in market activity. Debt underwriting revenues decreased 6%, primarily due to the decline in market activity, partially offset by a higher wallet share.

- Treasury and trade solutions revenues increased 4% (8% excluding the impact of FX translation) primarily due to continued growth in transaction volumes, continued growth in deposit balances across all regions and improved spreads, particularly in Latin America and North America, as trade revenues were largely unchanged. Corporate lending revenues decreased 39%. Excluding the impact of gains/(losses) on hedges on accrual loans, revenues decreased 11%, driven by the lease financing adjustment referenced above, the higher hedging costs and the absence of positive mark-to-market adjustments compared to the prior-year period, partially offset by continued growth in average loan balances. Private bank revenues increased 2%, reflecting growth in loan volumes and deposit balances, partially offset by lower capital markets activity and managed investments.

Within Markets and securities services:

Fixed income markets revenues were largely unchanged as a decrease in spread products and commodities revenues were offset by growth in rates and currencies. Spread products revenues declined due to a decline in securitized markets revenues, particularly in North America, and credit markets revenues, partially offset by an increase in municipals revenues. The decline in spread products revenues was primarily driven by lower activity levels and a less favorable environment in the early part of 2016. The decline in spread products revenues was offset by strength in rates and currencies revenues (15% increase year-over-year) due to higher revenues in overall G10 products, partially offset by lower local markets revenues in EMEA.

Equity markets revenues decreased 1%. Excluding the valuation adjustment referenced above, revenues decreased 12%, reflecting the impact of lower client volumes in cash equities and derivatives and the strong trading performance in Asia in the prior-year period.

- Securities services revenues decreased 2%. Excluding the impact of FX translation, revenues increased 3%,

primarily reflecting a modest gain on sale of a private equity fund services business.

Expenses increased 1% as higher repositioning charges, higher legal and related costs and investment spending were largely offset by repositioning savings and a benefit from FX translation.

Provisions increased \$473 million, primarily reflecting net credit losses of \$352 million (\$81 million in the prior-year period) and a net loan loss reserve build of \$120 million (negative \$82 million in the period-year period). This higher cost of credit included approximately \$216 million of net credit losses and an approximately \$154 million net loan loss reserve build related to energy and energy-related exposures in the first half of 2016, largely due to low oil prices as well as the impact of regulatory guidance.



## 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 June 30, 2016, Corporate/Other had \$49 billion of assets, or 3% of Citigroup's total assets.

In millions of dollars	Second Quarter		% Change	Six Months		% Change
	2016	2015		2016	2015	
Net interest revenue	\$56	\$(22)	NM	\$150	\$(49)	NM
Non-interest revenue	70	393	(82)%	250	632	(60)%
Total revenues, net of interest expense	\$126	\$371	(66)%	\$400	\$583	(31)%
Total operating expenses	\$447	\$386	16%	\$865	\$928	(7)%
Provisions for loan losses and for benefits and claims	—	—	—	—	—	—
Loss from continuing operations before taxes	\$(321)	\$(15)	NM	\$(465)	\$(345)	(35)%
Income taxes (benefits)	(232)	(246)	6%	(347)	(557)	38%
Income (loss) from continuing operations	\$(89)	\$231	NM	\$(118)	\$212	NM
Income (loss) from discontinued operations, net of taxes	(23)	6	NM	(25)	1	NM
Net income (loss) before attribution of noncontrolling interests	\$(112)	\$237	NM	\$(143)	\$213	NM
Noncontrolling interests	3	(2)	NM	(5)	8	NM
Net income (loss)	\$(115)	\$239	NM	\$(138)	\$205	NM

NM Not meaningful

## 2Q16 vs. 2Q15

The net loss was \$115 million, compared to net income of \$239 million in the prior-year period, due to lower revenues, higher expenses and the absence of the previously disclosed favorable tax impact reflecting the resolution of certain state and local audits in the prior-year period (see "Income Taxes" below).

Revenues decreased 66%, primarily due to the absence of gains on real estate sales in the prior-year period and lower gains on debt buybacks. Corporate/Other expects revenues to be at or near zero during the remainder of 2016 as a result of lower debt buyback activity and the absence of certain episodic gains.

Expenses increased 16%, largely driven by higher corporate-wide advertising and marketing expenses and higher legal and related expenses.

## 2016 YTD vs. 2015 YTD

The net loss was \$138 million, compared to net income of \$205 million in the prior-year period, reflecting lower revenues and the absence of the favorable tax impact reflecting the resolution of the state and local audits, partially offset by lower expenses.

Revenues decreased 31%, primarily due to the absence of the gains on real estate sales and lower gains on debt buybacks, partially offset by higher investment income.

Expenses decreased 7%, largely driven by lower legal and related expenses, partially offset by 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. As of June 30, 2016, Citi Holdings assets were approximately \$66 billion, a decrease of 47% year-over-year and 10% from March 31, 2016. The decline in assets of \$7 billion from March 31, 2016 primarily consisted of divestitures and run-off. As of June 30, 2016, Citi had signed agreements to reduce Citi Holdings GAAP assets by \$7 billion, subject to regulatory approvals and other closing conditions.

Also as of June 30, 2016, consumer assets in Citi Holdings were approximately \$58 billion, or approximately 88% of Citi Holdings assets. Of the consumer assets, approximately \$33 billion, or 57%, consisted of North America mortgages (residential first mortgages and home equity loans). As of June 30, 2016, Citi Holdings represented approximately 4% of Citi's GAAP assets and 10% 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	Second Quarter			Six Months		
	2016	2015	% Change	2016	2015	% Change
Net interest revenue	\$549	\$1,200	(54 )%	\$1,146	\$2,459	(53 )%
Non-interest revenue	294	769	(62 )	1,172	1,655	(29 )
Total revenues, net of interest expense	\$843	\$1,969	(57 )%	\$2,318	\$4,114	(44 )%
Provisions for credit losses and for benefits and claims						
Net credit losses	\$102	\$334	(69 )%	\$245	\$803	(69 )%
Credit reserve release	(224 )	(185 )	(21 )	(255 )	(357 )	29
Provision for loan losses	\$(122)	\$149	NM	\$(10 )	\$446	NM
Provision for benefits and claims	29	160	(82 )	89	329	(73 )
Release for unfunded lending commitments	(5 )	2	NM	(7 )	(3 )	NM
Total provisions for credit losses and for benefits and claims	\$(98 )	\$311	NM	\$72	\$772	(91 )%
Total operating expenses	\$858	\$1,362	(37 )%	\$1,686	\$2,747	(39 )%
Income from continuing operations before taxes	\$83	\$296	(72 )%	\$560	\$595	(6 )%
Income taxes (benefits)	(15 )	140	NM	115	289	(60 )%
Income from continuing operations	\$98	\$156	(37 )%	\$445	\$306	45 %
Noncontrolling interests	5	—	NM	\$6	\$1	NM
Net income	\$93	\$156	(40 )%	\$439	\$305	44 %
Total revenues, net of interest expense (excluding CVA/DVA) <sup>(1)</sup>						
Total revenues—as reported	\$843	\$1,969	(57 )%	\$2,318	\$4,114	(44 )%
CVA/DVA	—	9	NM	—	5	NM
Total revenues-excluding CVA/DVA <sup>(1)</sup>	\$843	\$1,960	(57 )%	\$2,318	\$4,109	(44 )%
Balance sheet data (in billions of dollars)						
Average assets	\$71	\$126	(44 )%	\$75	\$130	(42 )%
Return on average assets	0.53	%0.50	%	1.18	%0.47	%
Efficiency ratio	102	%69	%	73	%67	%
Total EOP assets	\$66	\$124	(47 )			
Total EOP loans	41	64	(35 )			
Total EOP deposits	6	12	(45 )			

<sup>(1)</sup> Excludes CVA/DVA in the second quarter and six months of 2015, consistent with current period presentation. For additional information, see Notes 1 and 22 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 the second quarter and year-to-date 2015. Presentations of the results of operations, excluding the impact of CVA/DVA, are non-GAAP financial measures. For a reconciliation of these metrics to the reported results, see the table above.

#### 2Q16 vs. 2Q15

Net income was \$93 million, compared to \$150 million in the prior-year period, primarily due to lower revenues, partially offset by lower expenses and lower cost of credit.

Revenues decreased 57%, primarily driven by the overall wind-down of the portfolio and lower net gains on asset sales in the current quarter.

Expenses declined 37%, primarily due to the ongoing decline in assets, partially offset by a modest increase in legal and related costs.

Provisions decreased \$409 million to a benefit of \$98 million, driven by lower net credit losses and a higher net loan loss reserve release. Net credit losses declined 69%, primarily due to divestiture activity and continued improvements in North America mortgages. The net reserve release increased 25% to \$229 million, primarily due to the impact of asset sales in the current quarter.

#### 2016 YTD vs. 2015 YTD

Net income increased 45% to \$439 million, primarily due to lower expenses and lower net credit losses, partially offset by lower revenues and a lower net loan loss reserve release.

Revenues decreased 44%, primarily driven by the overall wind-down of the portfolio, partially offset by higher net gains on asset sales.

Expenses declined 39%, primarily due to the ongoing decline in assets and lower legal and related costs, partially offset by higher repositioning costs.

Provisions decreased 91%, driven by lower net credit losses, partially offset by a lower net loan loss reserve release.

Net credit losses declined 69%, primarily due to overall lower asset levels as well as continued improvements in North America mortgages. The net reserve release decreased 27% to \$262 million, primarily due to the impact of asset sales.

## OFF-BALANCE SHEET ARRANGEMENTS

The table below shows where a discussion of Citi's various off-balance sheet arrangements may be found in this Form 10-Q. For additional information on Citi's off-balance sheet arrangements, see "Off-Balance Sheet Arrangements" and Notes 1, 22 and 27 to the Consolidated Financial Statements in Citigroup's 2015 Annual Report on Form 10-K. Types of Off-Balance Sheet Arrangements Disclosures in this Form 10-Q

Variable interests and other obligations, including contingent obligations, arising from variable interests in nonconsolidated VIEs	See Note 20 to the Consolidated Financial Statements.
Letters of credit, and lending and other commitments	See Note 24 to the Consolidated Financial Statements.
Guarantees	See Note 24 to the Consolidated Financial Statements.

## 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 the second quarter of 2016, consistent with the planned optimization of its capital structure, Citi issued noncumulative perpetual preferred stock amounting to \$1.5 billion, resulting in a total of approximately \$19.3 billion outstanding as of June 30, 2016. In addition, during the second quarter of 2016, Citi returned a total of approximately \$1.5 billion of capital to common shareholders in the form of share repurchases (approximately 30 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

Citi'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. For additional information regarding Citi's capital management, see "Capital Resources—Capital Management" in Citigroup's 2015 Annual Report on Form 10-K.

### 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) and Dodd-Frank Act Stress Testing (DFAST). For additional information regarding Citi's capital planning and stress testing, see "Capital Resources—Current Regulatory Capital Standards—Capital Planning and Stress Testing" and "Risk Factors—Regulatory Risks" in Citigroup's 2015 Annual Report on Form 10-K.

In June 2016, the Federal Reserve Board expressed no objection to Citi's capital plan, including requested capital actions, in conjunction with the 2016 CCAR (for additional information, see "Equity Security Repurchases" and "Dividends" below).

### Current Regulatory Capital Standards

Citi is subject to regulatory capital standards issued by the Federal Reserve Board which constitute the U.S. Basel III rules. These rules establish an integrated capital adequacy framework, encompassing both risk-based capital ratios and leverage ratios. For additional information regarding the risk-based capital ratios, Tier 1 Leverage ratio, and Supplementary Leverage ratio, see "Capital Resources—Current Regulatory Capital Standards" in Citigroup's 2015 Annual Report on Form 10-K.

### GSIB Surcharge

The Federal Reserve Board also adopted a 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. GSIB surcharges under the rule initially range from 1.0% to 4.5% of total risk-weighted assets. Citi's initial GSIB surcharge effective January 1, 2016 is 3.5%. However, Citi's efforts in addressing quantitative measures of its systemic importance have resulted in a reduction of Citi's estimated GSIB surcharge to 3%, effective January 1, 2017. For additional information regarding the identification of a GSIB and the methodology for annually determining the GSIB surcharge, see "Capital Resources—Current Regulatory Capital Standards—GSIB Surcharge" in Citigroup's 2015 Annual

Report on Form 10-K.

#### Transition Provisions

The U.S. Basel III rules contain several differing, largely multi-year transition provisions (i.e., “phase-ins” and “phase-outs”). Citi considers all of these transition provisions as being fully implemented on January 1, 2019 (full implementation). For additional information regarding the transition provisions under the U.S. Basel III rules, including with respect to the GSIB surcharge, see “Capital Resources—Current Regulatory Capital Standards—Transition Provisions” in Citigroup’s 2015 Annual Report on Form 10-K.

## 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. Citi's effective minimum Common Equity Tier 1 Capital, Tier 1 Capital and Total Capital ratios during 2016, inclusive of the 25% phase-in of both the 2.5% Capital Conservation Buffer and 3.5% GSIB surcharge (all of which is to be composed of Common Equity Tier 1 Capital), are 6%, 7.5%, and 9.5%, respectively. Citi's effective and stated minimum Common Equity Tier 1 Capital, Tier 1 Capital and Total Capital ratios during 2015 were equivalent at 4.5%, 6%, and 8%, respectively.

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 table sets 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 June 30, 2016 and December 31, 2015.

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

In millions of dollars, except ratios	June 30, 2016		December 31, 2015	
	Advanced Approaches	Standardized Approach	Advanced Approaches	Standardized Approach
Common Equity Tier 1 Capital	\$171,594	\$171,594	\$173,862	\$173,862
Tier 1 Capital	181,282	181,282	176,420	176,420
Total Capital (Tier 1 Capital + Tier 2 Capital) <sup>(1)</sup>	206,163	218,860	198,746	211,115
Total Risk-Weighted Assets	1,204,218	1,152,635	1,190,853	1,138,711
Common Equity Tier 1 Capital ratio <sup>(2)</sup>	14.25	% 14.89	% 14.60	% 15.27
Tier 1 Capital ratio <sup>(2)</sup>	15.05	15.73	14.81	15.49
Total Capital ratio <sup>(2)</sup>	17.12	18.99	16.69	18.54
In millions of dollars, except ratios	June 30, 2016	December 31, 2015		
Quarterly Adjusted Average Total Assets <sup>(3)</sup>	\$1,754,048	\$1,732,933		
Total Leverage Exposure <sup>(4)</sup>	2,332,632	2,326,072		
Tier 1 Leverage ratio	10.34	%	10.18	%
Supplementary Leverage ratio	7.77		7.58	

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, (1) 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 June 30, 2016 and December 31, 2015, 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.

(3) Tier 1 Leverage ratio denominator.

(4) Supplementary Leverage ratio denominator.

As indicated in the table above, Citigroup's capital ratios at June 30, 2016 were in excess of the stated and effective 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 June 30, 2016.



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

In millions of dollars	June 30, 2016	December 31, 2015
Common Equity Tier 1 Capital		
Citigroup common stockholders' equity <sup>(1)</sup>	\$212,819	\$205,286
Add: Qualifying noncontrolling interests	277	369
Regulatory Capital Adjustments and Deductions:		
Less: Net unrealized gains (losses) on securities available-for-sale (AFS), net of tax <sup>(2)(3)</sup>	822	(544 )
Less: Defined benefit plans liability adjustment, net of tax <sup>(3)</sup>	(2,243	)(3,070 )
Less: Accumulated net unrealized losses on cash flow hedges, net of tax <sup>(4)</sup>	(149	)(617 )
Less: Cumulative unrealized net gain related to changes in fair value of financial liabilities attributable to own creditworthiness, net of tax <sup>(3)(5)</sup>	344	176
Less: Intangible assets:		
Goodwill, net of related deferred tax liabilities (DTLs) <sup>(6)</sup>	21,854	21,980
Identifiable intangible assets other than mortgage servicing rights (MSRs), net of related DTLs <sup>(3)(7)</sup>	3,215	1,434
Less: Defined benefit pension plan net assets <sup>(3)</sup>	578	318
Less: Deferred tax assets (DTAs) arising from net operating loss, foreign tax credit and general business credit carry-forwards <sup>(3)(8)</sup>	13,765	9,464
Less: Excess over 10%/15% limitations for other DTAs, certain common stock investments, and MSRs <sup>(3)(8)(9)</sup>	3,316	2,652
Total Common Equity Tier 1 Capital	\$171,594	\$173,862
Additional Tier 1 Capital		
Qualifying perpetual preferred stock <sup>(1)</sup>	\$19,069	\$16,571
Qualifying trust preferred securities <sup>(10)</sup>	1,368	1,707
Qualifying noncontrolling interests	17	12
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 <sup>(3)(5)</sup>	230	265
Less: Minimum regulatory capital requirements of insurance underwriting subsidiaries <sup>(11)</sup>	184	229
Less: Defined benefit pension plan net assets <sup>(3)</sup>	386	476
Less: DTAs arising from net operating loss, foreign tax credit and general business credit carry-forwards <sup>(3)(8)</sup>	9,177	14,195
Less: Permitted ownership interests in covered funds <sup>(12)</sup>	789	567
Total Additional Tier 1 Capital	\$9,688	\$2,558
Total Tier 1 Capital (Common Equity Tier 1 Capital + Additional Tier 1 Capital)	\$181,282	\$176,420
Tier 2 Capital		
Qualifying subordinated debt <sup>(13)</sup>	\$23,701	\$21,370
Qualifying trust preferred securities <sup>(10)</sup>	328	—
Qualifying noncontrolling interests	23	17
Excess of eligible credit reserves over expected credit losses <sup>(14)</sup>	1,011	1,163
Regulatory Capital Adjustment and Deduction:		
Add: Unrealized gains on AFS equity exposures includable in Tier 2 Capital	2	5
Less: Minimum regulatory capital requirements of insurance underwriting subsidiaries <sup>(11)</sup>	184	229
Total Tier 2 Capital	\$24,881	\$22,326
Total Capital (Tier 1 Capital + Tier 2 Capital)	\$206,163	\$198,746





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

In millions of dollars	June 30, 2016	December 31, 2015
Credit Risk <sup>(15)</sup>	\$809,540	\$791,036
Market Risk	69,678	74,817
Operational Risk	325,000	325,000
Total Risk-Weighted Assets	\$1,204,218	\$1,190,853

Issuance costs of \$184 million and \$147 million related to preferred stock outstanding at June 30, 2016 and December 31, 2015, 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.

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.

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 in the chart entitled "Basel III Transition Arrangements: Significant Regulatory Capital Adjustments and Deductions", as presented in Citigroup's 2015 Annual Report on Form 10-K.

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.

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

Identifiable intangible assets other than MSRs increased by approximately \$2.2 billion during the second quarter of 2016 as a result of the acquisition of the Costco cards portfolio, as well as the renewal and extension of the co-branded credit card program agreement with American Airlines. For additional information, see Note 16 to the Consolidated Financial Statements.

Of Citi's approximately \$45.4 billion of net DTAs at June 30, 2016, approximately \$20.9 billion of such assets were includable in regulatory capital pursuant to the U.S. Basel III rules, while approximately \$24.5 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 \$17.1 billion were deducted from Common Equity Tier 1 Capital and \$9.2 billion were deducted from Additional Tier 1 Capital. Serving to reduce the approximately \$26.3 billion of aggregate excluded net DTAs was approximately \$1.8 billion of net DTLs primarily associated with goodwill and certain other intangible assets. 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.

Assets subject to 10%/15% limitations include MSRs, DTAs arising from temporary differences and significant common stock investments in unconsolidated financial institutions. At June 30, 2016 and December 31, 2015, the deduction related only to DTAs arising from temporary differences that exceeded the 10% limitation.

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 Tier 1 Capital during 2015 in an amount up to 25% of the aggregate outstanding principal amounts of such issuances as of January 1, 2014. The remaining 75% of non-grandfathered trust preferred securities are eligible for inclusion in Tier 2 Capital during 2015 in accordance with the transition arrangements for non-qualifying capital instruments under the U.S. Basel III rules. As of December 31, 2015, 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. Effective January 1, 2016, non-grandfathered trust preferred securities are not eligible for inclusion in Tier 1 Capital, but are eligible for inclusion in Tier 2 Capital subject to full phase-out by January 1, 2022. During 2016, non-grandfathered trust preferred securities are eligible for inclusion in Tier 2 Capital in an amount up to 60% of the aggregate outstanding principal amounts of such issuances as of January 1, 2014.

- (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.

Effective July 2015, banking entities are required to be in compliance with the Volcker Rule of the Dodd-Frank

- (12) 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.

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

- (13) for inclusion in Tier 2 Capital during 2015 up to 25% of the aggregate outstanding principal amounts of such issuances as of January 1, 2014. Effective January 1, 2016, non-qualifying subordinated debt issuances are not eligible for inclusion in Tier 2 Capital.

Advanced Approaches banking organizations are permitted to include in Tier 2 Capital eligible credit reserves

- (14) that exceed expected credit losses to the extent that the excess reserves do not exceed 0.6% of credit risk-weighted assets.

Under the U.S. Basel III rules, credit risk-weighted assets during the transition period reflect the effects of

- (15) 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 June 30, 2016	Six Months Ended June 30, 2016
Common Equity Tier 1 Capital		
Balance, beginning of period	\$ 169,924	\$ 173,862
Net income	3,998	7,499
Common and preferred dividends declared	(469)	(828)
Net increase in treasury stock	(1,315)	(1,862)
Net change in common stock and additional paid-in capital <sup>(1)</sup>	147	(520)
Net change in foreign currency translation adjustment net of hedges, net of tax	(552)	102
Net increase in unrealized gains on securities AFS, net of tax	556	1,595
Net increase in defined benefit plans liability adjustment, net of tax	(16)	(1,319)
Net change in adjustment related to changes in fair value of financial liabilities attributable to own creditworthiness, net of tax	5	37
Net decrease in goodwill, net of related deferred tax liabilities (DTLs)	81	126
Net increase in identifiable intangible assets other than mortgage servicing rights (MSRs), net of related DTLs	(1,216)	(1,781)
Net increase in defined benefit pension plan net assets	(56)	(260)
Net change in deferred tax assets (DTAs) arising from net operating loss, foreign tax credit and general business credit carry-forwards	283	(4,301)
Net change in excess over 10%/15% limitations for other DTAs, certain common stock investments and MSRs	244	(664)
Other	(20)	(92)
Net change in Common Equity Tier 1 Capital	\$ 1,670	\$ (2,268)
Common Equity Tier 1 Capital Balance, end of period	\$ 171,594	\$ 171,594
Additional Tier 1 Capital		
Balance, beginning of period	\$ 8,167	\$ 2,558
Net increase in qualifying perpetual preferred stock <sup>(1)</sup>	1,494	2,498
Net change in qualifying trust preferred securities	2	(339)
Net change in adjustment related to changes in fair value of financial liabilities attributable to own creditworthiness, net of tax	(5)	35
Net change in defined benefit pension plan net assets	(38)	90
Net decrease in DTAs arising from net operating loss, foreign tax credit and general business credit carry-forwards	189	5,018
Net increase in permitted ownership interests in covered funds	(164)	(222)
Other	43	50
Net increase in Additional Tier 1 Capital	\$ 1,521	\$ 7,130
Tier 1 Capital Balance, end of period	\$ 181,282	\$ 181,282
Tier 2 Capital		
Balance, beginning of period	\$ 23,567	\$ 22,326
Net increase in qualifying subordinated debt	1,037	2,331
Net change in qualifying trust preferred securities	(9)	328
Net change in excess of eligible credit reserves over expected credit losses	245	(152)
Other	41	48
Net increase in Tier 2 Capital	\$ 1,314	\$ 2,555

Tier 2 Capital Balance, end of period	\$24,881	\$24,881
Total Capital (Tier 1 Capital + Tier 2 Capital)	\$206,163	\$206,163

(1) During the three months and six months ended June 30, 2016, Citi issued \$1.5 billion and approximately \$2.5 billion of qualifying perpetual preferred stock with issuance costs of \$6 million and \$37 million, respectively. In accordance with Federal Reserve Board regulatory reporting requirements, which differ from those under U.S. GAAP, such issuance costs are excluded from common stockholders' equity and netted against preferred stock.

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

In millions of dollars	Three Months Ended June 30, 2016	Six Months Ended June 30, 2016
Total Risk-Weighted Assets, beginning of period	\$1,210,107	\$1,190,853
Changes in Credit Risk-Weighted Assets		
Net decrease in retail exposures <sup>(1)</sup>	(1,278	)(9,192 )
Net increase in wholesale exposures <sup>(2)</sup>	1,335	3,724
Net change in repo-style transactions	(3,218	)635
Net decrease in securitization exposures	(2,154	)(468 )
Net change in equity exposures	(189	)402
Net increase in over-the-counter (OTC) derivatives <sup>(3)</sup>	2,148	9,686
Net increase in derivatives CVA <sup>(4)</sup>	1,854	12,774
Net increase in other exposures <sup>(5)</sup>	3,288	619
Net change in supervisory 6% multiplier <sup>(6)</sup>	(4	)324
Net increase in Credit Risk-Weighted Assets	\$1,782	\$18,504
Changes in Market Risk-Weighted Assets		
Net decrease in risk levels <sup>(7)</sup>	\$(7,741	)\$(2,437 )
Net change due to model and methodology updates <sup>(8)</sup>	70	(2,702 )
Net decrease in Market Risk-Weighted Assets	\$(7,671	)\$(5,139 )
Net change in Operational Risk-Weighted Assets	\$—	\$—
Total Risk-Weighted Assets, end of period	\$1,204,218	\$1,204,218

Retail exposures decreased during the three months ended June 30, 2016, in part, due to residential mortgage loan sales and repayments, divestitures of certain Citi Holdings portfolios, and the impact of FX translation. Retail exposures decreased during the six months ended June 30, 2016, in part, due to residential mortgage loan sales and repayments, divestitures of certain Citi Holdings portfolios and reductions in qualifying revolving (cards) exposures attributable to seasonal holiday spending repayments. In addition, retail exposures for both the three and six months ended June 30, 2016 also reflect the acquisition of the Costco cards portfolio.

Wholesale exposures increased slightly during the three months ended June 30, 2016 primarily due to growth in commercial loans, partially offset by the impact of FX translation. Wholesale exposures increased during the six months ended June 30, 2016 primarily due to increases in securities AFS and commercial loans, partially offset by a decrease in loan commitments.

OTC derivatives increased during the three months ended June 30, 2016 primarily due to changes in fair value.

(3) OTC derivatives increased during the six months ended June 30, 2016 primarily driven by increased trade volume and model enhancements.

(4) Derivatives CVA increased during the three months ended June 30, 2016 primarily driven by volatility and rating changes. Derivatives CVA increased during the six months ended June 30, 2016 primarily driven by increased volatility and model enhancements.

(5) Other exposures include cleared transactions, unsettled transactions, assets other than those reportable in specific exposure categories and non-material portfolios.

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

(7) Risk levels decreased during the three and six months ended June 30, 2016 primarily due to a reduction in exposure levels subject to comprehensive risk, a reduction in positions subject to securitization charges, and the ongoing assessment regarding the applicability of the market risk capital rules to certain securitization positions, partially offset by an increase in assets subject to standard specific risk charges. In addition, further contributing to the decline in risk levels during the three months ended June 30, 2016 was a reduction in exposure levels subject to

Value at Risk and Stressed Value at Risk.

(8) Risk-weighted assets declined during the six months ended June 30, 2016 due to updated model volatility inputs.

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. During 2016, Citi's primary subsidiary U.S. depository institution, Citibank, N.A. (Citibank), is subject to effective minimum Common Equity Tier 1 Capital, Tier 1 Capital and Total Capital ratios, inclusive of the 25% phase-in of the 2.5% Capital Conservation Buffer, of 5.125%, 6.625%

and 8.625%, respectively. Citibank's effective and stated minimum Common Equity Tier 1 Capital, Tier 1 Capital and Total Capital ratios during 2015 were equivalent at 4.5%, 6%, and 8%, respectively.

The following table sets 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 June 30, 2016 and December 31, 2015.

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

In millions of dollars, except ratios	June 30, 2016		December 31, 2015		
	Advanced Approaches	Standardized Approach	Advanced Approaches	Standardized Approach	
Common Equity Tier 1 Capital	\$128,824	\$128,824	\$127,323	\$127,323	
Tier 1 Capital	128,824	128,824	127,323	127,323	
Total Capital (Tier 1 Capital + Tier 2 Capital) <sup>(1)</sup>	140,147	151,297	138,762	149,749	
Total Risk-Weighted Assets	923,797	1,016,761	898,769	999,014	
Common Equity Tier 1 Capital ratio <sup>(2)(3)</sup>	13.95	% 12.67	% 14.17	% 12.74	%
Tier 1 Capital ratio <sup>(2)(3)</sup>	13.95	12.67	14.17	12.74	
Total Capital ratio <sup>(2)(3)</sup>	15.17	14.88	15.44	14.99	
In millions of dollars, except ratios	June 30, 2016	December 31, 2015			
Quarterly Adjusted Average Total Assets <sup>(4)</sup>	\$1,326,486	\$1,298,560			
Total Leverage Exposure <sup>(5)</sup>	1,856,908	1,838,941			
Tier 1 Leverage ratio <sup>(3)</sup>	9.71	%	9.80	%	
Supplementary Leverage ratio	6.94	6.92			

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, (1) 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 June 30, 2016 and December 31, 2015, 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.

Beginning January 1, 2015, 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" under

(3) the revised Prompt Corrective Action (PCA) regulations applicable to insured depository institutions as established by the U.S. Basel III rules. For additional information, see "Capital Resources—Current Regulatory Capital Standards—Prompt Corrective Action Framework" in Citigroup's 2015 Annual Report on Form 10-K.

(4) Tier 1 Leverage ratio denominator.

(5) Supplementary Leverage ratio denominator.

As indicated in the table above, Citibank's capital ratios at June 30, 2016 were in excess of the stated and effective minimum requirements under the U.S. Basel III rules. In addition, Citibank was also "well capitalized" as of



June 30, 2016 under the revised PCA regulations which became effective January 1, 2015.

## 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 June 30, 2016.

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
<b>Citigroup</b>						
Advanced Approaches	0.8	1.2	0.8	1.3	0.8	1.4
Standardized Approach	0.9	1.3	0.9	1.4	0.9	1.6
<b>Citibank</b>						
Advanced Approaches	1.1	1.5	1.1	1.5	1.1	1.6
Standardized Approach	1.0	1.2	1.0	1.2	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	0.7	0.5	0.4

## Citigroup Broker-Dealer Subsidiaries

At June 30, 2016, 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 \$8.1 billion, which exceeded the minimum requirement by approximately \$6.5 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 \$17.8 billion at June 30, 2016, 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 June 30, 2016.

## 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, inclusive of the 2.5% Capital Conservation Buffer and the Countercyclical Capital Buffer at its current level of 0%, as well as 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 table sets 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 June 30, 2016 and December 31, 2015.

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

In millions of dollars, except ratios	June 30, 2016		December 31, 2015	
	Advanced Approaches	Standardized Approach	Advanced Approaches	Standardized Approach
Common Equity Tier 1 Capital	\$154,534	\$154,534	\$146,865	\$146,865
Tier 1 Capital	174,027	174,027	164,036	164,036
Total Capital (Tier 1 Capital + Tier 2 Capital) <sup>(1)</sup>	198,920	211,641	186,097	198,655
Total Risk-Weighted Assets	1,232,666	1,179,497	1,216,277	1,162,884
Common Equity Tier 1 Capital ratio <sup>(2)(3)</sup>	12.54	% 13.10	% 12.07	% 12.63
Tier 1 Capital ratio <sup>(2)(3)</sup>	14.12	14.75	13.49	14.11
Total Capital ratio <sup>(2)(3)</sup>	16.14	17.94	15.30	17.08
In millions of dollars, except ratios	June 30, 2016	December 31, 2015		
Quarterly Adjusted Average Total Assets <sup>(4)</sup>	\$1,748,345	\$1,724,710		
Total Leverage Exposure <sup>(5)</sup>	2,326,929	2,317,849		
Tier 1 Leverage ratio <sup>(3)</sup>	9.95	% 9.51	%	
Supplementary Leverage ratio <sup>(3)</sup>	7.48	7.08		

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, (1) 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 June 30, 2016 and December 31, 2015, 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.

(3) Citi's Basel III capital ratios and related components, on a fully implemented basis, are non-GAAP financial measures.

(4) Tier 1 Leverage ratio denominator.

(5) Supplementary Leverage ratio denominator.

#### Common Equity Tier 1 Capital Ratio

Citi's Common Equity Tier 1 Capital ratio was 12.5% at June 30, 2016, compared to 12.3% at March 31, 2016 and 12.1% at December 31, 2015 (all based on application of the Advanced Approaches for determining total risk-weighted assets). The quarter-over-quarter increase in the ratio was largely due to quarterly net income of \$4.0 billion, the favorable effects attributable to DTA utilization of approximately \$0.9 billion, as well as a decline in market risk-weighted assets, offset in part by an increase in identifiable intangible assets other than MSRs, and the return of approximately \$1.5 billion of capital to common shareholders. The increase in Citi's Common Equity Tier 1 Capital ratio from year-end 2015 reflected continued growth in Common Equity Tier 1 Capital resulting from net income of \$7.5 billion, the favorable effects attributable to DTA utilization of approximately \$2.4 billion, and beneficial net movements in AOCI, offset in part by the return of approximately \$2.9 billion of capital to common shareholders, an increase in credit risk-weighted assets, and an increase in identifiable intangible assets other than MSRs.

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

In millions of dollars	June 30, 2016	December 31, 2015
Common Equity Tier 1 Capital		
Citigroup common stockholders' equity <sup>(1)</sup>	\$212,819	\$205,286
Add: Qualifying noncontrolling interests	134	145
Regulatory Capital Adjustments and Deductions:		
Less: Accumulated net unrealized losses on cash flow hedges, net of tax <sup>(2)</sup>	(149)	(617)
Less: Cumulative unrealized net gain related to changes in fair value of financial liabilities attributable to own creditworthiness, net of tax <sup>(3)</sup>	574	441
Less: Intangible assets:		
Goodwill, net of related deferred tax liabilities (DTLs) <sup>(4)</sup>	21,854	21,980
Identifiable intangible assets other than mortgage servicing rights (MSRs), net of related DTLs <sup>(5)</sup>	5,358	3,586
Less: Defined benefit pension plan net assets	964	794
Less: Deferred tax assets (DTAs) arising from net operating loss, foreign tax credit and general business credit carry-forwards <sup>(6)</sup>	22,942	23,659
Less: Excess over 10%/15% limitations for other DTAs, certain common stock investments, and MSRs <sup>(6)(7)</sup>	6,876	8,723
Total Common Equity Tier 1 Capital	\$154,534	\$146,865
Additional Tier 1 Capital		
Qualifying perpetual preferred stock <sup>(1)</sup>	\$19,069	\$16,571
Qualifying trust preferred securities <sup>(8)</sup>	1,368	1,365
Qualifying noncontrolling interests	29	31
Regulatory Capital Deductions:		
Less: Minimum regulatory capital requirements of insurance underwriting subsidiaries <sup>(9)</sup>	184	229
Less: Permitted ownership interests in covered funds <sup>(10)</sup>	789	567
Total Additional Tier 1 Capital	\$19,493	\$17,171
Total Tier 1 Capital (Common Equity Tier 1 Capital + Additional Tier 1 Capital)	\$174,027	\$164,036
Tier 2 Capital		
Qualifying subordinated debt <sup>(11)</sup>	\$23,701	\$20,744
Qualifying trust preferred securities <sup>(12)</sup>	328	342
Qualifying noncontrolling interests	37	41
Excess of eligible credit reserves over expected credit losses <sup>(13)</sup>	1,011	1,163
Regulatory Capital Deduction:		
Less: Minimum regulatory capital requirements of insurance underwriting subsidiaries <sup>(9)</sup>	184	229
Total Tier 2 Capital	\$24,893	\$22,061
Total Capital (Tier 1 Capital + Tier 2 Capital) <sup>(14)</sup>	\$198,920	\$186,097

Issuance costs of \$184 million and \$147 million related to preferred stock outstanding at June 30, 2016 and December 31, 2015, 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.

(1) 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.

(2) 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.

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

(5) Identifiable intangible assets other than MSRs increased by approximately \$2.2 billion during the second quarter of 2016 as a result of the acquisition of the Costco cards portfolio, as well as the renewal and extension of the co-branded credit card program agreement with American Airlines. For additional information, see Note 16 to the Consolidated Financial Statements.

(6) Of Citi's approximately \$45.4 billion of net DTAs at June 30, 2016, approximately \$17.4 billion of such assets were includable in regulatory capital pursuant to the U.S. Basel III rules, while approximately \$28.0 billion of such assets were excluded in arriving at Common Equity Tier 1 Capital. Comprising the excluded net DTAs was an aggregate of approximately \$29.8 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 Tier 1 Capital. Serving to reduce the approximately \$29.8 billion of aggregate excluded net DTAs was approximately \$1.8 billion of net DTLs primarily associated with goodwill and certain other intangible assets. 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.

- Assets subject to 10%/15% limitations include MSRs, DTAs arising from temporary differences and significant (7) common stock investments in unconsolidated financial institutions. At June 30, 2016 and December 31, 2015, the deduction related only to DTAs arising from temporary differences that exceeded the 10% limitation.
- (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 (10) 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.
- (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 (13) that exceed expected credit losses to the extent that the excess reserves do not exceed 0.6% of credit risk-weighted assets.
- (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 June 30, 2016	Six Months Ended June 30, 2016
Common Equity Tier 1 Capital		
Balance, beginning of period	\$153,023	\$146,865
Net income	3,998	7,499
Common and preferred dividends declared	(469)	(828)
Net increase in treasury stock	(1,315)	(1,862)
Net change in common stock and additional paid-in capital <sup>(1)</sup>	147	(520)
Net change in foreign currency translation adjustment net of hedges, net of tax	(552)	)102
Net increase in unrealized gains on securities AFS, net of tax	927	2,961
Net increase in defined benefit plans liability adjustment, net of tax	(27)	(492)
Net change in adjustment related to changes in fair value of financial liabilities attributable to own creditworthiness, net of tax	—	72
Net decrease in goodwill, net of related deferred tax liabilities (DTLs)	81	126
Net increase in identifiable intangible assets other than mortgage servicing rights (MSRs), net of related DTLs	(2,026)	(1,772)
Net increase in defined benefit pension plan net assets	(94)	(170)
Net decrease in deferred tax assets (DTAs) arising from net operating loss, foreign tax credit and general business credit carry-forwards	472	717
Net decrease in excess over 10%/15% limitations for other DTAs, certain common stock investments and MSRs	378	1,847
Other	(9)	(11)
Net increase in Common Equity Tier 1 Capital	\$1,511	\$7,669
Common Equity Tier 1 Capital Balance, end of period	\$154,534	\$154,534
Additional Tier 1 Capital		
Balance, beginning of period	\$18,119	\$17,171
Net increase in qualifying perpetual preferred stock <sup>(1)</sup>	1,494	2,498
Net increase in qualifying trust preferred securities	2	3
Net increase in permitted ownership interests in covered funds	(164)	(222)
Other	42	43
Net increase in Additional Tier 1 Capital	\$1,374	\$2,322
Tier 1 Capital Balance, end of period	\$174,027	\$174,027
Tier 2 Capital		
Balance, beginning of period	\$23,579	\$22,061
Net increase in qualifying subordinated debt	1,037	2,957
Net change in excess of eligible credit reserves over expected credit losses	245	(152)
Other	32	27
Net increase in Tier 2 Capital	\$1,314	\$2,832
Tier 2 Capital Balance, end of period	\$24,893	\$24,893
Total Capital (Tier 1 Capital + Tier 2 Capital)	\$198,920	\$198,920

During the three months and six months ended June 30, 2016, Citi issued \$1.5 billion and approximately \$2.5 billion of qualifying perpetual preferred stock with issuance costs of \$6 million and \$37 million, respectively. (1) In accordance with Federal Reserve Board regulatory reporting requirements, which differ from those under U.S. GAAP, such issuance costs are excluded from common stockholders' equity and netted against preferred stock.



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Citigroup Risk-Weighted Assets Under Basel III (Full Implementation) at June 30, 2016

In millions of dollars	Advanced Approaches			Standardized Approach		
	Citicorp	Citi Holdings	Total	Citicorp	Citi Holdings	Total
Credit Risk	\$766,959	\$71,029	\$837,988	\$1,043,206	\$66,018	\$1,109,224
Market Risk	68,581	1,097	69,678	69,043	1,230	70,273
Operational Risk	275,921	49,079	325,000	—	—	—
Total Risk-Weighted Assets	\$1,111,461	\$121,205	\$1,232,666	\$1,112,249	\$67,248	\$1,179,497

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	\$731,515	\$84,945	\$816,460	\$1,008,951	\$78,748	\$1,087,699
Market Risk	70,701	4,116	74,817	71,015	4,170	75,185
Operational Risk	275,921	49,079	325,000	—	—	—
Total Risk-Weighted Assets	\$1,078,137	\$138,140	\$1,216,277	\$1,079,966	\$82,918	\$1,162,884

Total risk-weighted assets under both the Basel III Advanced Approaches and the Standardized Approach increased from year-end 2015 due to an increase in credit risk-weighted assets, partially offset by a decrease in market risk-weighted assets. The growth in credit risk-weighted assets resulted from higher derivative exposures, and a net increase in cards exposures arising from the acquisition of the Costco portfolio, which was offset in part by residential mortgage loan sales and repayments, as well as divestitures of certain Citi Holdings portfolios. In addition, further contributing to the increase in credit risk-weighted assets under the Advanced Approaches were model enhancements related to OTC derivatives and derivatives CVA.



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

In millions of dollars	Three Months Ended June 30, 2016	Six Months Ended June 30, 2016
Total Risk-Weighted Assets, beginning of period	\$1,239,575	\$1,216,277
Changes in Credit Risk-Weighted Assets		
Net decrease in retail exposures <sup>(1)</sup>	(1,278	)(9,192 )
Net increase in wholesale exposures <sup>(2)</sup>	1,335	3,724
Net change in repo-style transactions	(3,218	)635
Net decrease in securitization exposures	(2,154	)(468 )
Net change in equity exposures	(345	)549
Net increase in over-the-counter (OTC) derivatives <sup>(3)</sup>	2,148	9,686
Net increase in derivatives CVA <sup>(4)</sup>	1,854	12,774
Net increase in other exposures <sup>(5)</sup>	2,483	3,326
Net change in supervisory 6% multiplier <sup>(6)</sup>	(63	)494
Net increase in Credit Risk-Weighted Assets	\$762	\$21,528
Changes in Market Risk-Weighted Assets		
Net decrease in risk levels <sup>(7)</sup>	\$(7,741	)\$(2,437 )
Net change due to model and methodology updates <sup>(8)</sup>	70	(2,702 )
Net decrease in Market Risk-Weighted Assets	\$(7,671	)\$(5,139 )
Net change in Operational Risk-Weighted Assets	\$—	\$—
Total Risk-Weighted Assets, end of period	\$1,232,666	\$1,232,666

Retail exposures decreased during the three months ended June 30, 2016, in part, due to residential mortgage loan sales and repayments, divestitures of certain Citi Holdings portfolios, and the impact of FX translation. Retail exposures decreased during the six months ended June 30, 2016, in part, due to residential mortgage loan sales and repayments, divestitures of certain Citi Holdings portfolios and reductions in qualifying revolving (cards) exposures attributable to seasonal holiday spending repayments. In addition, retail exposures for both the three and six months ended June 30, 2016 also reflect the acquisition of the Costco cards portfolio.

Wholesale exposures increased slightly during the three months ended June 30, 2016 primarily due to growth in commercial loans, partially offset by the impact of FX translation. Wholesale exposures increased during the six months ended June 30, 2016 primarily due to increases in securities AFS and commercial loans, partially offset by a decrease in loan commitments.

OTC derivatives increased during the three months ended June 30, 2016 primarily due to changes in fair value.

(3) OTC derivatives increased during the six months ended June 30, 2016 primarily driven by increased trade volume and model enhancements.

(4) Derivatives CVA increased during the three months ended June 30, 2016 primarily driven by volatility and rating changes. Derivatives CVA increased during the six months ended June 30, 2016 primarily driven by increased volatility and model enhancements.

(5) Other exposures include cleared transactions, unsettled transactions, assets other than those reportable in specific exposure categories and non-material portfolios.

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

(7) Risk levels decreased during the three and six months ended June 30, 2016 primarily due to a reduction in exposure levels subject to comprehensive risk, a reduction in positions subject to securitization charges, and the ongoing assessment regarding the applicability of the market risk capital rules to certain securitization positions, partially offset by an increase in assets subject to standard specific risk charges. In addition, further contributing to the decline in risk levels during the three months ended June 30, 2016 was a reduction in exposure levels subject to

Value at Risk and Stressed Value at Risk.

(8) Risk-weighted assets declined during the six months ended June 30, 2016 due to updated model volatility inputs.

## Supplementary Leverage Ratio

Citigroup's Supplementary Leverage ratio was 7.5% for the second quarter of 2016, compared to 7.4% for the first quarter of 2016 and 7.1% for the fourth quarter of 2015. The growth in the ratio quarter-over-quarter was principally driven by an increase in Tier 1 Capital attributable largely to quarterly net income of \$4.0 billion and a \$1.5 billion noncumulative perpetual preferred stock issuance, partially offset by an increase in identifiable intangible assets other than MSRs and Total Leverage Exposure. The growth in the ratio from the fourth quarter of 2015 was also principally driven by an increase in Tier 1 Capital

attributable largely to net income of \$7.5 billion, \$2.5 billion of noncumulative perpetual preferred stock issuances, and the favorable effects associated with DTA utilization of approximately \$2.4 billion, offset in part by the return of capital to common shareholders.

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 June 30, 2016 and December 31, 2015.

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

In millions of dollars, except ratios	June 30, 2016	December 31, 2015
Tier 1 Capital	\$ 174,027	\$ 164,036
Total Leverage Exposure (TLE)		
On-balance sheet assets <sup>(1)</sup>	\$ 1,807,312	\$ 1,784,248
Certain off-balance sheet exposures: <sup>(2)</sup>		
Potential future exposure (PFE) on derivative contracts	207,468	206,128
Effective notional of sold credit derivatives, net <sup>(3)</sup>	68,412	76,923
Counterparty credit risk for repo-style transactions <sup>(4)</sup>	21,457	25,939
Unconditionally cancellable commitments	60,913	58,699
Other off-balance sheet exposures	220,334	225,450
Total of certain off-balance sheet exposures	\$ 578,584	\$ 593,139
Less: Tier 1 Capital deductions	58,967	59,538
Total Leverage Exposure	\$ 2,326,929	\$ 2,317,849
Supplementary Leverage ratio	7.48	% 7.08

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

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

(3) 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.

(4) 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 6.8% for the second quarter of 2016, compared to 6.9% for the first quarter of 2016 and 6.7% for the fourth quarter of 2015. The slight decrease in the ratio quarter-over-quarter was primarily attributable to a decline in Tier 1 Capital, as quarterly net income of \$3.5 billion was more than offset by the aggregate effects of an increase in identifiable intangible assets other than MSRs, as well as 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 2015 was principally driven by an increase in Tier 1 Capital due to net income, and beneficial net movements in AOCI, partially offset by cash

dividends paid by Citibank to its parent, Citicorp, and which were subsequently remitted to Citigroup.



#### Regulatory Capital Standards Developments

For additional information regarding other recent regulatory capital standards developments, see “Capital Resources—Regulatory Capital Standards Developments” in Citigroup’s 2015 Annual Report on Form 10-K and First Quarter of 2016 Form 10-Q.

#### Interest Rate Risk in the Banking Book

In April 2016, the Basel Committee on Banking Supervision (Basel Committee) issued a final rule which sets forth revised principles regarding the supervisory review process over a bank’s management of interest rate risk in the banking book (IRRBB), as well as the methods expected to be used by banks for the measurement, monitoring and control of IRRBB. Moreover, the final rule establishes qualitative and quantitative public disclosure requirements for IRRBB. The final rule is applicable to large, internationally active banking organizations, and is expected to be implemented by 2018.

The U.S. banking agencies have not yet proposed rules for incorporating the Basel Committee’s revised principles on IRRBB into the U.S. regulatory capital framework.

#### Revisions to the Securitization Framework

In July 2016, the Basel Committee issued a final rule which amends the Basel III securitization framework issued in December 2014 to include an alternative, and potentially preferential, regulatory capital treatment for securitizations identified as “simple, transparent and comparable” (STC). Although the Basel Committee had previously issued criteria solely for identifying STC securitizations in July 2015, this final rule introduces further requirements with respect to these identifying criteria as well as sets forth additional criteria, all of which must be satisfied in order for a securitization exposure to receive the alternative and more favorable regulatory capital treatment.

The U.S. banking agencies may revise the regulatory capital treatment of securitization exposures, including STC securitizations, in the future, based upon the revisions adopted by the Basel Committee.

## 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.

In millions of dollars or shares, except per share amounts	June 30, 2016	December 31, 2015
Total Citigroup stockholders' equity	\$231,888	\$221,857
Less: Preferred stock	19,253	16,718
Common equity	\$212,635	\$205,139
Less:		
Goodwill	22,496	22,349
Intangible assets (other than MSR's) <sup>(1)</sup>	5,521	3,721
Goodwill and intangible assets (other than MSR's) related to assets held-for-sale	30	68
Tangible common equity (TCE)	\$184,588	\$179,001
Common shares outstanding (CSO)	2,905.4	2,953.3
Tangible book value per share (TCE/CSO)	\$63.53	\$60.61
Book value per share (Common equity/CSO)	\$73.19	\$69.46

(1) Identifiable intangible assets (other than MSR's) increased by approximately \$2.2 billion during the second quarter of 2016 as a result of the acquisition of the Costco cards portfolio, as well as the renewal and extension of the co-branded credit card program agreement with American Airlines. For additional information, see Note 16 to the Consolidated Financial Statements.

## Managing Global Risk Table of Contents

MANAGING GLOBAL RISK	<u>51</u>
CREDIT RISK <sup>(1)</sup>	<u>52</u>
Consumer Credit	<u>52</u>
GCB Commercial Banking Exposure to the Energy and Energy-Related Sector	<u>55</u>
Corporate Credit	<u>58</u>
Additional Consumer and Corporate Credit Details	<u>61</u>
Loans Outstanding	<u>61</u>
Details of Credit Loss Experience	<u>62</u>
Allowance for Loan Losses	64
Non-Accrual Loans and Assets and Renegotiated Loans	<u>65</u>
LIQUIDITY RISK	<u>70</u>
High-Quality Liquid Assets (HQLA)	<u>70</u>
Loans	<u>70</u>
Deposits	71
Long-Term Debt	71
Secured Funding Transactions and Short-Term Borrowings	73
Liquidity Coverage Ratio (LCR)	74
Credit Ratings	75
MARKET RISK <sup>(1)</sup>	<u>77</u>
Market Risk of Non-Trading Portfolios	<u>77</u>
Market Risk of Trading Portfolios	<u>88</u>
COUNTRY RISK	<u>90</u>

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

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.

For more information on Citi's management of global risk, including its three lines of defense, see "Managing Global Risk" in Citi's 2015 Annual Report on Form 10-K.

## CREDIT RISK

For additional information on credit risk, including Citi's credit risk management, measurement and stress testing, see "Credit Risk" and "Risk Factors" in Citi's 2015 Annual Report on Form 10-K.

## 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 June 30, 2016, Citi's North America consumer mortgage portfolio was \$76.9 billion (compared to \$78.7 billion at March 31, 2016), of which the residential first mortgage portfolio was \$55.8 billion (compared to \$56.8 billion at March 31, 2016), and the home equity loan portfolio was \$21.1 billion (compared to \$21.9 billion at March 31, 2016). For additional information on Citi's North America consumer mortgage portfolio, see Note 14 to the Consolidated Financial Statements and "Credit Risk—North America Consumer Mortgage Lending" in Citi's 2015 Annual Report on Form 10-K.

#### North America Consumer Mortgage—Residential First Mortgages

The following charts detail the quarterly outstanding loans and 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 reflected 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 in 4Q'15.
- (2) Decrease in 1Q'16 net credit losses primarily reflected the transfer of CFNA residential first mortgage to held-for-sale and classification as Other assets at year-end 2015.
- (3) 2Q'16 excludes a \$23 million recovery of prior net credit losses related to the sale of CMI residential first mortgages during the quarter.
- (4) Year-over-year change in the S&P/Case-Shiller U.S. National Home Price Index.
- (5) Year-over-year change as of April 2016.

#### 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 delinquencies primarily reflected the transfer of CFNA residential first mortgages to held-for-sale and classification as Other assets at year-end 2015.

Overall changes in net credit losses and delinquencies in Citi's North America residential first mortgage portfolio during the current quarter as well as going forward will largely be driven by continued asset 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.

State <sup>(1)</sup>	June 30, 2016					March 31, 2016				
	ENR <sup>(2)</sup>	ENR Distribution %	90+DPD %	LTV > 100% <sup>(3)</sup>	Refreshed FICO	ENR <sup>(2)</sup>	ENR Distribution %	90+DPD %	LTV > 100% <sup>(3)</sup>	Refreshed FICO
CA	\$19.638	%	0.2 %	— %	756	\$19.638	%	0.3 %	1 %	754
NY/NJ/CT <sup>(4)</sup>	13.2	26	0.7	1	753	13.0	25	0.7	1	752
IL <sup>(4)</sup>	2.3	4	0.9	3	737	2.2	4	1.0	5	736
VA/MD	2.2	4	1.0	3	722	2.2	4	1.2	4	719
FL <sup>(4)</sup>	2.2	4	0.7	2	727	2.2	4	0.9	3	725
TX	1.8	3	0.9	—	716	1.9	4	0.9	—	713
Other	10.0	20	1.2	2	714	10.7	21	1.2	2	711
Total	\$51.3100	%	0.6 %	1 %	742	\$51.8100	%	0.7 %	1 %	740

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.

## Foreclosures

A substantial majority of Citi's foreclosure inventory consists of residential first mortgages. At June 30, 2016, Citi's foreclosure inventory included approximately \$0.1 billion, or 0.2%, of the total residential first mortgage portfolio, unchanged from March 31, 2016, 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—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 June 30, 2016, Citi's home equity loan portfolio of \$21.1 billion consisted of \$5.9 billion of fixed-rate home equity loans and \$15.2 billion of loans extended under home equity lines of credit (Revolving HELOCs).

## Revolving HELOCs

Citi's \$15.2 billion of Revolving HELOCs as of June 30, 2016 consisted of \$5.2 billion of loans that had commenced amortization (compared to \$4.6 billion at March 31, 2016) and \$10.0 billion of loans still within their revolving period that had not commenced amortization, or "reset" (compared to \$11.2 billion at March 31, 2016). 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 June 30, 2016

Note: Totals may not sum due to rounding.

Approximately 34% of Citi's total Revolving HELOCs portfolio had commenced amortization as of June 30, 2016 (compared to 29% as of March 31, 2016). Of the remaining Revolving HELOCs portfolio, approximately 56% will commence amortization during the remainder 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 remainder of 2016–2017 could increase on average by approximately \$370, or 150%. 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 remainder of 2016–2017, approximately \$0.5 billion, or 7%, of the loans have a CLTV greater than 100% as of June 30, 2016. 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 6.5% of the Revolving HELOCs that have begun amortization as of June 30, 2016 were 30+ days past due, compared to 3.5% of the total outstanding home equity loan portfolio (amortizing and non-amortizing). This compared to 6.7% and 3.5%, respectively, as of March 31, 2016. 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 increase. Delinquencies on newly amortizing loans have tended to peak between four and six months after reset. Resets to date have generally occurred during a period of historically low interest rates, improving HPI and a favorable economic environment, 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" in Citi's 2015 Annual Report on Form 10-K.

#### Net Credit Losses and Delinquencies

The following charts detail the quarterly outstanding loans and 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.

(1) 2Q'16 excludes a non-recurring benefit to net credit losses of approximately \$13 million associated with certain previously charged-off loans.

#### 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 the second quarter of 2016, largely driven by the continued improvement in HPI. 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 14 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:

State <sup>(1)</sup>	June 30, 2016					March 31, 2016				
	ENR <sup>(2)</sup>	ENR Distribution %	90+DPD %	CLTV > 100% <sup>(3)</sup>	Refreshed FICO	ENR <sup>(2)</sup>	ENR Distribution %	90+DPD %	CLTV > 100% <sup>(3)</sup>	Refreshed FICO
CA	\$5.7	29 %	1.9 %	4 %	731	\$6.0	29 %	1.8 %	5 %	731
NY/NJ/CT <sup>(4)</sup>	5.6	28	2.7	9	726	5.8	28	2.5	9	725
FL <sup>(4)</sup>	1.4	7	2.1	16	715	1.4	7	1.9	21	715
VA/MD	1.2	6	2.1	24	714	1.2	6	1.9	26	714
IL <sup>(4)</sup>	0.9	4	1.7	30	722	0.9	4	1.6	33	722
IN/OH/MI <sup>(4)</sup>	0.5	2	1.7	25	704	0.5	3	2.0	29	703
Other	4.5	23	1.9	10	712	4.9	24	1.8	13	712
Total	\$19.8	100 %	2.1 %	11 %	722	\$20.6	100 %	2.0 %	12 %	722

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.

#### GCB Commercial Banking Exposure to the Energy and Energy-Related Sector

In addition to the total corporate credit exposure to the energy and energy-related sector described under "Corporate Credit" below, Citi's commercial banking business, reported within GCB retail banking, had total credit exposure to the energy and energy-related sector of approximately \$2.0 billion as of June 30, 2016, with approximately \$1.4 billion of direct outstanding funded loans, or 5%, of the total outstanding commercial banking loans. This compared to approximately \$2.1 billion of total corporate credit exposure and \$1.4 billion of direct outstanding funded energy and energy-related loans as of March 31, 2016. In addition, as of June 30, 2016, approximately 88% of commercial banking's total credit exposure to the energy and energy-related sector was in the U.S., unchanged from March 31, 2016. Approximately 29% of commercial banking's total energy and energy-related exposure was rated investment grade at June 30, 2016, also unchanged from March 31, 2016.

During the second quarter of 2016, Citi built additional energy and energy-related loan loss reserves by approximately \$2 million, and incurred net credit losses of approximately \$17 million on this commercial banking portfolio. As of June 30, 2016, Citi held loan loss reserves against its funded energy

and energy-related commercial banking loans equal to approximately 9.8% of these loans (compared to approximately 9.6% as of March 31, 2016).

## Additional Consumer Credit Details

## Consumer Loan Delinquency Amounts and Ratios

In millions of dollars, except EOP loan amounts in billions	EOP loans <sup>(1)</sup>			90+ days past due <sup>(2)</sup>				30–89 days past due <sup>(2)</sup>			
	June 30, 2016	June 30, 2016	March 31, 2016	June 30, 2015	June 30, 2016	March 31, 2016	June 30, 2015	June 30, 2016	March 31, 2016	June 30, 2015	June 30, 2016
Citicorp <sup>(3)(4)</sup>											
Total	\$ 285.2	\$ 1,965	\$ 2,022	\$ 2,020	\$ 2,318	\$ 2,360	\$ 2,290				
Ratio		0.69	% 0.74	% 0.74	% 0.82	% 0.87	% 0.84	%			
Retail banking											
Total	\$ 141.8	\$ 515	\$ 498	\$ 567	\$ 735	\$ 793	\$ 746				
Ratio		0.37	% 0.35	% 0.40	% 0.52	% 0.56	% 0.53	%			
North America	54.8	180	152	150	192	198	176				
Ratio		0.33	% 0.29	% 0.31	% 0.36	% 0.38	% 0.36	%			
Latin America	19.5	157	172	232	197	256	217				
Ratio		0.81	% 0.86	% 1.10	% 1.01	% 1.27	% 1.03	%			
Asia <sup>(5)</sup>	67.5	178	174	185	346	339	353				
Ratio		0.26	% 0.25	% 0.26	% 0.51	% 0.49	% 0.49	%			
Cards											
Total	\$ 143.4	\$ 1,450	\$ 1,524	\$ 1,453	\$ 1,583	\$ 1,567	\$ 1,544				
Ratio		1.01	% 1.17	% 1.10	% 1.10	% 1.20	% 1.17	%			
North America—Citi-branded	77.5	510	530	495	550	492	462				
Ratio		0.66	% 0.82	% 0.77	% 0.71	% 0.76	% 0.72	%			
North America—Citi retail services	43.3	619	665	567	669	688	652				
Ratio		1.43	% 1.56	% 1.31	% 1.55	% 1.62	% 1.51	%			
Latin America	5.0	145	149	200	137	152	183				
Ratio		2.90	% 2.81	% 3.39	% 2.74	% 2.87	% 3.10	%			
Asia <sup>(5)</sup>	17.6	176	180	191	227	235	247				
Ratio		1.00	% 1.02	% 1.06	% 1.29	% 1.34	% 1.36	%			
Citi Holdings <sup>(6)(7)</sup>											
Total	\$ 41.2	\$ 878	\$ 896	\$ 1,647	\$ 858	\$ 929	\$ 1,366				
Ratio		2.23	% 2.08	% 2.70	% 2.18	% 2.16	% 2.24	%			
International	5.5	170	145	185	138	161	213				
Ratio		3.09	% 2.27	% 1.97	% 2.51	% 2.52	% 2.27	%			
North America	35.7	708	751	1,462	720	768	1,153				
Ratio		2.09	% 2.05	% 2.84	% 2.12	% 2.09	% 2.24	%			
Total Citigroup	\$ 326.4	\$ 2,843	\$ 2,918	\$ 3,667	\$ 3,176	\$ 3,289	\$ 3,656				
Ratio		0.88	% 0.93	% 1.10	% 0.98	% 1.05	% 1.09	%			

(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.

The 90+ days past due balances for North America—Citi-branded and North America—Citi retail services are generally (3) 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.

(4) 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

\$408 million (\$0.9 billion), \$456 million (\$1.1 billion) and \$423 million (\$0.8 billion) at June 30, 2016, March 31, 2016 and June 30, 2015, respectively. The amounts excluded for loans 30–89 days past due (EOP loans have the same adjustment as above) were \$91 million, \$86 million and \$75 million at June 30, 2016, March 31, 2016 and June 30, 2015, 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 loans that are guaranteed by U.S. government-sponsored entities since the potential loss predominantly resides (6) within the U.S. government-sponsored entities. The amounts excluded for loans 90+ days past due (and EOP loans) were \$1.2 billion (\$1.8 billion), \$1.3 billion (\$1.9 billion) and \$1.7 billion (\$2.7 billion) at June 30, 2016, March 31, 2016 and June 30,

2015, 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, \$0.2 billion and \$0.3 billion at June 30, 2016, March 31, 2016 and June 30, 2015, respectively.

The June 30, 2016, March 31, 2016 and June 30, 2015 loans 90+ days past due and 30–89 days past due and related (7) ratios for North America exclude \$9 million, \$9 million and \$12 million, respectively, of loans that are carried at fair value.

#### Consumer Loan Net Credit Losses and Ratios

In millions of dollars, except average loan amounts in billions	Average Net credit losses <sup>(2)(3)</sup>			
	Average loans <sup>(1)</sup> 2Q16	2Q16	1Q16	2Q15
<b>Citicorp</b>				
Total	\$ 273.3	\$1,373	\$1,370	\$1,504
Ratio		2.02	%2.03	%2.21 %
<b>Retail banking</b>				
Total	\$ 141.4	\$242	\$220	\$261
Ratio		0.69	%0.63	%0.73 %
North America	54.4	44	24	39
Ratio		0.33	%0.18	%0.32 %
Latin America	19.5	137	134	142
Ratio		2.83	%2.76	%2.70 %
Asia <sup>(4)</sup>	67.5	61	62	80
Ratio		0.36	%0.37	%0.44 %
<b>Cards</b>				
Total	\$ 131.9	\$1,131	\$1,150	\$1,243
Ratio		3.45	%3.52	%3.84 %
North America—Citi-branded	66.7	467	455	503
Ratio		2.82	%2.83	%3.19 %
North America—Retail services	42.7	442	453	457
Ratio		4.16	%4.14	%4.30 %
Latin America	5.1	123	144	174
Ratio		9.70	%11.14	%11.44 %
Asia <sup>(4)</sup>	17.4	99	98	109
Ratio		2.29	%2.27	%2.43 %
<b>Citi Holdings<sup>(3)</sup></b>				
Total	\$ 43.3	\$101	\$143	\$309
Ratio		0.94	%1.25	%1.90 %
International	6.1	77	78	116
Ratio		5.08	%4.68	%4.70 %
North America	37.2	24	65	193
Ratio		0.26	%0.66	%1.39 %
<b>Total Citigroup</b>	\$ 316.6	\$1,474	\$1,513	\$1,813
Ratio		1.87	%1.92	%2.15 %

(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.

(3) 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 \$160 million of net credit losses (NCLs) were recorded as a reduction in revenue (Other revenue) during the second quarter of 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.

## 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 June 30, 2016				At March 31, 2016				At December 31, 2015			
	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) <sup>(1)</sup>	\$ 111	\$ 99	\$ 24	\$ 234	\$ 104	\$ 103	\$ 24	\$ 231	\$ 98	\$ 97	\$ 25	\$ 220
Unfunded lending commitments (off-balance sheet) <sup>(2)</sup>	101	209	32	342	103	225	23	351	99	231	26	356
Total exposure	\$ 212	\$ 308	\$ 56	\$ 576	\$ 207	\$ 328	\$ 47	\$ 582	\$ 197	\$ 328	\$ 51	\$ 576

(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:

	June 30, 2016	March 31, 2016	December 31, 2015
North America	54 %	56 %	56 %
EMEA	26	25	25
Asia	12	12	12
Latin America	8	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			
	June 30,	March 31,	December 31,	
	2016	2016	2015	
AAA/AA/A	49	% 48	% 48	%
BBB	34	35	35	
BB/B	15	15	15	
CCC or below	2	2	2	
Unrated	—	—	—	
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			
	June 30, 2016	March 31, 2016	December 31, 2015	
Transportation and industrial	21	%21	%20	%
Consumer retail and health	17	16	16	
Power, chemicals, commodities and metals and mining	11	12	11	
Technology, media and telecom	11	11	12	
Energy <sup>(1)</sup>	9	8	9	
Banks/broker-dealers/finance companies	7	7	7	
Real estate	6	6	6	
Hedge funds	5	5	5	
Insurance and special purpose entities	5	5	5	
Public sector	5	5	5	
Other industries	3	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 June 30, 2016, 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 June 30, 2016, Citi's total corporate credit exposure to the energy and energy-related sector (see footnote 1 to the table above) was \$56.9 billion, with \$22.1 billion consisting of direct outstanding funded loans, or 3%, of Citi's total outstanding loans. This compared to \$57.2 billion of total exposure and \$22.3 billion of funded loans as of March 31, 2016. In addition, as of June 30, 2016, approximately 72% of ICG's total corporate credit energy and energy-related exposure was in the United States, United Kingdom and Canada (unchanged from March 31, 2016). Also as of June 30, 2016, approximately 73% of Citi's total energy and energy-related exposures were rated investment grade (unchanged from March 31, 2016).

During the second quarter of 2016, Citi incurred approximately \$102 million of net credit losses in the energy and energy-related loan portfolio and released approximately \$104 million of energy and energy-related loan loss reserves.

As of June 30, 2016, Citi held loan loss reserves against its funded energy and energy-related loans equal to approximately 3.9% of these loans (down slightly from 4.2% at March 31, 2016), with a funded reserve ratio of

approximately 10% on the non-investment grade portion of the portfolio, consistent with the prior quarter.

For information on Citi's energy and energy-related exposures within GCB's commercial banking business within retail banking, see "Commercial Credit—GCB Commercial Banking Exposure to the Energy and Energy-Related Sector" above.

#### Exposure to Banks, Broker-Dealers and Finance Companies

As of June 30, 2016, Citi's total corporate credit exposure to banks, broker-dealers and finance companies was approximately \$39 billion, of which \$27 billion represented direct outstanding funded loans, or 5% of Citi's total outstanding loans. Also as of June 30, 2016, 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, as of June 30, 2016, Citi's total corporate credit exposure to banks was approximately \$24 billion, with \$19 billion consisting of direct outstanding funded loans, or 3% of Citi's total outstanding loans. Of the approximately \$24 billion as of June 30, 2016, approximately 30% related to Asia, 30% related to EMEA, 20% related to North America and 20% related to Latin America. More than 70% of Citi's total corporate credit exposure to banks had a tenor of less than 12 months as of June 30, 2016.

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 June 30, 2016, Citi had net derivative credit exposure to banks, broker-dealers and finance companies of approximately \$8 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 June 30, 2016, Citi had net credit exposure to banks, broker-dealers and finance companies in the form of securities financing transactions of \$4 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 June 30, 2016, March 31, 2016 and December 31, 2015, \$37.6 billion, \$36.6 billion and \$34.5 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

	June 30, 2016	March 31, 2016	December 31, 2015	
AAA/AA/A	20	19	21	%
BBB	51	53	48	
BB/B	25	25	27	
CCC or below	4	3	4	
Total	100	100	100	%

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

### Industry of Hedged Exposure

	June 30, 2016	March 31, 2016	December 31, 2015	
Transportation and industrial	26	28	28	%
Consumer retail and health	16	18	17	
Technology, media and telecom	15	16	16	
Energy	15	13	13	
Power, chemicals, commodities and metals and mining	12	11	12	
Insurance and special purpose entities	5	5	5	
Public Sector	5	4	4	
Banks/broker-dealers	5	4	4	
Other industries	1	1	1	
Total	100	100	100	%

## ADDITIONAL CONSUMER AND CORPORATE CREDIT DETAILS

## Loans Outstanding

	2nd Qtr. 2016	1st Qtr. 2016	4th Qtr. 2015	3rd Qtr. 2015	2nd Qtr. 2015
In millions of dollars					
Consumer loans					
In U.S. offices					
Mortgage and real estate <sup>(1)</sup>	\$77,242	\$79,128	\$80,281	\$89,155	\$90,715
Installment, revolving credit, and other	3,486	3,504	3,480	4,999	4,956
Cards	120,113	106,892	112,800	107,244	107,096
Commercial and industrial	7,041	6,793	6,407	6,437	6,493
	\$207,882	\$196,317	\$202,968	\$207,835	\$209,260
In offices outside the U.S.					
Mortgage and real estate <sup>(1)</sup>	\$46,049	\$47,831	\$47,062	\$47,295	\$50,704
Installment, revolving credit, and other	27,830	28,778	29,480	29,702	30,958
Cards	25,844	26,312	27,342	26,865	28,662
Commercial and industrial	17,857	17,697	17,741	17,841	18,863
Lease financing	140	139	362	368	424
	\$117,720	\$120,757	\$121,987	\$122,071	\$129,611
Total consumer loans	\$325,602	\$317,074	\$324,955	\$329,906	\$338,871
Unearned income <sup>(2)</sup>	817	826	830	(687)	(677)
Consumer loans, net of unearned income	\$326,419	\$317,900	\$325,785	\$329,219	\$338,194
Corporate loans					
In U.S. offices					
Commercial and industrial	\$50,286	\$44,104	\$41,147	\$40,435	\$40,697
Loans to financial institutions	32,001	36,865	36,396	38,034	37,360
Mortgage and real estate <sup>(1)</sup>	40,175	38,697	37,565	37,019	34,680
Installment, revolving credit, and other	32,491	33,273	33,374	32,129	31,882
Lease financing	1,546	1,597	1,780	1,718	1,707
	\$156,499	\$154,536	\$150,262	\$149,335	\$146,326
In offices outside the U.S.					
Commercial and industrial	\$87,125	\$85,491	\$82,358	\$85,628	\$87,274
Loans to financial institutions	27,856	28,652	28,704	28,090	29,675
Mortgage and real estate <sup>(1)</sup>	5,455	5,769	5,106	6,602	5,948
Installment, revolving credit, and other	24,825	21,583	20,853	19,352	20,214
Lease financing	255	280	303	329	378
Governments and official institutions	5,757	5,303	4,911	4,503	4,714
	\$151,273	\$147,078	\$142,235	\$144,504	\$148,203
Total corporate loans	\$307,772	\$301,614	\$292,497	\$293,839	\$294,529
Unearned income <sup>(3)</sup>	(676)	(690)	(665)	(614)	(605)
Corporate loans, net of unearned income	\$307,096	\$300,924	\$291,832	\$293,225	\$293,924
Total loans—net of unearned income	\$633,515	\$618,824	\$617,617	\$622,444	\$632,118
Allowance for loan losses—on drawn exposures	(12,304)	(12,712)	(12,626)	(13,626)	(14,075)
Total loans—net of unearned income and allowance for credit losses	\$621,211	\$606,112	\$604,991	\$608,818	\$618,043
Allowance for loan losses as a percentage of total loans—net of unearned income <sup>(4)</sup>	1.96	% 2.07	% 2.06	% 2.21	% 2.25
Allowance for consumer loan losses as a percentage of total consumer loans—net of unearned income	2.89	% 3.09	% 3.02	% 3.35	% 3.45

Allowance for corporate loan losses as a percentage of total corporate loans—net of unearned income	0.95	%0.98	%0.97	%0.90	%0.84	%
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(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.

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

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

## Details of Credit Loss Experience

	2nd Qtr. 2016	1st Qtr. 2016	4th Qtr. 2015	3rd Qtr. 2015	2nd Qtr. 2015
In millions of dollars					
Allowance for loan losses at beginning of period	\$12,712	\$12,626	\$13,626	\$14,075	\$14,598
Provision for loan losses					
Consumer	\$1,275	\$1,570	\$1,684	\$1,338	\$1,559
Corporate	115	316	572	244	(44 )
	\$1,390	\$1,886	\$2,256	\$1,582	\$1,515
Gross credit losses					
Consumer					
In U.S. offices	\$1,212	\$1,230	\$1,267	\$1,244	\$1,393
In offices outside the U.S.	678	689	794	746	816
Corporate					
In U.S. offices	63	190	75	30	5
In offices outside the U.S.	95	34	44	48	121
	\$2,048	\$2,143	\$2,180	\$2,068	\$2,335
Credit recoveries <sup>(1)</sup>					
Consumer					
In U.S. offices	\$262	\$256	\$229	\$222	\$228
In offices outside the U.S.	154	150	164	155	168
Corporate					
In U.S. offices	3	4	9	11	4
In offices outside the U.S.	13	9	16	17	15
	\$432	\$419	\$418	\$405	\$415
Net credit losses					
In U.S. offices	\$1,010	\$1,160	\$1,104	\$1,041	\$1,166
In offices outside the U.S.	606	564	658	622	754
Total	\$1,616	\$1,724	\$1,762	\$1,663	\$1,920
Other—net <sup>(2)(3)(4)(5)(6)(7)(8)</sup>	\$(182 )	\$(76 )	\$(1,494 )	(368 )	\$(118 )
Allowance for loan losses at end of period	\$12,304	\$12,712	\$12,626	\$13,626	\$14,075
Allowance for loan losses as a percentage of total loans <sup>(9)</sup>	1.96	%2.07	%2.06	%2.21	%2.25
Allowance for unfunded lending commitments <sup>(6)(10)</sup>	\$1,432	\$1,473	\$1,402	\$1,036	\$973
Total allowance for loan losses and unfunded lending commitments	\$13,736	\$14,185	\$14,028	\$14,662	\$15,048
Net consumer credit losses	\$1,474	\$1,513	\$1,668	\$1,613	\$1,813
As a percentage of average consumer loans	1.87	%1.90	%2.00	%1.93	%2.15
Net corporate credit losses	\$142	\$211	\$94	\$50	\$107
As a percentage of average corporate loans	0.19	%0.29	%0.13	%0.07	%0.15
Allowance for loan losses at end of period <sup>(11)</sup>					
Citicorp	\$10,433	\$10,544	\$10,331	\$10,213	\$10,368
Citi Holdings	1,871	2,168	2,295	3,413	3,707
Total Citigroup	\$12,304	\$12,712	\$12,626	\$13,626	\$14,075
Allowance by type					
Consumer	\$9,432	\$9,807	\$9,835	\$11,030	\$11,669
Corporate	2,872	2,905	2,791	2,596	2,406
Total Citigroup	\$12,304	\$12,712	\$12,626	\$13,626	\$14,075

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

(2) 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.

(3) The second quarter of 2016 includes a reduction of approximately \$101 million related to the sale or transfers to held-for-sale (HFS) of various loan portfolios, including a reduction of \$24 million related to the transfers of a real estate loan portfolio to HFS. Additionally, the second quarter includes a reduction of approximately \$75 million related to FX translation.



(4) The first quarter of 2016 includes a reduction of approximately \$148 million related to the sale or transfers to held-for-sale (HFS) of various loan portfolios, including a reduction of \$29 million related to the transfers of a real estate loan portfolio to HFS. Additionally, the first quarter includes an increase of approximately \$63 million related to FX translation.

(5) The fourth quarter of 2015 includes a reduction of approximately \$1.1 billion related to the sale or transfers to HFS of various loan portfolios, including a reduction of \$1.1 billion related to the transfers of a real estate loan portfolio to HFS. Additionally, the fourth quarter includes a reduction of approximately \$35 million related to FX translation.

(6) The fourth quarter of 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.

(7) The third quarter of 2015 includes a reduction of approximately \$110 million related to the sale or transfers to HFS of various loan portfolios, including a reduction of \$14 million related to a transfer of a real estate loan portfolio to HFS. Additionally, the third quarter includes a reduction of approximately \$255 million related to FX translation.

(8) The second quarter of 2015 includes a reduction of approximately \$88 million related to the sale or transfers to held-for-sale (HFS) of various loan portfolios, including a reduction of \$34 million related to a transfer of a real estate loan portfolio to HFS. Additionally, the second quarter of 2015 includes a reduction of approximately \$39 million related to FX translation.

(9) June 30, 2016, March 31, 2016, December 31, 2015, September 30, 2015, and June 30, 2015 exclude \$4.1 billion, \$4.8 billion, \$5.0 billion, \$5.5 billion and \$6.5 billion, respectively, of loans which are carried at fair value.

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

(11) 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 "Significant Accounting Policies and Significant Estimates" and Note 1 to the Consolidated Financial Statements in Citi's 2015 Annual Report on Form 10-K. 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	June 30, 2016			
	Allowance for loan losses	Loans, net of unearned income	Allowance as a percentage of loans <sup>(1)</sup>	
North America cards <sup>(2)</sup>	\$4.6	\$ 120.8	3.8	%
North America mortgages <sup>(3)</sup>	1.4	76.9	1.8	
North America other	0.4	13.6	2.9	
International cards	1.5	25.1	6.0	
International other <sup>(4)</sup>	1.5	90.0	1.7	
Total consumer	\$9.4	\$ 326.4	2.9	%
Total corporate	2.9	307.1	1.0	
Total Citigroup	\$12.3	\$ 633.5	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 \$4.6 billion of loan loss reserves represented approximately 15 months of coincident net credit loss coverage.

Of the \$1.4 billion, approximately \$1.2 billion was allocated to North America mortgages in Citi Holdings. Of the \$1.4 billion, approximately \$0.5 billion and \$0.8 billion are determined in accordance with ASC 450-20 and ASC

(3) 310-10-35 (troubled debt restructurings), respectively. Of the \$76.9 billion in loans, approximately \$71.0 billion and \$5.8 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 15 to the Consolidated Financial Statements.

(4) Includes mortgages and other retail loans.

In billions of dollars	December 31, 2015			
	Allowance for loan losses	Loans, net of unearned income	Allowance as a percentage of loans <sup>(1)</sup>	
North America cards <sup>(2)</sup>	\$4.5	\$ 113.4	4.0	%
North America mortgages <sup>(3)</sup>	1.7	79.6	2.1	
North America other	0.5	13.0	3.8	
International cards	1.6	26.7	6.0	
International other <sup>(4)</sup>	1.5	93.1	1.6	
Total consumer	\$9.8	\$ 325.8	3.0	%
Total corporate	2.8	291.8	1.0	
Total Citigroup	\$12.6	\$ 617.6	2.1	%

(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. Of the \$1.7 billion, approximately \$0.6 billion and \$1.1 billion are determined in accordance with ASC 450-20 and ASC

(3) 310-10-35 (troubled debt restructurings), respectively. Of the \$79.6 billion in loans, 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 15 to the Consolidated Financial Statements.

(4) 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 66% of Citi's corporate non-accrual loans were performing at June 30, 2016, compared to 59% at March 31, 2016.

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.

As set forth in the tables below, Citi's corporate non-accrual loans within Citicorp increased during the second quarter of 2016 by 6% or approximately \$135 million, driven primarily by energy and energy-related exposures in EMEA (for additional information on these exposures, see "Corporate Credit" above). Approximately two-thirds of the total additions to corporate non-accrual loans during the quarter remained performing as of June 30, 2016.

	Jun. 30, 2016	Mar. 31, 2016	Dec. 31, 2015	Sept. 30, 2015	Jun. 30, 2015
In millions of dollars					
Citicorp	\$4,101	\$3,718	\$2,991	\$2,921	\$2,684
Citi Holdings	2,064	2,210	2,263	3,486	3,800
Total non-accrual loans	\$6,165	\$5,928	\$5,254	\$6,407	\$6,484
Corporate non-accrual loans <sup>(1)(2)</sup>					
North America	\$1,280	\$1,331	\$818	\$833	\$467
EMEA	762	469	347	386	385
Latin America	267	410	303	230	226
Asia	151	117	128	129	145
Total corporate non-accrual loans	\$2,460	\$2,327	\$1,596	\$1,578	\$1,223
Citicorp	\$2,410	\$2,275	\$1,543	\$1,525	\$1,168
Citi Holdings	50	52	53	53	55
Total corporate non-accrual loans	\$2,460	\$2,327	\$1,596	\$1,578	\$1,223
Consumer non-accrual loans <sup>(1)(3)</sup>					
North America	\$2,520	\$2,519	\$2,515	\$3,622	\$3,928
Latin America	884	817	874	935	1,032
Asia <sup>(4)</sup>	301	265	269	272	301
Total consumer non-accrual loans	\$3,705	\$3,601	\$3,658	\$4,829	\$5,261
Citicorp	\$1,691	\$1,443	\$1,448	\$1,396	\$1,516
Citi Holdings	2,014	2,158	2,210	3,433	3,745
Total consumer non-accrual loans	\$3,705	\$3,601	\$3,658	\$4,829	\$5,261

Excludes purchased distressed loans, as they are generally accreting interest. The carrying value of these loans was (1) \$212 million at June 30, 2016, \$236 million at March 31, 2016, \$250 million at December 31, 2015, \$320 million at September 30, 2015 and \$343 million at June 30, 2015.

(2) The increases in corporate non-accrual loans during the third quarter of 2015 and first quarter of 2016 primarily related to Citi's North America and EMEA energy and energy-related corporate credit exposure.

(3) The December 31, 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	Three months ended June 30, 2016			Three months ended June 30, 2015		
	Corporate	Consumer	Total	Corporate	Consumer	Total
Non-accrual loans at beginning of period	\$2,327	\$ 3,601	\$5,928	\$1,182	\$ 5,572	\$6,754
Additions	830	1,326	2,156	292	1,077	1,369
Sales and transfers to held-for-sale	(1	)(209	)(210	)(140	)(141	)(281
Returned to performing	(68	)(143	)(211	)(10	)(281	)(291
Paydowns/settlements	(491	)(396	)(887	)(103	)(309	)(412
Charge-offs	(113	)(462	)(575	)(40	)(615	)(655
Other	(24	)(12	)(36	42	(42	)—
Ending balance	\$2,460	\$ 3,705	\$6,165	\$1,223	\$ 5,261	\$6,484

In millions of dollars	Six months ended June 30, 2016			Six months ended June 30, 2015		
	Corporate	Consumer	Total	Corporate	Consumer	Total
Non-accrual loans at beginning of period	\$1,596	\$ 3,658	\$5,254	\$1,202	\$ 5,905	\$7,107
Additions	1,877	2,240	4,117	488	2,933	3,421
Sales and transfers to held-for-sale	(9	)(371	)(380	)(176	)(755	)(931
Returned to performing	(83	)(284	)(367	)(21	)(607	)(628
Paydowns/settlements	(589	)(641	)(1,230	)(242	)(616	)(858
Charge-offs	(253	)(898	)(1,151	)(58	)(1,486	)(1,544
Other	(79	)1	(78	)30	(113	)(83
Ending balance	\$2,460	\$ 3,705	\$6,165	\$1,223	\$ 5,261	\$6,484

The table below summarizes Citigroup's other real estate owned (OREO) assets as of the periods indicated. This represents the carrying value of all real estate property acquired by foreclosure or other legal proceedings when Citi has taken possession of the collateral:

In millions of dollars	Jun. 30, 2016	Mar. 31, 2016	Dec. 31, 2015	Sept. 30, 2015	Jun. 30, 2015
<b>OREO</b>					
Citicorp	\$54	\$74	\$70	\$83	\$85
Citi Holdings	121	131	139	144	161
<b>Total OREO</b>	<b>\$175</b>	<b>\$205</b>	<b>\$209</b>	<b>\$227</b>	<b>\$246</b>
North America	\$151	\$159	\$166	\$177	\$190
EMEA	—	1	1	1	1
Latin America	19	35	38	44	50
Asia	5	10	4	5	5
<b>Total OREO</b>	<b>\$175</b>	<b>\$205</b>	<b>\$209</b>	<b>\$227</b>	<b>\$246</b>
<b>Non-accrual assets—Total Citigroup</b>					
Corporate non-accrual loans	\$2,460	\$2,327	\$1,596	\$1,578	\$1,223
Consumer non-accrual loans	3,705	3,601	3,658	4,829	5,261
<b>Non-accrual loans (NAL)</b>	<b>\$6,165</b>	<b>\$5,928</b>	<b>\$5,254</b>	<b>\$6,407</b>	<b>\$6,484</b>
<b>OREO</b>	<b>\$175</b>	<b>\$205</b>	<b>\$209</b>	<b>\$227</b>	<b>\$246</b>
<b>Non-accrual assets (NAA)</b>	<b>\$6,340</b>	<b>\$6,133</b>	<b>\$5,463</b>	<b>\$6,634</b>	<b>\$6,730</b>
NAL as a percentage of total loans	0.97	%0.96	%0.85	%1.03	%1.03
NAA as a percentage of total assets	0.35	0.34	0.32	0.37	0.37
Allowance for loan losses as a percentage of NAL <sup>(1)</sup>	200	214	240	213	217
	<b>Jun. 30,</b>	<b>Mar. 31,</b>	<b>Dec. 31,</b>	<b>Sept. 30,</b>	<b>Jun. 30,</b>
<b>Non-accrual assets—Total Citicorp</b>	<b>2016</b>	<b>2016</b>	<b>2015</b>	<b>2015</b>	<b>2015</b>
<b>Non-accrual loans (NAL)</b>	<b>\$4,101</b>	<b>\$3,718</b>	<b>\$2,991</b>	<b>\$2,921</b>	<b>\$2,684</b>
<b>OREO</b>	<b>54</b>	<b>74</b>	<b>70</b>	<b>83</b>	<b>85</b>
<b>Non-accrual assets (NAA)</b>	<b>\$4,155</b>	<b>\$3,792</b>	<b>\$3,061</b>	<b>\$3,004</b>	<b>\$2,769</b>
NAA as a percentage of total assets	0.24	%0.22	%0.19	%0.18	%0.16
Allowance for loan losses as a percentage of NAL <sup>(1)</sup>	254	284	345	350	386
<b>Non-accrual assets—Total Citi Holdings</b>					
<b>Non-accrual loans (NAL)<sup>(2)</sup></b>	<b>\$2,064</b>	<b>\$2,210</b>	<b>\$2,263</b>	<b>\$3,486</b>	<b>\$3,800</b>
<b>OREO</b>	<b>121</b>	<b>131</b>	<b>139</b>	<b>144</b>	<b>161</b>
<b>Non-accrual assets (NAA)</b>	<b>\$2,185</b>	<b>\$2,341</b>	<b>\$2,402</b>	<b>\$3,630</b>	<b>\$3,961</b>
NAA as a percentage of total assets	3.31	%3.21	%2.97	%3.10	%3.19
Allowance for loan losses as a percentage of NAL <sup>(1)</sup>	91	98	101	98	98

The allowance for loan losses includes the allowance for Citi's credit card portfolios and purchased distressed loans, (1) while the non-accrual loans exclude credit card balances (with the exception of certain international portfolios) and purchased distressed loans as these continue to accrue interest until charge-off.

(2) The December 31, 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).

## Renegotiated Loans

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

In millions of dollars	Jun. 30, 2016	Dec. 31, 2015
Corporate renegotiated loans <sup>(1)</sup>		
In U.S. offices		
Commercial and industrial <sup>(2)</sup>	\$26	\$25
Mortgage and real estate <sup>(3)</sup>	96	104
Loans to financial institutions	—	5
Other	252	273
	\$374	\$407
In offices outside the U.S.		
Commercial and industrial <sup>(2)</sup>	\$297	\$111
Mortgage and real estate <sup>(3)</sup>	34	33
Other	36	45
	\$367	\$189
Total corporate renegotiated loans	\$741	\$596
Consumer renegotiated loans <sup>(4)(5)(6)</sup>		
In U.S. offices		
Mortgage and real estate <sup>(7)</sup>	\$5,643	\$7,058
Cards	1,307	1,396
Installment and other	81	79
	\$7,031	\$8,533
In offices outside the U.S.		
Mortgage and real estate	\$463	\$474
Cards	542	555
Installment and other	491	514
	\$1,496	\$1,543
Total consumer renegotiated loans	\$8,527	\$10,076

(1) Includes \$422 million and \$258 million of non-accrual loans included in the non-accrual assets table above at June 30, 2016 and December 31, 2015, respectively. The remaining loans are accruing interest.

(2) In addition to modifications reflected as TDRs at June 30, 2016, Citi also modified \$374 million commercial loans risk rated "Substandard Non-Performing" or worse (asset category defined by banking regulators) all within offices in 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).

(3) In addition to modifications reflected as TDRs at June 30, 2016, Citi also modified \$13 million of 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 \$1,739 million and \$1,852 million of non-accrual loans included in the non-accrual assets table above at June 30, 2016 and December 31, 2015, respectively. The remaining loans are accruing interest.

(5) Includes \$45 million and \$53 million of commercial real estate loans at June 30, 2016 and December 31, 2015, respectively.

(6) Includes \$105 million and \$128 million of other commercial loans at June 30, 2016 and December 31, 2015, respectively.

(7) Reduction in the six months ended June 30, 2016 includes \$1,073 million related to TDRs sold or transferred to held-for-sale.





## LIQUIDITY RISK

For additional information on funding and liquidity at Citigroup, including its objectives, management and measurement, see “Liquidity Risk” and “Risk Factors” in Citi’s 2015 Annual Report on Form 10-K.

## High-Quality Liquid Assets (HQLA)

	Citibank			Non-Bank and Other <sup>(1)</sup>			Total		
	Jun. 30, 2016	Mar. 31, 2016	Jun. 30, 2015	Jun. 30, 2016	Mar. 31, 2016	Jun. 30, 2015	Jun. 30, 2016	Mar. 31, 2016	Jun. 30, 2015
In billions of dollars									
Available cash	\$61.3	\$74.2	\$71.9	\$23.2	\$24.5	\$17.8	\$84.5	\$98.7	\$89.7
U.S. sovereign	115.0	117.6	118.8	19.6	22.6	19.4	134.6	140.3	138.2
U.S. agency/agency MBS	69.2	68.9	58.5	0.3	0.5	1.3	69.5	69.4	59.7
Foreign government debt <sup>(2)</sup>	86.7	86.8	80.6	16.8	19.6	13.5	103.6	106.4	94.1
Other investment grade	1.2	1.1	2.9	1.5	1.6	1.1	2.7	2.7	4.0
Total HQLA (EOP)	\$333.3	\$348.7	\$332.6	\$61.5	\$68.8	\$53.1	\$394.8	\$417.5	\$385.8
Total HQLA (AVG)	\$342.5	\$335.1	\$—	\$68.5	\$65.0	\$—	\$411.0	\$400.1	\$—

Note: Except as indicated, 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. As previously disclosed (see “Liquidity Risk” in the First Quarter of 2016 Form 10-Q), the Federal Reserve Board has proposed requiring disclosure of HQLA, the Liquidity Coverage Ratio and related components on an average basis each quarter, as compared to end-of-period. Citi has presented the average information on these metrics currently available, which includes average total HQLA, average LCR and average net outflows under the LCR for the periods 2Q’16 and 1Q’16; 2Q’15 and other component information is not currently available.

“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 \$8 billion of the “Non-Bank and Other” HQLA balance as of June 30, 2016.

Foreign government debt includes securities issued or guaranteed by foreign sovereigns, agencies and multilateral development banks. Foreign government debt securities are held largely to support local liquidity requirements and (2) Citi’s local franchises, and principally include government bonds from Hong Kong, Korea, India, Taiwan and Mexico.

As set forth in the table above, sequentially, Citi’s total HQLA declined on an end-of-period basis but increased on an average basis, as Citi maintained higher cash balances for most of the second quarter of 2016 in advance of its acquisition of the Costco portfolio on June 17, 2016.

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 \$37 billion as of June 30, 2016 (unchanged from both March 31, 2016 and June 30, 2015) 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 June 30, 2016, the capacity available for lending to these entities under Section 23A was approximately \$15 billion, compared to \$14 billion as of March 31, 2016 and \$17 billion as of June 30, 2015, subject to certain eligible non-cash collateral requirements.

#### Loans

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	Jun. 30, 2016	Mar. 31, 2016	Jun. 30, 2015
Global Consumer Banking			
North America	\$175.6	\$160.9	\$156.9
Latin America	24.5	25.4	27.0
Asia <sup>(1)</sup>	85.1	86.3	90.5
Total	\$285.2	\$272.6	\$274.4
Institutional Clients Group			
Corporate lending	123.9	123.0	119.1
Treasury and trade solutions (TTS)	73.6	73.0	74.7
Private bank, markets and securities services and other	109.4	104.8	99.9
Total	\$306.9	\$300.8	\$293.6
Total Citicorp	592.1	573.4	568.0
Total Citi Holdings	41.4	45.4	64.1
Total Citigroup loans (EOP)	\$633.5	\$618.8	\$632.1
Total Citigroup loans (AVG)	\$620.6	\$612.2	\$627.0

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

As set forth on the table above, end-of-period loans remained largely unchanged year-over-year and increased 2% quarter-over-quarter. Excluding the impact of FX translation, Citigroup's end-of-period loans increased 2% year-over-year and 3% quarter-over-quarter, as growth in Citicorp offset continued reductions in Citi Holdings. Excluding the impact of FX translation, Citicorp loans increased 6% year-over-year. GCB loans grew 6% year-over-year, driven by 12% growth in North America. Within North America, Citi-branded cards increased 20% year-over-year, primarily due to the acquisition of the Costco portfolio. International GCB loans declined 1%, as continued growth in Mexico was more than offset by a 3% decline in Asia reflecting the repositioning of the retail portfolio in this region away from lower return mortgage loans as well as de-risking in the commercial portfolio, which was partially offset by growth in higher return card and personal loans. ICG loans increased 6% year-over-year. Within ICG, corporate loans increased 6% driven by both new business and the funding of transaction-related commitments to target market clients. While treasury and trade solutions loans remained relatively unchanged, private bank and markets and securities services loans grew 11% year-over-year driven by continued opportunities to support client activity.

Citi Holdings loans decreased 35% year-over-year driven by \$18 billion of reductions in North America mortgages, including transfers to held-for-sale (see Note 14 to the Consolidated Financial Statements).

### Deposits

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	Jun. 30, 2016	Mar. 31, 2016	Jun. 30, 2015
Global Consumer Banking			
North America	\$183.3	\$183.7	\$182.5
Latin America	28.2	28.3	29.1
Asia <sup>(1)</sup>	90.5	90.7	89.4
Total	\$302.0	\$302.7	\$301.0
Institutional Clients Group			
Treasury and trade solutions (TTS)	405.0	415.0	397.3
Banking ex-TTS	116.4	114.8	108.4
Markets and securities services	85.5	77.3	82.5
Total	\$606.8	\$607.1	\$588.3
Corporate/Other	22.7	15.6	7.0
Total Citicorp	\$931.5	\$925.4	\$896.3
Total Citi Holdings	6.4	9.2	11.7
Total Citigroup deposits (EOP)	\$937.9	\$934.6	\$908.0
Total Citigroup deposits (AVG)	\$935.6	\$911.7	\$906.4

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

As set forth in the table above, end-of-period deposits increased 3% year-over-year and remained relatively unchanged quarter-over-quarter. Excluding the impact of FX translation, Citigroup's end-of-period deposits increased 5% year-over-year and 1% sequentially, despite continued reductions in Citi Holdings deposits.

Excluding the impact of FX translation, Citicorp deposits grew 6% year-over-year. Within Citicorp, GCB deposits increased 2% year-over-year, driven by 5% growth in international deposits. ICG deposits increased 5% year-over-year, driven by primarily by treasury and trade solutions, which continued to support clients' local liquidity needs, particularly in North America and EMEA.

### Long-Term Debt

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 7.0 years as of June 30, 2016, unchanged sequentially and an increase from 6.7 years in the prior-year period, due primarily to the issuance of longer-dated debt securities during the second quarter of 2016 including in response to proposed total loss-absorbing capacity, or TLAC, requirements (for additional information on TLAC, see “Liquidity Risk— Long-Term Debt— Total Loss Absorbing Capacity (TLAC)” and “Risk Factors— Liquidity Risks” in Citi’s 2015 Annual Report on Form 10-K).

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:

	Jun.	Mar.	Jun.
In billions of dollars	30,	31,	30,
	2016	2016	2015
<b>Parent</b>			
<b>Benchmark debt:</b>			
Senior debt	\$96.1	\$94.0	\$98.4
Subordinated debt	28.8	29.4	25.6
Trust preferred	1.7	1.7	1.7
<b>Customer-related debt:</b>			
Structured debt	22.5	23.6	23.7
Non-structured debt	3.3	3.3	4.5
Local country and other <sup>(1)</sup>	2.3	4.1	1.2
<b>Total parent</b>	<b>\$154.8</b>	<b>\$156.1</b>	<b>\$155.1</b>
<b>Bank</b>			
FHLB borrowings	\$19.6	\$17.1	\$16.8
Securitizations <sup>(2)</sup>	27.3	28.7	32.0
Local country and other <sup>(1)</sup>	5.8	6.0	7.9
<b>Total bank</b>	<b>\$52.6</b>	<b>\$51.7</b>	<b>\$56.7</b>
<b>Total long-term debt</b>	<b>\$207.4</b>	<b>\$207.8</b>	<b>\$211.8</b>

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 modestly both year-over-year and sequentially as Citi's continued issuance of benchmark debt was more than offset by declines in other funding sources, including securitizations at the bank entities and customer-related debt at the parent.

As part of its liability management and to assist it in meeting regulatory changes and requirements, 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. During the second quarter of 2016, Citi repurchased an aggregate of approximately \$2.9 billion of its outstanding long-term debt.

## 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:

	2Q16		1Q16		2Q15	
In billions of dollars	Maturities	Issuances	Maturities	Issuances	Maturities	Issuances
<b>Parent</b>						
<b>Benchmark debt:</b>						
Senior debt	\$5.1	\$ 6.6	\$4.3	\$ 5.2	\$3.2	\$ 5.4
Subordinated debt	1.7	1.0	—	1.5	2.0	3.0

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Trust preferred	—	—	—	—	—	—
Customer-related debt:						
Structured debt	3.4	2.0	2.0	3.6	1.4	3.9
Non-structured debt	0.1	0.1	0.2	—	0.3	0.1
Local country and other	1.9	—	0.1	1.9	0.1	0.1
Total parent	\$12.2	\$ 9.7	\$6.6	\$ 12.2	\$7.0	\$ 12.5
Bank						
FHLB borrowings	\$1.0	\$ 2.5	\$1.7	\$ 1.0	\$—	\$ 0.5
Securitizations	1.3	—	2.3	—	3.2	—
Local country and other	1.1	1.0	0.7	0.7	0.4	1.2
Total bank	\$3.4	\$ 3.5	\$4.7	\$ 1.7	\$3.6	\$ 1.7
Total	\$15.6	\$ 13.2	\$11.3	\$ 13.9	\$10.6	\$ 14.2

The table below shows Citi's aggregate long-term debt maturities (including repurchases and redemptions) year-to-date in 2016, as well as its aggregate expected annual long-term debt maturities as of June 30, 2016:

In billions of dollars	Maturities								Total
	2016 YTD	2016	2017	2018	2019	2020	2021	Thereafter	
<b>Parent</b>									
<b>Benchmark debt:</b>									
Senior debt	\$ 9.4	\$5.1	\$14.4	\$18.5	\$14.6	\$6.6	\$8.7	\$ 28.2	\$96.1
Subordinated debt	1.7	—	2.4	1.0	1.3	—	—	24.1	28.8
Trust preferred	—	—	—	—	—	—	—	1.7	1.7
<b>Customer-related debt:</b>									
Structured debt	5.4	2.0	3.4	2.5	2.1	2.2	1.7	8.6	22.5
Non-structured debt	0.3	0.3	0.5	0.6	0.2	0.2	0.1	1.3	3.3
Local country and other	2.0	—	0.3	0.2	0.1	0.1	—	1.6	2.3
<b>Total parent</b>	<b>\$ 18.8</b>	<b>\$7.4</b>	<b>\$20.9</b>	<b>\$22.9</b>	<b>\$18.3</b>	<b>\$9.2</b>	<b>\$10.5</b>	<b>\$ 65.5</b>	<b>\$154.8</b>
<b>Bank</b>									
FHLB borrowings	\$ 2.7	\$6.8	\$8.8	\$4.0	\$—	\$—	\$—	\$ —	\$19.6
Securitizations	3.6	8.1	5.3	8.4	1.9	0.1	2.5	1.0	27.3
Local country and other	1.8	1.4	1.8	0.8	0.4	1.0	0.2	0.2	5.8
<b>Total bank</b>	<b>\$ 8.1</b>	<b>\$16.3</b>	<b>\$15.8</b>	<b>\$13.2</b>	<b>\$2.3</b>	<b>\$1.2</b>	<b>\$2.7</b>	<b>\$ 1.2</b>	<b>\$52.6</b>
<b>Total long-term debt</b>	<b>\$ 26.9</b>	<b>\$23.7</b>	<b>\$36.8</b>	<b>\$36.1</b>	<b>\$20.6</b>	<b>\$10.4</b>	<b>\$13.2</b>	<b>\$ 66.7</b>	<b>\$207.4</b>

#### Secured Funding Transactions and Short-Term Borrowings

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 17 to the Consolidated Financial Statements for further information on Citigroup's and its affiliates' outstanding short-term borrowings. Citi has purposefully reduced its commercial paper and 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 \$158 billion as of June 30, 2016 declined 11% from the prior-year period and increased 1% sequentially. Excluding the impact of FX translation, secured funding decreased 9% from the prior-year period and increased 2% sequentially, both driven by normal business activity. Average balances for secured funding were

approximately \$161 billion for the quarter ended June 30, 2016.

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 June 30, 2016.

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.

## 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 (for additional information, see “Liquidity Risk” in each of Citi’s 2015 Annual Report on Form 10-K and First Quarter 2016 Form 10-Q). 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	Jun. 30,	Mar. 31,	Jun. 30,
	2016	2016	2015
HQLA	\$411.0	\$400.1	\$385.8
Net outflows	339.8	333.3	347.3
LCR	121	% 120	% 111
HQLA in excess of net outflows	\$71.2	\$66.8	\$38.6

Note: Amounts for 2Q’16 and 1Q’16 set forth in the table above are presented on an average basis; amounts for 2Q’15 are presented end-of-period. Accordingly, data in 2Q’16 and 1Q’16 is not directly comparable to data in 2Q’15.

As set forth in the table above, Citi’s LCR increased sequentially driven by the increase in HQLA as discussed above, partially offset by higher net outflows due to growth in average deposits as well as the impact of the Costco portfolio acquisition.

### Credit Ratings

The table below sets forth the ratings for Citigroup and Citibank as of June 30, 2016. 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 June 30, 2016. 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 June 30, 2016.

	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 June 14, 2016, 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, N.A.'s VR and IDR at 'a/A+', respectively. The outlooks for the Long-Term IDRs are Stable.

### 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" in Citi's 2015 Annual Report on Form 10-K.

### Citigroup Inc. and Citibank—Potential Derivative Triggers

As of June 30, 2016, 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 \$1.2 billion, compared to \$0.8 billion as of March 31, 2016. 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 June 30, 2016, 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 \$2.1 billion, compared to \$1.3 billion as of March 31, 2016, 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 \$3.3 billion, compared to \$2.1 billion as of March 31, 2016 (see also Note 21 to the Consolidated Financial Statements). As set forth under “High-Quality Liquid Assets” above, the liquidity resources of Citibank were approximately \$343 billion and the liquidity resources of Citi’s non-bank and other entities were approximately \$69 billion, for a total of approximately \$411 billion as of June 30, 2016. 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 June 30, 2016, Citibank had liquidity commitments of approximately \$10.0 billion to consolidated asset-backed commercial paper conduits, unchanged from March 31, 2016 (as referenced in Note 20 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

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.

For additional information, see "Market Risk" and "Risk Factors" in Citi's 2015 Annual Report on Form 10-K.

### Market Risk of Non-Trading Portfolios

For additional information on Citi's net interest revenue (for interest rate exposure purposes), interest rate risk and interest rate risk measurement, see "Market Risk of Non-Trading Portfolios" in Citi's 2015 Annual Report on Form 10-K.

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)	Jun. 30, 2016	Mar. 31, 2016	Jun. 30, 2015
Estimated annualized impact to net interest revenue			
U.S. dollar <sup>(1)</sup>	\$1,394	\$1,362	\$1,360
All other currencies	590	587	645
Total	\$1,984	\$1,949	\$2,005
As a percentage of average interest-earning assets	0.12	%0.13	%0.12
Estimated initial impact to AOCI (after-tax) <sup>(2)</sup>	\$(4,628)	\$(4,950)	\$(4,213)
Estimated initial impact on Common Equity Tier 1 Capital ratio (bps) <sup>(3)</sup>	(52)	(57)	(47)

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 \$(230) million for a 100 basis point instantaneous increase in interest rates as of June 30, 2016.

<sup>(2)</sup> Includes the effect of changes in interest rates on AOCI related to investment securities, cash flow hedges and pension liability adjustments.

<sup>(3)</sup> 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 slight increase in the estimated impact to net interest revenue sequentially primarily reflected changes in the balance sheet composition. The sequential decrease in the estimated impact to AOCI 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 stockholders' 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 June 30, 2016, Citi expects that the negative \$4.6 billion impact to AOCI in such a scenario could potentially be offset over approximately 30 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. While Citi also monitors the impact of a parallel decrease in interest rates, a 100 basis point decrease in short-term interest rates is not meaningful, as it would imply negative interest rates in many of Citi's markets.

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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	\$1,394	\$1,380	\$171	\$(170 )
All other currencies	590	552	34	(33 )
Total	\$1,984	\$1,932	\$205	\$(203 )
Estimated initial impact to AOCI (after-tax) <sup>(1)</sup>	\$(4,628)	\$(2,941)	\$(1,863)	\$1,482
Estimated initial impact to Common Equity Tier 1 Capital ratio (bps) <sup>(2)</sup>	(52 )	(33 )	(21 )	16

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.

Over the past year, a number of central banks, including the European Central Bank, the Bank of Japan and the Swiss National Bank, have implemented negative interest rates, and additional governmental entities could do so in the future. While negative interest rates can adversely impact net interest revenue (as well as net interest margin), Citi has, to date, been able to partially offset the impact of negative rates in these jurisdictions through a combination of business and Citi Treasury interest rate risk mitigation activities, including applying negative rates to client accounts (for additional information on Citi Treasury's ongoing interest rate mitigation activities, see "Market Risk—Market Risk of Non-Trading Portfolios" in Citi's 2015 Annual Reporting on Form 10-K).

#### Changes in Foreign Exchange Rates—Impacts on AOCI and Capital

As of June 30, 2016, 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 \$1.6 billion, or 0.9% 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 and the Japanese Yen.

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 on the changes in AOCI, see Note 18 to the Consolidated Financial Statements.

In millions of dollars (unless otherwise noted)	For the quarter ended		
	Jun. 30, 2016	Mar. 31, 2016	Jun. 30, 2015



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Change in FX spot rate <sup>(1)</sup>	(0.9 )	%2.1	%0.2	%
Change in TCE due to FX translation, net of hedges	\$(441)	\$396	\$(44)	
As a percentage of TCE	(0.2 )	%0.2	%—	%
Estimated impact to Common Equity Tier 1 Capital ratio (on a fully implemented basis) due to changes in FX translation, net of hedges (bps)	2	(1 )	(3 )	

(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

	2nd Qtr.	1st Qtr.	2nd Qtr.	Change
In millions of dollars, except as otherwise noted	2016	2016	2015	2Q16 vs. 2Q15
Interest revenue <sup>(1)</sup>	\$14,473	\$14,286	\$14,995	(3 )%
Interest expense	3,120	2,940	3,051	2
Net interest revenue <sup>(1)(2)</sup>	\$11,353	\$11,346	\$11,944	(5 )%
Interest revenue—average rate	3.65 %	3.68 %	3.71 %	(6 ) bps
Interest expense—average rate	1.04	0.99	0.97	7 bps
Net interest margin	2.86	2.92	2.95	(9 ) bps
Interest-rate benchmarks				
Two-year U.S. Treasury note—average rate	0.77 %	0.84 %	0.61 %	16 bps
10-year U.S. Treasury note—average rate	1.75	1.91	2.16	(41) bps
10-year vs. two-year spread	98	107	155	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

(1) (based on the U.S. federal statutory tax rate of 35%) of \$117 million, \$119 million, and \$121 million for the three months ended June 30, 2016, March 31, 2016 and June 30, 2015, respectively.

(2) Excludes expenses associated with certain hybrid financial instruments, which are classified as Long-term debt and accounted for at fair value.

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 2.86% in the second quarter of 2016, lower than the first quarter driven by higher cash balances and lower loan yields.

For information regarding expected changes to the FDIC deposit insurance assessment, see "Market Risk—Interest Revenue/Expense and Net Interest Margin" in Citi's First Quarter of 2016 Form 10-Q.

## Additional Interest Rate Details

Average Balances and Interest Rates—Assets<sup>(1)(2)(3)(4)</sup>

## Taxable Equivalent Basis

	Average volume			Interest revenue			% Average rate		
	2nd Qtr.	1st Qtr.	2nd Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.
In millions of dollars, except rates	2016	2016	2015	2016	2016	2015	2016	2016	2015
Assets									
Deposits with banks <sup>(5)</sup>	\$ 135,245	\$ 117,765	\$ 134,641	\$ 237	\$ 219	\$ 168	0.70%	0.75%	0.50%
Federal funds sold and securities borrowed or purchased under agreements to resell <sup>(6)</sup>									
In U.S. offices	\$ 148,511	\$ 150,044	\$ 149,577	\$ 362	\$ 374	\$ 307	0.98%	1.00%	0.82%
In offices outside the U.S. <sup>(5)</sup>	84,018	78,571	86,458	302	273	357	1.45%	1.40%	1.66%
Total	\$ 232,529	\$ 228,615	\$ 236,035	\$ 664	\$ 647	\$ 664	1.15%	1.14%	1.13%
Trading account assets <sup>(7)(8)</sup>									
In U.S. offices	\$ 108,602	\$ 104,982	\$ 118,896	\$ 970	\$ 953	\$ 985	3.59%	3.65%	3.32%
In offices outside the U.S. <sup>(5)</sup>	101,075	99,118	110,691	603	518	671	2.40%	2.10%	2.43%
Total	\$ 209,677	\$ 204,100	\$ 229,587	\$ 1,573	\$ 1,471	\$ 1,656	3.02%	2.90%	2.89%
Investments									
In U.S. offices									
Taxable	\$ 225,279	\$ 228,980	\$ 214,168	\$ 991	\$ 1,000	\$ 973	1.77%	1.76%	1.82%
Exempt from U.S. income tax	19,010	19,400	19,818	170	169	99	3.60%	3.50%	2.00%
In offices outside the U.S. <sup>(5)</sup>	107,235	103,763	99,045	837	754	760	3.14%	2.92%	3.08%
Total	\$ 351,524	\$ 352,143	\$ 333,031	\$ 1,998	\$ 1,923	\$ 1,832	2.29%	2.20%	2.21%
Loans (net of unearned income) <sup>(9)</sup>									
In U.S. offices	\$ 353,422	\$ 350,107	\$ 347,779	\$ 5,793	\$ 5,873	\$ 6,292	6.59%	6.75%	7.26%
In offices outside the U.S. <sup>(5)</sup>	267,226	262,133	279,247	3,972	3,901	3,721	5.98%	5.99%	5.34%
Total	\$ 620,648	\$ 612,240	\$ 627,026	\$ 9,765	\$ 9,774	\$ 10,013	6.33%	6.42%	6.41%
Other interest-earning assets <sup>(10)</sup>	\$ 45,639	\$ 47,765	\$ 62,656	\$ 236	\$ 252	\$ 662	2.08%	2.12%	4.24%
Total interest-earning assets	\$ 1,595,262	\$ 1,562,628	\$ 1,622,976	\$ 14,473	\$ 14,286	\$ 14,995	3.65%	3.68%	3.71%
Non-interest-earning assets <sup>(7)</sup>	\$ 212,050	\$ 214,943	\$ 216,708						
Total assets from discontinued operations	—	—	—						
Total assets	\$ 1,807,312	\$ 1,777,571	\$ 1,839,684						

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 \$117 million, \$119 million, and \$121 million for the three months ended June 30, 2016, March 31, 2016 and June 30, 2015, 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.

Interest expense on Trading account liabilities of ICG is reported as a reduction of Interest revenue. Interest (8) 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.

80

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Average Balances and Interest Rates—Liabilities and Equity, and Net Interest Revenue<sup>(1)(2)(3)(4)</sup>

Taxable Equivalent Basis

	Average volume			Interest expense			% Average rate		
	2nd Qtr.	1st Qtr.	2nd Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.	2nd Qtr.	1st Qtr.	2nd Qtr.
In millions of dollars, except rates	2016	2016	2015	2016	2016	2015	2016	2016	2015
<b>Liabilities</b>									
<b>Deposits</b>									
In U.S. offices <sup>(5)</sup>	\$286,653	\$277,648	\$269,673	\$371	\$316	\$330	0.52%	0.46%	0.49%
In offices outside the U.S. <sup>(6)</sup>	435,242	424,055	431,305	935	888	958	0.86%	0.84%	0.89%
Total	\$721,895	\$701,703	\$700,978	\$1,306	\$1,204	\$1,288	0.73%	0.69%	0.74%
<b>Federal funds purchased and securities loaned or sold under agreements to repurchase<sup>(7)</sup></b>									
In U.S. offices	\$103,517	\$103,523	\$112,690	\$260	\$260	\$183	1.01%	1.01%	0.65%
In offices outside the U.S. <sup>(6)</sup>	57,685	59,392	70,602	267	242	260	1.86%	1.64%	1.48%
Total	\$161,202	\$162,915	\$183,292	\$527	\$502	\$443	1.31%	1.24%	0.97%
<b>Trading account liabilities<sup>(8)(9)</sup></b>									
In U.S. offices	\$27,420	\$23,636	\$26,008	\$64	\$52	\$27	0.94%	0.88%	0.42%
In offices outside the U.S. <sup>(6)</sup>	45,960	41,676	46,972	32	36	27	0.28%	0.35%	0.23%
Total	\$73,380	\$65,312	\$72,980	\$96	\$88	\$54	0.53%	0.54%	0.30%
<b>Short-term borrowings<sup>(10)</sup></b>									
In U.S. offices	\$54,825	\$56,834	\$65,695	\$43	\$29	\$73	0.32%	0.21%	0.45%
In offices outside the U.S. <sup>(6)</sup>	10,253	22,642	48,584	66	71	84	2.59%	1.26%	0.69%
Total	\$65,078	\$79,476	\$114,279	\$109	\$100	\$157	0.67%	0.51%	0.55%
<b>Long-term debt<sup>(11)</sup></b>									
In U.S. offices	\$175,506	\$172,429	\$180,517	\$1,009	\$995	\$1,057	2.31%	2.32%	2.35%
In offices outside the U.S. <sup>(6)</sup>	6,714	6,854	7,393	73	51	52	4.37%	2.99%	2.82%
Total	\$182,220	\$179,283	\$187,910	\$1,082	\$1,046	\$1,109	2.39%	2.35%	2.37%
Total interest-bearing liabilities	\$1,203,775	\$1,188,689	\$1,259,439	\$3,120	\$2,940	\$3,051	1.04%	0.99%	0.97%
Demand deposits in U.S. offices	\$38,979	\$31,336	\$24,670						
Other non-interest-bearing liabilities <sup>(8)</sup>	335,243	332,065	336,701						
Total liabilities	\$1,577,997	\$1,552,090	\$1,620,810						
Citigroup stockholders' equity <sup>(12)</sup>	\$228,149	\$224,320	\$217,522						
Noncontrolling interest	1,166	1,161	1,352						
Total equity <sup>(12)</sup>	\$229,315	\$225,481	\$218,874						
Total liabilities and stockholders' equity	\$1,807,312	\$1,777,571	\$1,839,684						
<b>Net interest revenue as a percentage of average interest-earning assets<sup>(13)</sup></b>									
In U.S. offices	\$854,825	\$853,513	\$884,959	\$6,816	\$6,986	\$7,087	3.21%	3.29%	3.21%
In offices outside the U.S. <sup>(6)</sup>	740,437	709,115	738,017	4,537	4,360	4,857	2.46%	2.47%	2.64%
Total	\$1,595,262	\$1,562,628	\$1,622,976	\$11,353	\$11,346	\$11,944	2.86%	2.92%	2.95%

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 \$117 million, \$119 million, and \$121 million for the three months ended June 30, 2016, March 31, 2016 and June 30, 2015, 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.  
Consists of other time deposits and savings deposits. Savings deposits are made up of insured money market
- (5) 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.
- (9) 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.
- (10) Includes brokerage payables.
- (11) Excludes hybrid financial instruments and beneficial interests in consolidated VIEs that are classified as 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.

Average Balances and Interest Rates—Assets<sup>(1)(2)(3)(4)</sup>  
Taxable Equivalent Basis

	Average volume		Interest revenue		% Average rate	
	Six Months 2016	Six Months 2015	Six Months 2016	Six Months 2015	Six Months 2016	Six Months 2015
In millions of dollars, except rates						
Assets						
Deposits with banks <sup>(5)</sup>	\$ 126,505	\$ 136,907	\$ 456	\$ 351	0.72%	0.52%
Federal funds sold and securities borrowed or purchased under agreements to resell <sup>(6)</sup>						
In U.S. offices	\$ 149,278	\$ 150,327	\$ 736	\$ 590	0.99%	0.79%
In offices outside the U.S. <sup>(5)</sup>	81,295	88,280	575	716	1.42%	1.64%
Total	\$ 230,573	\$ 238,607	\$ 1,311	\$ 1,306	1.14%	1.10%
Trading account assets <sup>(7)(8)</sup>						
In U.S. offices	\$ 106,792	\$ 117,923	\$ 1,923	\$ 1,903	3.62%	3.25%
In offices outside the U.S. <sup>(5)</sup>	100,097	111,000	1,121	1,187	2.25%	2.16%
Total	\$ 206,889	\$ 228,923	\$ 3,044	\$ 3,090	2.96%	2.72%
Investments						
In U.S. offices						
Taxable	\$ 227,130	\$ 213,800	\$ 1,991	\$ 1,913	1.76%	1.80%
Exempt from U.S. income tax	19,205	20,279	339	182	3.55%	1.81%
In offices outside the U.S. <sup>(5)</sup>	105,499	100,607	1,591	1,529	3.03%	3.06%
Total	\$ 351,834	\$ 334,686	\$ 3,921	\$ 3,624	2.24%	2.18%
Loans (net of unearned income) <sup>(9)</sup>						
In U.S. offices	\$ 351,765	\$ 352,865	\$ 11,666	\$ 12,660	6.67%	7.24%
In offices outside the U.S. <sup>(5)</sup>	264,680	278,081	7,873	7,916	5.98%	5.74%
Total	\$ 616,445	\$ 630,946	\$ 19,539	\$ 20,576	6.37%	6.58%
Other interest-earning assets <sup>(10)</sup>	\$ 46,702	\$ 54,080	\$ 488	\$ 772	2.10%	2.88%
Total interest-earning assets	\$ 1,578,948	\$ 1,624,149	\$ 28,759	\$ 29,719	3.66%	3.69%
Non-interest-earning assets <sup>(7)</sup>	\$ 213,496	\$ 222,258				
Total assets from discontinued operations	—	—				
Total assets	\$ 1,792,444	\$ 1,846,407				

(1) Net interest revenue includes the taxable equivalent adjustments (based on the U.S. federal statutory tax rate of 35%) of \$236 million and \$244 million for the six months ended June 30, 2016 and 2015, respectively.

(2) Interest rates and amounts include the effects of risk management activities associated with the respective asset and 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) 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 FIN 41 (ASC 210-20-45). However, Interest revenue excludes the impact of FIN 41 (ASC 210-20-45).
- (7) The fair value carrying amounts of derivative contracts are reported 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.



Average Balances and Interest Rates—Liabilities and Equity, and Net Interest Revenue<sup>(1)(2)(3)(4)</sup>

## Taxable Equivalent Basis

	Average volume		Interest expense		% Average rate	
	Six Months	Six Months	Six Months	Six Months	Six Months	Six Months
	2016	2015	2016	2015	2016	2015
In millions of dollars, except rates						
<b>Liabilities</b>						
<b>Deposits</b>						
In U.S. offices <sup>(5)</sup>	\$282,151	\$275,596	\$687	\$686	0.49%	0.50%
In offices outside the U.S. <sup>(6)</sup>	429,649	424,092	1,823	1,927	0.85%	0.92%
Total	\$711,800	\$699,688	\$2,510	\$2,613	0.71%	0.75%
<b>Federal funds purchased and securities loaned or sold under agreements to repurchase<sup>(7)</sup></b>						
In U.S. offices	\$103,520	\$109,542	\$520	\$346	1.01%	0.64%
In offices outside the U.S. <sup>(6)</sup>	58,539	70,661	509	473	1.75%	1.35%
Total	\$162,059	\$180,203	\$1,029	\$819	1.28%	0.92%
<b>Trading account liabilities<sup>(8)(9)</sup></b>						
In U.S. offices	\$25,528	\$27,024	\$116	\$50	0.91%	0.37%
In offices outside the U.S. <sup>(6)</sup>	43,818	46,066	68	51	0.31%	0.22%
Total	\$69,346	\$73,090	\$184	\$101	0.53%	0.28%
<b>Short-term borrowings<sup>(10)</sup></b>						
In U.S. offices	\$55,830	\$68,878	\$72	\$94	0.26%	0.28%
In offices outside the U.S. <sup>(6)</sup>	16,448	52,831	138	183	1.69%	0.70%
Total	\$72,278	\$121,709	\$210	\$277	0.58%	0.46%
<b>Long-term debt<sup>(11)</sup></b>						
In U.S. offices	\$173,968	\$186,036	\$2,003	\$2,167	2.32%	2.35%
In offices outside the U.S. <sup>(6)</sup>	6,784	7,200	124	102	3.68%	2.86%
Total	\$180,752	\$193,236	\$2,127	\$2,269	2.37%	2.37%
Total interest-bearing liabilities	\$1,196,235	\$1,267,926	\$6,060	\$6,079	1.02%	0.97%
Demand deposits in U.S. offices	\$35,158	\$24,344				
Other non-interest-bearing liabilities <sup>(8)</sup>	333,653	337,915				
Total liabilities from discontinued operations	—	—				
Total liabilities	\$1,565,046	\$1,630,185				
Citigroup stockholders' equity <sup>(12)</sup>	\$226,235	\$214,828				
Noncontrolling interest	1,164	1,394				
Total equity <sup>(12)</sup>	\$227,399	\$216,222				
Total liabilities and stockholders' equity	\$1,792,445	\$1,846,407				
<b>Net interest revenue as a percentage of average interest-earning assets</b>						
In U.S. offices	\$854,172	\$913,944	\$13,802	\$14,091	3.25%	3.11%
In offices outside the U.S. <sup>(6)</sup>	724,776	710,205	8,897	9,549	2.47%	2.71%
Total	\$1,578,948	\$1,624,149	\$22,699	\$23,640	2.89%	2.94%

(1) Net interest revenue includes the taxable equivalent adjustments (based on the U.S. federal statutory tax rate of 35%) of \$236 million and \$244 million for the six months ended June 30, 2016 and 2015, respectively.

(2) Interest rates and amounts include the effects of risk management activities associated with the respective asset and 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 fees and charges.

(6) Average rates reflect prevailing local interest rates, including inflationary effects and monetary corrections in certain countries.

(7) Average volumes of securities loaned or sold under agreements to repurchase are reported net pursuant to FIN 41 (ASC 210-20-45). However, Interest expense excludes the impact of FIN 41 (ASC 210-20-45).

(8) The fair value carrying amounts of derivative contracts are reported 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) Excludes hybrid financial instruments and beneficial interests in consolidated VIEs that are classified as Long-term debt, as these obligations are accounted for in changes in fair value recorded in Principal transactions.

(11) Includes stockholders' equity from discontinued operations.

(12) Includes allocations for capital and funding costs based on the location of the asset.

Analysis of Changes in Interest Revenue<sup>(1)(2)(3)</sup>

In millions of dollars	2nd Qtr. 2016 vs. 1st Qtr. 2016			2nd Qtr. 2016 vs. 2nd Qtr. 2015		
	Increase (decrease) due to change in:			Increase (decrease) due to change in:		
	Average volume	Average rate	Net change	Average volume	Average rate	Net change
Deposits with banks <sup>(4)</sup>	\$31	\$(13)	\$18	\$1	\$68	\$69
Federal funds sold and securities borrowed or purchased under agreements to resell						
In U.S. offices	\$(4)	\$(8)	\$(12)	\$(2)	\$57	\$55
In offices outside the U.S. <sup>(4)</sup>	19	10	29	(10)	(45)	(55)
Total	\$15	\$2	\$17	\$(12)	\$12	\$—
Trading account assets <sup>(5)</sup>						
In U.S. offices	\$33	\$(16)	\$17	\$(89)	\$74	\$(15)
In offices outside the U.S. <sup>(4)</sup>	10	75	85	(58)	(10)	(68)
Total	\$43	\$59	\$102	\$(147)	\$64	\$(83)
Investments <sup>(1)</sup>						
In U.S. offices	\$(19)	\$11	\$(8)	\$48	\$41	\$89
In offices outside the U.S. <sup>(4)</sup>	26	57	83	64	13	77
Total	\$7	\$68	\$75	\$112	\$54	\$166
Loans (net of unearned income) <sup>(6)</sup>						
In U.S. offices	\$55	\$(135)	\$(80)	\$101	\$(600)	\$(499)
In offices outside the U.S. <sup>(4)</sup>	76	(5)	71	(165)	416	251
Total	\$131	\$(140)	\$(9)	\$(64)	\$(184)	\$(248)
Other interest-earning assets <sup>(7)</sup>	\$(11)	\$(5)	\$(16)	\$(148)	\$(278)	\$(426)
Total interest revenue	\$216	\$(29)	\$187	\$(258)	\$(264)	\$(522)

(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<sup>(1)(2)(3)</sup>

In millions of dollars	2nd Qtr. 2016 vs. 1st Qtr. 2016			2nd Qtr. 2016 vs. 2nd Qtr. 2015		
	Increase (decrease) due to change in:			Increase (decrease) due to change in:		
	Average volume	Average rate	Net change	Average volume	Average rate	Net change
Deposits						
In U.S. offices	\$11	\$44	\$55	\$21	\$20	\$41
In offices outside the U.S. <sup>(4)</sup>	24	23	47	9	(32)	(23)
Total	\$35	\$67	\$102	\$30	\$(12)	\$18
Federal funds purchased and securities loaned or sold under agreements to repurchase						
In U.S. offices	\$—	\$—	\$—	\$(16)	\$93	\$77
In offices outside the U.S. <sup>(4)</sup>	(7)	)32	25	(53)	)60	7
Total	\$(7)	)\$32	\$25	\$(69)	)\$153	\$84
Trading account liabilities <sup>(5)</sup>						
In U.S. offices	\$9	\$3	\$12	\$2	\$35	\$37
In offices outside the U.S. <sup>(4)</sup>	3	(7)	(4)	(1)	)6	5
Total	\$12	\$(4)	)\$8	\$1	\$41	\$42
Short-term borrowings <sup>(6)</sup>						
In U.S. offices	\$(1)	)\$15	\$14	\$(11)	)\$19	)\$30
In offices outside the U.S. <sup>(4)</sup>	(53)	)48	(5)	(107)	)89	(18)
Total	\$(54)	)\$63	\$9	\$(118)	)\$70	\$(48)
Long-term debt						
In U.S. offices	\$18	\$(4)	)\$14	\$(29)	)\$19	)\$48
In offices outside the U.S. <sup>(4)</sup>	(1)	)23	22	(5)	)26	21
Total	\$17	\$19	\$36	\$(34)	\$7	\$(27)
Total interest expense	\$3	\$177	\$180	\$(190)	\$259	\$69
Net interest revenue	\$213	\$(206)	)\$7	\$(68)	)\$523	)\$591

(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.

Analysis of Changes in Interest Revenue, Interest Expense, and Net Interest Revenue<sup>(1)(2)(3)</sup>

In millions of dollars	Six Months 2016 vs. Six Months 2015 Increase (decrease) due to change in:		
	Average volume	Average rate	Net change <sup>(2)</sup>
Deposits at interest with banks <sup>(4)</sup>	\$(28 )	\$ 133	\$ 105
Federal funds sold and securities borrowed or purchased under agreements to resell			
In U.S. offices	\$(4 )	\$ 150	\$ 146
In offices outside the U.S. <sup>(4)</sup>	(54 )	(87 )	(141 )
Total	\$(58 )	\$ 63	\$ 5
Trading account assets <sup>(5)</sup>			
In U.S. offices	\$(189)	\$ 209	\$ 20
In offices outside the U.S. <sup>(4)</sup>	(120 )	54	(66 )
Total	\$(309)	\$ 263	\$(46 )
Investments <sup>(1)</sup>			
In U.S. offices	\$ 113	\$ 122	\$ 235
In offices outside the U.S. <sup>(4)</sup>	74	(12 )	62
Total	\$ 187	\$ 110	\$ 297
Loans (net of unearned income) <sup>(6)</sup>			
In U.S. offices	\$(39 )	\$(955 )	\$(994 )
In offices outside the U.S. <sup>(4)</sup>	(390 )	347	(43 )
Total	\$(429)	\$(608 )	\$(1,037 )
Other interest-earning assets	\$ (96 )	\$ (188 )	\$ (284 )
Total interest revenue	\$(733)	\$(227 )	\$(960 )
Deposits <sup>(7)</sup>			
In U.S. offices	\$ 16	\$ (15 )	\$ 1
In offices outside the U.S. <sup>(4)</sup>	25	(129 )	(104 )
Total	\$ 41	\$ (144 )	\$(103 )
Federal funds purchased and securities loaned or sold under agreements to repurchase			
In U.S. offices	\$(20 )	\$ 194	\$ 174
In offices outside the U.S. <sup>(4)</sup>	(90 )	126	36
Total	\$(110)	\$ 320	\$ 210
Trading account liabilities <sup>(5)</sup>			
In U.S. offices	\$(3 )	\$ 69	\$ 66
In offices outside the U.S. <sup>(4)</sup>	(3 )	20	17
Total	\$(6 )	\$ 89	\$ 83
Short-term borrowings			
In U.S. offices	\$(17 )	\$ (5 )	\$(22 )
In offices outside the U.S. <sup>(4)</sup>	(185 )	140	(45 )
Total	\$(202)	\$ 135	\$(67 )
Long-term debt			
In U.S. offices	\$(139)	\$ (25 )	\$(164 )
In offices outside the U.S. <sup>(4)</sup>	(6 )	28	22
Total	\$(145)	\$ 3	\$(142 )
Total interest expense	\$(422)	\$ 403	\$(19 )
Net interest revenue	\$(311)	\$(630 )	\$(941 )

(1)

The taxable equivalent adjustment is 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.
- (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 Trading account assets and Trading account liabilities, respectively.

(6) Includes cash-basis loans.

(7) The interest expense on deposits includes the FDIC assessment and deposit insurance fees and charges of \$502 million and \$585 million for the six months ended June 30, 2016 and 2015, respectively.



## Market Risk of Trading Portfolios

For additional information on Citi's market risk of trading portfolios, see "Market Risk—Market Risk of Trading Portfolios" in Citi's 2015 Annual Report on Form 10-K.

## Value at Risk

As of June 30, 2016, Citi estimates that the conservative features of its VAR calibration contribute an approximate 16% add-on (compared to 22% at March 31, 2016) to what would be a VAR estimated under the assumption of stable and perfectly normal distributed markets.

As set forth in the table below, Citi's average Trading VAR as of June 30, 2016 decreased sequentially, mainly due to interest rate risk profile changes from hedging activity associated with non-trading positions. Average Trading and Credit Portfolio VAR as of June 30, 2016 decreased more than Trading VAR, with the further decrease mainly from lower spread volatilities affecting the credit portfolio.

In millions of dollars	June 30, 2016	Second Quarter 2016 Average	March 31, 2016	First Quarter 2016 Average	June 30, 2015	Second Quarter 2015 Average
Interest rate	\$32	\$32	\$37	\$41	\$33	\$42
Credit spread	61	60	62	64	64	\$70
Covariance adjustment <sup>(1)</sup>	(30)	(26)	(29)	(27)	(22)	(25)
Fully diversified interest rate and credit spread	\$63	\$66	\$70	\$78	\$75	\$87
Foreign exchange	26	20	25	29	32	34
Equity	11	15	9	15	24	21
Commodity	23	20	17	14	18	18
Covariance adjustment <sup>(1)</sup>	(59)	(56)	(62)	(56)	(66)	(70)
Total trading VAR—all market risk factors, including general and specific risk (excluding credit portfolios) <sup>(2)</sup>	\$64	\$65	\$59	\$80	\$83	\$90
Specific risk-only component <sup>(3)</sup>	\$9	\$9	\$7	\$7	\$7	\$6
Total trading VAR—general market risk factors only (excluding credit portfolios) <sup>(2)</sup>	\$55	\$56	\$52	\$73	\$76	\$84

Incremental impact of the credit portfolio <sup>(4)</sup>	\$22	\$23	\$29	\$28	\$15	\$23
Total trading and credit portfolio VAR	\$86	\$88	\$88	\$108	\$98	\$113

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 in 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 (4) Citi Treasury, the CVA relating to derivative counterparties and all associated CVA hedges. FVA and DVA are not 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 in ICG.

The table below provides the range of market factor VARs associated with Citi's total trading VAR, inclusive of specific risk:

	Second Quarter 2016		First Quarter 2016		Second Quarter 2015	
	Low	High	Low	High	Low	High
In millions of dollars						
Interest rate	\$26	\$40	\$29	\$64	\$29	\$73
Credit spread	56	64	56	69	63	77
Fully diversified interest rate and credit spread	\$60	\$74	\$66	\$97	\$71	\$106
Foreign exchange	14	29	24	40	22	51
Equity	10	26	9	24	12	32
Commodity	16	25	10	18	15	22
Total trading	\$55	\$76	\$59	\$106	\$71	\$107
Total trading and credit portfolio	79	98	85	131	89	141

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	Jun. 30, 2016
Total—all market risk factors, including general and specific risk	\$ 62
Average—during quarter	\$ 61
High—during quarter	72
Low—during quarter	53

#### 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.

As of June 30, 2016, there was one back-testing exception observed for Citi's Regulatory VAR for the prior 12 months. Trading losses on June 3, 2016 exceeded the VAR estimate at the Citigroup level, driven by higher volatility in the interest rate and foreign exchange markets following the release of weak non-farm payroll data.



## COUNTRY RISK

For additional information on country risk at Citi, see “Country Risk” and “Risk Factors” in Citi’s 2015 Annual Report on Form 10-K.

## Top 25 Country Exposures

The following table presents Citi’s top 25 exposures by country (excluding the U.S.) as of June 30, 2016. For purposes of the table, loan amounts are reflected in the country where the loan is booked, which is 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. In addition, Citi has

developed regional booking centers in certain countries, most significantly in the United Kingdom (U.K.) and Ireland, in order to more efficiently serve its corporate customers. As an example, with respect to the U.K., only 30% of corporate loans presented in the table below are to U.K. domiciled entities (25% for unfunded commitments), with the balance of the loans predominately to European domiciled counterparties. Approximately 85% of the total U.K. funded loans and 90% of the total U.K. unfunded commitments were investment grade as of June 30, 2016. Trading account assets and investment securities are generally categorized based on the domicile of the issuer of the security of the underlying reference entity. For additional information on the assets included in the table, see the footnotes to the table below.

In billions of dollars	ICG loans <sup>(1)</sup>	GCB loans <sup>(2)</sup>	Other funded <sup>(3)</sup>	Unfunded <sup>(4)</sup>	Net MTM on Derivatives/Repos <sup>(5)</sup>	Total hedges (on loans and CVA)	Investment securities <sup>(6)</sup>	Trading account assets <sup>(7)</sup>	Total as of 2Q16	Total as of 1Q16	Total as of 4Q15
United Kingdom	\$ 33.1	\$ -	\$ 3.7	\$ 51.8	\$ 13.5	\$(3.0)	\$ 8.9	\$ 0.4	\$ 108.4	\$ 103.5	\$ 110.4
Mexico	7.2	24.5	0.4	5.3	0.8	(0.6)	15.9	3.5	57.0	61.1	60.4
Singapore	12.0	13.3	0.5	5.1	0.8	(0.3)	5.7	0.2	37.3	37.2	36.7
Korea	2.9	19.3	0.4	4.4	1.4	(1.0)	8.6	1.2	37.2	38.5	39.3
Hong Kong	11.7	10.4	0.7	5.3	0.5	(0.9)	5.0	2.6	35.3	34.5	35.2
India	10.2	6.3	0.7	4.5	0.4	(1.3)	7.1	3.1	31.0	32.8	33.0
Brazil	14.3	1.9	0.2	3.8	2.9	(2.8)	4.1	4.2	28.6	27.8	23.2
Ireland	7.7	—	0.4	15.1	0.3	—	—	0.6	24.1	24.5	22.0
Australia	3.9	10.2	—	4.9	1.0	(0.9)	4.6	(1.1)	22.6	25.9	24.5
China	7.3	4.5	3.2	1.6	1.3	(1.1)	3.0	2.6	22.4	22.9	23.0
Canada	2.5	0.6	2.3	6.3	2.8	(0.9)	4.3	0.2	18.1	17.4	16.5
Germany	0.2	—	—	4.2	3.7	(3.5)	9.8	2.9	17.3	21.9	18.8
Japan	2.8	—	0.4	2.9	4.1	(1.2)	2.4	4.2	15.6	11.1	9.1
Taiwan	3.8	8.0	0.1	1.4	0.2	(0.2)	1.2	0.9	15.4	15.5	14.8
Poland	2.7	1.6	0.1	3.2	0.1	(0.3)	4.7	0.1	12.2	14.8	13.1
Malaysia	2.0	4.8	0.2	1.8	0.2	(0.1)	0.8	1.6	11.3	10.8	9.2
Netherlands	—	—	—	—	1.6	(1.0)	6.1	0.4	7.1	6.8	7.1
Thailand	0.9	1.9	—	1.1	0.1	—	1.7	0.8	6.5	6.2	5.4
United Arab Emirates	3.5	1.3	0.2	1.6	0.4	(0.4)	—	(0.2)	6.4	6.4	6.4
Luxembourg	0.1	—	—	—	0.5	(0.2)	5.1	0.2	5.7	6.2	4.9
Indonesia	1.9	1.1	0.1	1.0	—	(0.2)	0.9	0.4	5.2	5.2	4.4

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Colombia	2.3	1.7	—	0.9	0.3	(0.1 )0.3	(0.3 )5.1	5.9	5.7
Russia	2.4	0.9	—	0.8	0.2	(0.5 )0.6	0.4 4.8	5.1	5.0
Turkey	3.3	—	0.4	0.5	0.3	(0.1 )0.4	(0.2 )4.6	4.8	4.0
South Africa	1.3	—	—	2.2	0.3	(0.3 )1.1	(0.1 )4.5	2.8	2.8

ICG loans reflect funded corporate loans and private bank loans, net of unearned income. As of June 30, 2016, (1) private bank loans in the table above totaled \$16.5 billion, concentrated in the U.K. (\$4.3 billion), Singapore (\$6.6 billion) and Hong Kong (\$4.5 billion).

(2) GCB loans include funded loans in Brazil and Colombia related to businesses that were transferred to Citi Holdings as of January 1, 2016.

(3) Other funded includes other direct exposure such as accounts receivable, loans held-for-sale, other loans in Citi Holdings and investments accounted for under the equity method.

(4) Unfunded exposure includes unfunded corporate lending commitments, letters of credit and other contingencies.

(5) Net mark-to-market (MTM) on derivatives and securities lending/borrowing transactions (repos). Exposures are shown net of collateral and inclusive of CVA. Includes margin loans.

(6) Investment securities include securities available-for-sale, recorded at fair market value, and securities held-to-maturity, recorded at historical cost.

- (7) Trading account assets are shown on a net basis and include derivative exposures where the underlying reference entity is located in that country.

Included within the table above are Citi's exposures to the U.K. as well as certain other countries within the European Union (EU) as of June 30, 2016. On June 23, 2016, a referendum was held in the U.K. regarding the U.K.'s continued membership in the EU, with the result that a majority of votes cast were in favor of the U.K. leaving the EU.

The result of the referendum has raised numerous uncertainties, including as to when the U.K. may begin the official process of withdrawal and the commencement of negotiations with the EU regarding the terms of the withdrawal.

Additional areas of uncertainty that could impact Citi include, among others: (i) whether Citi will need to make changes to its legal entity and booking model strategy and/or structure in both the U.K. and the EU based on the outcome of negotiations relating to the regulation of financial services; (ii) the potential impact of the withdrawal to the economy of the United Kingdom as well as more broadly throughout Europe; (iii) the potential impact to Citi's exposures to counterparties as a result of any macroeconomic slowdown; (iv) the impact of the referendum on U.S. monetary policy, such as changes to interest rates; and (v) the potential impact to foreign exchange rates, particularly the Euro and the pound sterling, and the resulting impacts to Citi's results of operations.

To date, Citi has not experienced any significant negative impact to its results of operations or client or counterparty activity or exposures as a result of the U.K. referendum. Given the current status, it is not possible to determine as to the outcome of the issues raised above. However, Citi will continue to monitor developments emanating from the U.K. referendum closely.

#### Argentina

For additional information relating to Citi's exposures in Argentina, see "Country Risk—Argentina" in Citi's 2015 Annual Report on Form 10-K and First Quarter of 2016 Form 10-Q.

There were no significant changes to Citi's exposures in Argentina during the current quarter. Citi's net investment in its Argentine operations was approximately \$722 million as of June 30, 2016 (compared to \$756 million as of March 31, 2016) with cumulative translation losses, net of qualifying net investment hedges, of approximately \$2 billion (pretax) as of June 30, 2016 (unchanged from March 31, 2016). In addition, during the current quarter, Citi Argentina was notified by the Comision Nacional de Valores that Citi's previous suspension from certain capital markets activities had been lifted and an Argentine court, at the request of the Ministry of Economy and Public Finance, lifted an injunction that restricted Citi from exiting its retail custody business in Argentina.

#### Venezuela

For historical information on foreign exchange controls in Venezuela as well as additional information on Citi's exposures in Venezuela, see "Country Risk—Venezuela" in Citi's 2015 Annual Report on Form 10-K and First Quarter of 2016 Form 10-Q.

As of June 30, 2016, Citi's net investment in its Venezuelan operations was approximately \$54 million (compared to \$51 million as of March 31, 2016), with de minimis foreign exchange exposure remaining. Citi also had cumulative translation losses related to its investment in Venezuela of approximately \$20 million, which would not be reclassified into earnings unless a change of control, liquidation or similar event to Citi's Venezuela operations were to occur. Accordingly, if any such event were to occur, Citi estimates its net exposure to Venezuela would be approximately \$70 million as of June 30, 2016.

In addition, as previously reported, on July 11, 2016, following a periodic risk management review in Venezuela, Citi decided to discontinue correspondent banking and the servicing of certain accounts in Venezuela.





## INCOME TAXES

## Deferred Tax Assets

For additional information on Citi's deferred tax assets (DTAs), see "Risk Factors—Operational Risks," "Significant Accounting Policies and Significant Estimates—Income Taxes" and Note 9 to the Consolidated Financial Statements in Citi's 2015 Annual Report on Form 10-K.

At June 30, 2016, Citigroup had recorded net DTAs of approximately \$45.4 billion, a decrease of \$0.9 billion from March 31, 2016 and \$2.4 billion from December 31, 2015. The sequential decrease in DTAs was driven primarily by the continued generation of U.S. taxable earnings in Citicorp and gains in AOCI.

The following table summarizes Citi's net DTAs balance as of the periods presented. Of Citi's net DTAs as of June 30, 2016, those arising from net operating losses, foreign tax credit and general business credit carry-forwards are 100% deducted in calculating Citi's regulatory capital, while DTAs arising from temporary differences are deducted from regulatory capital if in excess of the 10%/15% limitations (see "Capital Resources" above). Approximately \$17.4 billion of the net DTAs was not deducted in calculating regulatory capital pursuant to full Basel III implementation standards as of June 30, 2016.

## Jurisdiction/Component DTAs balance

In billions of dollars	June 30, 2016	December 31, 2015
Total U.S.	\$43.1	\$ 45.2
Total foreign	2.3	2.6
Total	\$45.4	\$ 47.8

## Effective Tax Rate

Citi's effective tax rate for the second quarter of 2016 was 29.9%, slightly higher than the 29.2% effective tax rate in the second quarter of 2015 (excluding CVA/DVA). The slight increase was due to a combination of factors, including the impact of the previously disclosed New York City tax reform and a state and local audit settlement in the prior-year period and the lower level of pretax income in the current quarter.

#### 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 June 30, 2016 and, based on that evaluation, the CEO and CFO have concluded that at that date Citigroup's disclosure controls and procedures were effective.

#### DISCLOSURE PURSUANT TO SECTION 219 OF THE IRAN THREAT REDUCTION AND SYRIA HUMAN RIGHTS ACT

Pursuant to Section 219 of the Iran Threat Reduction and Syria Human Rights Act of 2012, which added Section 13(r) to the Securities Exchange Act of 1934, as amended, Citi is required to disclose in its annual or quarterly reports, as applicable, whether it or any of its affiliates knowingly engaged in certain activities, transactions or dealings relating to Iran or with individuals or entities that are subject to sanctions under U.S. law. Disclosure is generally required even where the activities, transactions or dealings were conducted in compliance with applicable law.

A branch of Citibank located in Dublin, Ireland processed a funds transfer to the Embassy of Iran in Ireland during the second quarter of 2016. The value of this funds transfer was approximately EUR 50 (approximately \$57.00). This payment was for visa services which are exempt under Office of Foreign Assets Control regulations. The transaction resulted in nominal revenue for Citibank.

## FORWARD-LOOKING STATEMENTS

Certain statements in this Form 10-Q, 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' discussion and analysis of its results of operations above and in Citi's 2015 Annual Report on Form 10-K, the factors listed and described under "Risk Factors" in Citi's 2015 Annual Report on Form 10-K and the risks and uncertainties summarized below:

- potential changes to various aspects of the regulatory capital framework proposed or adopted by the Basel Committee on Banking Supervision and/or the U.S. banking agencies, such as those related to market risk (including as a result of the so-called "fundamental review of the trading book"), operational risk and credit risk, and the impact any such changes could have on Citi's regulatory capital ratios and/or their components;

- the potential impact of any inclusion of Citi's GSIB surcharge in the Federal Reserve Board's post-stress minimum capital requirements under CCAR, including on Citi's ability to return capital to shareholders;

- Citi's ability to adequately address the shortcomings identified by the Federal Reserve Board and FDIC as a result of their review of Citi's 2015 annual resolution plan submission and the potential impact actions Citi may take to address such shortcomings may have on its funding and liquidity;

- the ongoing regulatory changes and uncertainties faced by Citi in the U.S. and globally, including as a result of the Federal Reserve Board's recent proposal relating to single-counterparty credit limits, and the potential impact these changes and uncertainties could have on Citi's businesses, results of operations, financial condition, strategy or organizational structure and compliance risks and costs;

- the potential impact to Citi's delinquency rates, loan loss reserves, net credit losses and overall results of operations

as Citi's revolving home equity lines of credit continue to "reset" (Revolving HELOCs), particularly if interest rates increase;

- the potential impact to Citi's businesses, credit costs and overall results of operations and financial condition as a result of macroeconomic and geopolitical challenges and uncertainties, including slower growth in the emerging markets or if energy or other commodity prices deteriorate;

- the extensive uncertainties arising as a result of the vote in the United Kingdom to withdraw from the European Union and the potential impact to macroeconomic conditions as well as Citi's legal entity structure and overall results of operations or financial condition;

- the various risks faced by Citi as a result of its significant presence in the emerging markets, including among others sociopolitical instability, nationalization or loss of licenses, business restrictions, sanctions or asset freezes, closure of branches or subsidiaries, confiscation of assets and foreign exchange controls as well as the increased compliance and regulatory risks and costs;

- the potential impact of concentrations of risk, such as market risk arising from Citi's volume of transactions with counterparties in the financial services industry, could have on Citi's hedging strategies and results of operations;

- the uncertainties and potential operational difficulties to Citi and its liquidity planning arising from the Federal Reserve Board's total loss-absorbing capacity (TLAC) proposal, including uncertainties relating to any potential

“grandfathering” of outstanding long-term debt and the potential impact on Citi’s estimated liquidity needs;  
the potential impacts on Citi’s liquidity and/or costs of funding as a result of external factors, including among others market disruptions and governmental fiscal and monetary policies as well as regulatory changes, such as the TLAC proposal;  
the impact of ratings downgrades of Citi or one or more of its more significant subsidiaries or issuing entities on Citi’s funding and liquidity as well as the results of operations of certain of its businesses;  
the potential negative impact to Citi’s co-branding and private label credit card relationships or Citi’s results of operations or financial condition due to, among other things, operational difficulties of a particular retailer or merchant or early termination of a particular relationship;  
the potential impact to Citi from an increasing risk of continually evolving cybersecurity or other technological risks, including the theft, loss, misuse or disclosure of confidential client, customer or network information, damage to Citi’s reputation, additional costs to Citi, regulatory penalties, legal exposure and financial losses;  
Citi’s ability to continue to utilize its DTAs (including the foreign tax credit component of its DTAs) and thus reduce the negative impact of the DTAs on Citi’s regulatory capital, including as a result of movements in Citi’s AOCI;  
the potential impact to Citi if its interpretation or application of the extensive tax laws to which it is subject,

such as withholding tax obligations, differs from those of the relevant governmental authorities;

the impact on the value of Citi's DTAs and its results of operations if corporate tax rates in the U.S. or certain state, local or foreign jurisdictions decline, or if other changes are made to the U.S. tax system;

the potential impact to Citi's results of operations and/or regulatory capital and capital ratios if Citi's risk models, including its Basel III risk-weighted asset models, are ineffective, require modification or enhancement or approval is withdrawn by Citi's U.S. banking regulators;

Citi's ability to manage its overall level of expenses while at the same time continuing to successfully invest in identified areas of its businesses or operations;

Citi's ability to continue to wind-down Citi Holdings, and thus reduce the negative impact on Citi's regulatory capital, as well as maintain Citi Holdings at or above "break even" during 2016;

the potential impact on Citi's performance, including its competitive position and ability to effectively manage its businesses and continue to execute its strategy, if Citi is unable to hire and retain highly qualified employees for any reason;

the impact of ongoing changes to financial accounting and reporting standards or interpretations, such as the FASB's recently finalized credit impairment standard, on how Citi records and reports its financial condition and results of operations as well as the potential impact of incorrect assumptions or estimates in Citi's financial statements;

the heightened compliance requirements and risks to which Citi is subject, including reputational and legal risks, as well as the impact of increased compliance costs on Citi's expense management and investments initiatives;

the potential outcomes of the extensive legal and regulatory proceedings, investigations and other inquiries to which Citi is or may be subject at any given time, particularly given the increased severity of the remedies sought and potential collateral consequences to Citi arising from such outcomes; and

the potential impact of the U.S. Treasury's proposed changes to Section 385 of the U.S. tax code on Citi's intercompany borrowing activities and documentation.

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.



## FINANCIAL STATEMENTS AND NOTES TABLE OF CONTENTS

## CONSOLIDATED FINANCIAL STATEMENTS

Consolidated Statement of Income (Unaudited)— For the Three and Six Months Ended June 30, 2016 and 2015	<u>98</u>
Consolidated Statement of Comprehensive Income(Unaudited)—For the Three and Six Months Ended June 30, 2016 and 2015	<u>100</u>
Consolidated Balance Sheet—June 30, 2016 (Unaudited) and December 31, 2015	<u>101</u>
Consolidated Statement of Changes in Stockholders' Equity(Unaudited)—For the Six Months Ended June 30, 2016 and 2015	<u>103</u>
Consolidated Statement of Cash Flows (Unaudited)— For the Six Months Ended June 30, 2016 and 2015	<u>105</u>

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

Note 1—Basis of Presentation and Accounting Changes	<u>107</u>
Note 2—Discontinued Operations and Significant Disposals	<u>109</u>
Note 3—Business Segments	<u>110</u>
Note 4—Interest Revenue and Expense	<u>111</u>
Note 5—Commissions and Fees	<u>112</u>
Note 6—Principal Transactions	<u>113</u>
Note 7—Incentive Plans	<u>114</u>
Note 8—Retirement Benefits	<u>115</u>
Note 9—Earnings per Share	<u>120</u>
Note 10—Federal Funds, Securities Borrowed, Loaned and Subject to Repurchase Agreements	<u>121</u>
Note 11—Brokerage Receivables and Brokerage Payables	<u>125</u>
Note 12—Trading Account Assets and Liabilities	<u>125</u>
Note 13—Investments	<u>126</u>
Note 14—Loans	<u>138</u>

Note 15—Allowance for Credit Losses	<u>152</u>
Note 16—Goodwill and Intangible Assets	<u>154</u>
Note 17—Debt	<u>156</u>
Note 18—Changes in Accumulated Other Comprehensive Income (Loss)	<u>157</u>
Note 19—Preferred Stock	<u>162</u>
Note 20—Securitizations and Variable Interest Entities	<u>164</u>
Note 21—Derivatives Activities	<u>178</u>
Note 22—Fair Value Measurement	<u>192</u>
Note 23—Fair Value Elections	<u>219</u>
Note 24—Guarantees and Commitments	<u>223</u>
Note 25—Contingencies	<u>229</u>
Note 26—Condensed Consolidating Financial Statement	<u>232</u>

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## CONSOLIDATED FINANCIAL STATEMENTS

## CONSOLIDATED STATEMENT OF INCOME (UNAUDITED) Citigroup Inc. and Subsidiaries

In millions of dollars, except per share amounts	Three Months		Six Months Ended	
	Ended June 30, 2016	2015	June 30, 2016	2015
Revenues				
Interest revenue	\$14,356	\$14,873	\$28,523	\$29,473
Interest expense	3,120	3,051	6,060	6,079
Net interest revenue	\$11,236	\$11,822	\$22,463	\$23,394
Commissions and fees	\$2,725	\$3,194	\$5,188	\$6,364
Principal transactions	1,816	2,173	3,656	4,144
Administration and other fiduciary fees	878	995	1,689	1,957
Realized gains on sales of investments, net	200	183	386	490
Other-than-temporary impairment losses on investments				
Gross impairment losses	(118)	(43)	(583)	(115)
Less: Impairments recognized in AOCI	—	—	—	—
Net impairment losses recognized in earnings	\$(118)	\$(43)	\$(583)	\$(115)
Insurance premiums	\$217	\$482	\$481	\$979
Other revenue	594	664	1,823	1,993
Total non-interest revenues	\$6,312	\$7,648	\$12,640	\$15,812
Total revenues, net of interest expense	\$17,548	\$19,470	\$35,103	\$39,206
Provisions for credit losses and for benefits and claims				
Provision for loan losses	\$1,390	\$1,515	\$3,276	\$3,270
Policyholder benefits and claims	49	181	137	378
Provision (release) for unfunded lending commitments	(30)	(48)	41	(85)
Total provisions for credit losses and for benefits and claims	\$1,409	\$1,648	\$3,454	\$3,563
Operating expenses				
Compensation and benefits	\$5,229	\$5,483	\$10,785	\$11,003
Premises and equipment	642	737	1,293	1,446
Technology/communication	1,657	1,656	3,306	3,256
Advertising and marketing	433	393	823	785
Other operating	2,408	2,659	4,685	5,322
Total operating expenses	\$10,369	\$10,928	\$20,892	\$21,812
Income from continuing operations before income taxes	\$5,770	\$6,894	\$10,757	\$13,831
Provision for income taxes	1,723	2,036	3,202	4,156
Income from continuing operations	\$4,047	\$4,858	\$7,555	\$9,675
Discontinued operations				
Income (loss) from discontinued operations	\$(36)	\$9	\$(39)	\$1
Provision (benefit) for income taxes	(13)	3	(14)	—
Income (loss) from discontinued operations, net of taxes	\$(23)	\$6	\$(25)	\$1
Net income before attribution of noncontrolling interests	\$4,024	\$4,864	\$7,530	\$9,676
Noncontrolling interests	26	18	31	60
Citigroup's net income	\$3,998	\$4,846	\$7,499	\$9,616
Basic earnings per share <sup>(1)</sup>				
Income from continuing operations	\$1.25	\$1.51	\$2.36	\$3.03
Loss from discontinued operations, net of taxes	(0.01)	—	(0.01)	—
Net income	\$1.24	\$1.52	\$2.35	\$3.03
Weighted average common shares outstanding	2,915.8	3,020.0	2,929.4	3,027.1



Diluted earnings per share<sup>(1)</sup>

Income from continuing operations	\$ 1.25	\$ 1.51	\$ 2.36	\$ 3.02
Loss from discontinued operations, net of taxes	(0.01 )	—	(0.01 )	—
Net income	\$ 1.24	\$ 1.51	\$ 2.35	\$ 3.02
Adjusted weighted average common shares outstanding	2,915.93	3,025.02	2,929.5	3,032.1

(1) 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  
(UNAUDITED)

In millions of dollars	Three Months		Six Months Ended	
	Ended June 30, 2016	2015	June 30, 2016	2015
Net income before attribution of noncontrolling interests	\$4,024	\$4,864	\$7,530	\$9,676
Add: Citigroup's other comprehensive income (loss)				
Net change in unrealized gains and losses on investment securities, net of taxes	\$927	\$(935)	\$2,961	\$(344)
Net change in debt valuation adjustment (DVA), net of taxes <sup>(1)</sup>	12	—	205	—
Net change in cash flow hedges, net of taxes	151	92	468	178
Benefit plans liability adjustment, net of taxes	(27)	)578	(492)	)488
Net change in foreign currency translation adjustment, net of taxes and hedges	(552)	)(148)	)102	(2,210)
Citigroup's total other comprehensive income (loss)	\$511	\$(413)	\$3,244	\$(1,888)
Total comprehensive income before attribution of noncontrolling interests	\$4,535	\$4,451	\$10,774	\$7,788
Less: Net income attributable to noncontrolling interests	26	18	31	60
Citigroup's comprehensive income	\$4,509	\$4,433	\$10,743	\$7,728

Effective January 1, 2016, Citigroup early adopted only the provisions of the amendment in ASU No. 2016-01, Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and (1) Financial Liabilities, related to the presentation of DVA on fair value option liabilities. Accordingly, beginning in the first quarter 2016, the portion of the change in fair value of these liabilities related to changes in Citigroup's own credit spreads (DVA) is reflected as a component of Accumulated other comprehensive income (AOCI).

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

CONSOLIDATED BALANCE SHEET Citigroup Inc. and Subsidiaries  
(UNAUDITED)

In millions of dollars	June 30,	
	2016	December 31, 2015
(Unaudited)		
Assets		
Cash and due from banks (including segregated cash and other deposits)	\$22,140	\$20,900
Deposits with banks	127,993	112,197
Federal funds sold and securities borrowed or purchased under agreements to resell (including \$144,816 and \$137,964 as of June 30, 2016 and December 31, 2015, respectively, at fair value)	228,683	219,675
Brokerage receivables	36,851	27,683
Trading account assets (including \$92,869 and \$92,123 pledged to creditors at June 30, 2016 and December 31, 2015, respectively)	271,764	249,956
Investments:		
Available for sale (including \$8,659 and \$10,698 pledged to creditors as of June 30, 2016 and December 31, 2015, respectively)	312,765	299,136
Held to maturity (including \$1,487 and \$3,630 pledged to creditors as of June 30, 2016 and December 31, 2015, respectively)	35,903	36,215
Non-marketable equity securities (including \$1,973 and \$2,088 at fair value as of June 30, 2016 and December 31, 2015, respectively)	7,625	7,604
Total investments	\$356,293	\$342,955
Loans:		
Consumer (including \$32 and \$34 as of June 30, 2016 and December 31, 2015, respectively, at fair value)	326,419	325,785
Corporate (including \$4,102 and \$4,971 as of June 30, 2016 and December 31, 2015, respectively, at fair value)	307,096	291,832
Loans, net of unearned income	\$633,515	\$617,617
Allowance for loan losses	(12,304)	(12,626)
Total loans, net	\$621,211	\$604,991
Goodwill	22,496	22,349
Intangible assets (other than MSR's)	5,521	3,721
Mortgage servicing rights (MSR's)	1,324	1,781
Other assets (including \$7,432 and \$6,121 as of June 30, 2016 and December 31, 2015, respectively, at fair value)	124,495	125,002
Total assets	\$1,818,771	\$1,731,210

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	June 30,	
	2016	December 31, 2015
(Unaudited)		
Assets of consolidated VIEs to be used to settle obligations of consolidated VIEs		
Cash and due from banks	\$112	\$153

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Trading account assets	427	583
Investments	4,755	5,263
Loans, net of unearned income		
Consumer	54,211	58,772
Corporate	21,832	22,008
Loans, net of unearned income	\$76,043	\$80,780
Allowance for loan losses	(1,751)	(2,135)
Total loans, net	\$74,292	\$78,645
Other assets	150	150
Total assets of consolidated VIEs to be used to settle obligations of consolidated VIEs	\$79,736	\$84,794
Statement continues on the next page.		

101

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CONSOLIDATED BALANCE SHEET  
(Continued)

Citigroup Inc. and Subsidiaries

	June 30,	
	2016	December 31,
	(Unaudited) 2015	
In millions of dollars, except shares and per share amounts		
<b>Liabilities</b>		
Non-interest-bearing deposits in U.S. offices	\$ 140,145	\$ 139,249
Interest-bearing deposits in U.S. offices (including \$685 and \$923 as of June 30, 2016 and December 31, 2015, respectively, at fair value)	295,589	280,234
Non-interest-bearing deposits in offices outside the U.S.	76,574	71,577
Interest-bearing deposits in offices outside the U.S. (including \$786 and \$667 as of June 30, 2016 and December 31, 2015, respectively, at fair value)	425,544	416,827
Total deposits	\$937,852	\$907,887
Federal funds purchased and securities loaned or sold under agreements to repurchase (including \$46,144 and \$36,843 as of June 30, 2016 and December 31, 2015, respectively, at fair value)	158,001	146,496
Brokerage payables	62,054	53,722
Trading account liabilities	136,307	117,512
Short-term borrowings (including \$1,850 and \$1,207 as of June 30, 2016 and December 31, 2015, respectively, at fair value)	18,408	21,079
Long-term debt (including \$25,931 and \$25,293 as of June 30, 2016 and December 31, 2015, respectively, at fair value)	207,448	201,275
Other liabilities (including \$2,822 and \$1,624 as of June 30, 2016 and December 31, 2015, respectively, at fair value)	65,680	60,147
Total liabilities	\$1,585,750	\$1,508,118
<b>Stockholders' equity</b>		
Preferred stock (\$1.00 par value; authorized shares: 30 million), issued shares: 770,120 as of June 30, 2016 and 668,720 as of December 31, 2015, at aggregate liquidation value	\$19,253	\$16,718
Common stock (\$0.01 par value; authorized shares: 6 billion), issued shares: 3,099,482,042 as of June 30, 2016 and December 31, 2015	31	31
Additional paid-in capital	107,730	108,288
Retained earnings	140,527	133,841
Treasury stock, at cost: June 30, 2016—194,108,004 shares and December 31, 2015—146,203,311 shares	(9,538)	(7,677)
Accumulated other comprehensive income (loss)	(26,115)	(29,344)
Total Citigroup stockholders' equity	\$231,888	\$221,857
Noncontrolling interest	1,133	1,235
Total equity	\$233,021	\$223,092
Total liabilities and equity	\$1,818,771	\$1,731,210

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.

	June 30,	
	2016	December 31,
	(Unaudited) 2015	
In millions of dollars		



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Liabilities of consolidated VIEs for which creditors or beneficial interest holders do not have recourse to the general credit of Citigroup

Short-term borrowings	\$ 10,986	\$ 11,965
Long-term debt	27,723	31,273
Other liabilities	2,072	2,099
Total liabilities of consolidated VIEs for which creditors or beneficial interest holders do not have recourse to the general credit of Citigroup	\$ 40,781	\$ 45,337

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

CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY Citigroup Inc. and Subsidiaries  
(UNAUDITED)

In millions of dollars, except shares in thousands	Six Months Ended	
	June 30, 2016	2015
Preferred stock at aggregate liquidation value		
Balance, beginning of period	\$16,718	\$10,468
Issuance of new preferred stock	2,535	3,500
Balance, end of period	\$19,253	\$13,968
Common stock and additional paid-in capital		
Balance, beginning of period	\$108,319	\$108,010
Employee benefit plans	(516)	)279
Preferred stock issuance expense	(37)	)(14)
Other	(5)	)(25)
Balance, end of period	\$107,761	\$108,250
Retained earnings		
Balance, beginning of period	\$133,841	\$118,201
Adjustment to opening balance, net of taxes <sup>(1)(2)</sup>	15	(349)
Adjusted balance, beginning of period	\$133,856	\$117,852
Citigroup's net income	7,499	9,616
Common dividends <sup>(3)</sup>	(296)	)(184)
Preferred dividends	(532)	)(330)
Tax benefit	—	—
Balance, end of period	\$140,527	\$126,954
Treasury stock, at cost		
Balance, beginning of period	\$(7,677)	)\$ (2,929)
Employee benefit plans <sup>(4)</sup>	773	151
Treasury stock acquired <sup>(5)</sup>	(2,634)	)(1,850)
Balance, end of period	\$(9,538)	)\$ (4,628)
Citigroup's accumulated other comprehensive income (loss)		
Balance, beginning of period	\$(29,344)	)\$ (23,216)
Adjustment to opening balance, net of taxes <sup>(1)</sup>	(15)	—
Adjusted balance, beginning of period	\$(29,359)	)\$ (23,216)
Net change in Citigroup's Accumulated other comprehensive income (loss)	3,244	(1,888)
Balance, end of period	\$(26,115)	)\$ (25,104)
Total Citigroup common stockholders' equity	\$212,635	\$205,472
Total Citigroup stockholders' equity	\$231,888	\$219,440
Noncontrolling interests		
Balance, beginning of period	\$1,235	\$1,511
Transactions between noncontrolling-interest shareholders and the related consolidated subsidiary	(11)	—
Transactions between Citigroup and the noncontrolling-interest shareholders	(73)	)(114)
Net income attributable to noncontrolling-interest shareholders	31	60
Dividends paid to noncontrolling-interest shareholders	(1)	)(10)
Other comprehensive income (loss) attributable to noncontrolling-interest shareholders	(23)	)(61)
Other	(25)	)(1)
Net change in noncontrolling interests	\$(102)	)\$ (126)
Balance, end of period	\$1,133	\$1,385

Total equity	\$233,021	\$220,825
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Effective January 1, 2016, Citigroup early adopted the provisions of the amendment in ASU No. 2016-01, Financial Instruments—Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities, related to the presentation of DVA on fair value option liabilities. Accordingly, beginning in the first (1) quarter 2016, the portion of the change in fair value of these liabilities related to changes in Citigroup's own credit spreads (DVA) is reflected as a component of Accumulated other comprehensive income (AOCI). The cumulative effect of this change in accounting resulted in a reclassification from Retained earnings to AOCI of an accumulated after-tax loss of approximately \$15 million at January 1, 2016.

- 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
- (2) Retained earnings represents the impact to periods prior to January 1, 2013 and is shown as an adjustment to the opening balance since 2015 is the earliest period presented in this statement. See Note 1 to the Consolidated Financial Statements for additional information.
- (3) Common dividends declared were \$0.05 per share in the first and second quarter of 2016 and \$0.01 per share in the first quarter and \$0.05 per share in the second quarter of 2015.
- Includes treasury stock related to (i) certain activity on employee stock option program exercises where the
- (4) 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.
- (5) For the six months ended June 30, 2016 and 2015, 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  
(UNAUDITED)

	Six Months Ended	
	June 30,	
In millions of dollars	2016	2015
Cash flows from operating activities of continuing operations		
Net income before attribution of noncontrolling interests	\$7,530	\$9,676
Net income attributable to noncontrolling interests	31	60
Citigroup's net income	\$7,499	\$9,616
Gain (loss) from discontinued operations, net of taxes	(25	)1
Income from continuing operations—excluding noncontrolling interests	\$7,524	\$9,615
Adjustments to reconcile net income to net cash provided by operating activities of continuing operations		
Gains on significant disposals <sup>(1)</sup>	(422	)—
Depreciation and amortization	1,776	1,767
Provision for loan losses	3,276	3,270
Realized gains from sales of investments	(386	)(490 )
Net impairment losses on investments, goodwill and intangible assets	583	136
Change in trading account assets	(21,808	)17,589
Change in trading account liabilities	18,795	(2,741 )
Change in brokerage receivables net of brokerage payables	(836	)(12,815 )
Change in loans held-for-sale (HFS)	1,786	(1,869 )
Change in other assets	(4,345	)(1,382 )
Change in other liabilities	7,175	3,575
Other, net	7,949	1,691
Total adjustments	\$13,543	\$8,731
Net cash provided by operating activities of continuing operations	\$21,067	\$18,346
Cash flows from investing activities of continuing operations		
Change in deposits with banks	\$(15,796)	\$(2,911 )
Change in federal funds sold and securities borrowed or purchased under agreements to resell	(9,008	)5,516
Change in loans	(30,170	)(9,945 )
Proceeds from sales and securitizations of loans	7,021	6,377
Purchases of investments	(108,359)	(140,945)
Proceeds from sales of investments	66,138	89,707
Proceeds from maturities of investments	33,383	44,732
Proceeds from significant disposals <sup>(1)</sup>	265	—
Capital expenditures on premises and equipment and capitalized software	(1,377	)(1,471 )
Proceeds from sales of premises and equipment, subsidiaries and affiliates, and repossessed assets	390	328
Net cash used in investing activities of continuing operations	\$(57,513)	\$(8,612 )
Cash flows from financing activities of continuing operations		
Dividends paid	\$(828	)\$(514 )
Issuance of preferred stock	2,498	3,486
Treasury stock acquired	(2,634	)(1,850 )
Stock tendered for payment of withholding taxes	(312	)(423 )
Change in federal funds purchased and securities loaned or sold under agreements to repurchase	11,505	3,574
Issuance of long-term debt	27,142	27,183
Payments and redemptions of long-term debt	(26,855	)(26,059 )

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Change in deposits	29,965	8,705
Change in short-term borrowings	(2,671 )	(32,428 )
Net cash provided by (used in) financing activities of continuing operations	\$37,810	\$(18,326)

105

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Effect of exchange rate changes on cash and cash equivalents	\$ (124 )	\$(103 )
Change in cash and due from banks	\$1,240	\$(8,695 )
Cash and due from banks at beginning of period	20,900	32,108
Cash and due from banks at end of period	\$22,140	\$23,413
Supplemental disclosure of cash flow information for continuing operations		
Cash paid during the period for income taxes	\$2,045	\$2,863
Cash paid during the period for interest	5,726	5,478
Non-cash investing activities		
Decrease in net loans associated with significant disposals reclassified to HFS	—	(8,874 )
Decrease in investments associated with significant disposals reclassified to HFS	—	(1,444 )
Transfers to loans HFS from loans	6,000	15,900
Transfers to OREO and other repossessed assets	97	158
Non-cash financing activities		
Decrease in long-term debt associated with significant disposals reclassified to HFS	\$—	\$(5,923 )

(1) See Note 2 for further information on significant disposals.

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

## NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (UNAUDITED)

### 1. BASIS OF PRESENTATION AND ACCOUNTING CHANGES

#### Basis of Presentation

The accompanying unaudited Consolidated Financial Statements as of June 30, 2016 and for the three- and six- month periods ended June 30, 2016 and 2015 include the accounts of Citigroup Inc. and its consolidated subsidiaries.

In the opinion of management, all adjustments, consisting of normal recurring adjustments, necessary for a fair presentation have been reflected. The accompanying unaudited Consolidated Financial Statements should be read in conjunction with the Consolidated Financial Statements and related notes included in Citigroup's Annual Report on Form 10-K for the fiscal year ended December 31, 2015, including the historical audited consolidated financial statements of Citigroup reflecting the certain realignments and reclassifications set forth in Citigroup's Current Report on Form 8-K filed with the SEC on June 17, 2016 (2015 Annual Report on Form 10-K), and Citigroup's Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (First Quarter of 2016 Form 10-Q).

Certain financial information that is normally included in annual financial statements prepared in accordance with U.S. generally accepted accounting principles (GAAP), but is not required for interim reporting purposes, has been condensed or omitted.

Management must make estimates and assumptions that affect the Consolidated Financial Statements and the related footnote disclosures. While management makes its best judgment, actual results could differ from those estimates.

Current market conditions increase the risk and complexity of the judgments in these estimates.

As noted above, the Notes to Consolidated Financial Statements are unaudited.

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.

#### ACCOUNTING CHANGES

##### Recognition and Measurement of Financial Assets and Financial Liabilities

In January 2016, the FASB issued Accounting Standards Update (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 requires 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 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.

Citi early-adopted only the provisions of this ASU related to presentation of DVA in OCI effective January 1, 2016, as permitted by the ASU. Accordingly, beginning in the first quarter 2016, the portion of the change in fair value of liabilities for which the fair value option was elected related to changes in Citigroup's own credit spreads (DVA) is reflected as a component of Accumulated other comprehensive income (AOCI), whereas, these amounts were previously recognized in Citigroup's revenues and net income. The impact of adopting this amendment resulted in a cumulative catch-up reclassification from retained earnings to AOCI of an accumulated after tax loss of approximately \$15 million at January 1, 2016. Financial statements for periods prior to 2016 were not subject to restatement under the provisions of this ASU. For additional information, see Note 18, Note 22 and Note 23 to the Consolidated



Financial Statements. The Company is evaluating the effect that the other provisions of ASU 2016-01 will have on its Consolidated Financial Statements and related disclosures.

#### 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.

#### 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.

#### Consolidation-Collateralized Financing Entities

In August 2014, the FASB issued ASU No. 2014-13, Consolidation (Topic 810): Measuring the Financial Assets and the Financial Liabilities of a Consolidated Collateralized Financing Entity, which provides an alternative measurement method for consolidated collateralized financing VIEs to elect: (i) to measure their financial assets and liabilities separately under existing U.S. GAAP for fair value measurement with any differences in such fair values reflected in earnings; or (ii) to measure both their financial assets and liabilities using the more observable of the fair value of the financial assets or the fair value of the financial liabilities. The ASU became effective on January 1, 2016. Adoption of ASU 2014-13 did not have a material impact on the Company's Consolidated Financial Statements.

### FUTURE APPLICATION OF ACCOUNTING STANDARDS

#### Accounting for Financial Instruments-Credit Losses

In June 2016, the FASB issued ASU 2016-13, Financial Instruments-Credit Losses (Topic 326). The ASU introduces a new accounting model, the Current Expected Credit Losses model (CECL), which requires earlier recognition of credit losses, while also providing additional transparency about credit risk.

The FASB's CECL model utilizes a lifetime "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. The expected credit losses are adjusted each period for changes in expected lifetime credit losses. For available-for-sale securities where fair value is less than cost, credit-related impairment, if any, will be recognized in an allowance for credit losses and adjusted each period for changes in expected credit risk. This model replaces the multiple existing impairment models in current GAAP, which generally require that a loss be incurred before it is recognized.

The CECL model represents a significant departure from existing GAAP, and may result in material changes to the Company's accounting for financial instruments. The Company is evaluating the effect that ASU 2016-13 will have on its Consolidated Financial Statements and related disclosures. The ASU will be effective for Citi as of January

1, 2020. Early application is permitted for annual periods beginning January 1, 2019.

#### Recognition of Breakage for Certain Prepaid Stored-Value Products

In March 2016, the FASB issued ASU No. 2016-04, Liabilities—Extinguishment of Liabilities (Subtopic 405-20): Recognition of Breakage for Certain Prepaid Stored-Value Products, which was intended to address potential diversity in entities' practices related to the derecognition of the financial liability that is recorded when an entity issues a prepaid stored-value product. Typically, when the holder of a prepaid stored-value product redeems that product to make a purchase of goods or services, the issuing entity settles the transaction with the selling merchant, and the liability to the product holder is extinguished. However, in some cases, a prepaid stored-value product may be wholly or partially unused for an indefinite time period.

The ASU provides authoritative guidance describing the narrow circumstances in which an entity's liability for an unredeemed prepaid stored-value product may be extinguished. The amendment is effective on January 1, 2018; early adoption is permitted. Adoption of the ASU is not expected to 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. 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.

#### 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 lessees to recognize all leases 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 \$0 million and \$8 million for the three months ended June 30, 2016 and 2015, respectively, and income from Discontinued operations, net of taxes, of \$0 million and \$6 million for the six months ended June 30, 2016 and 2015, respectively.

#### Sale of Egg Banking plc Credit Card Business

Citi sold 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 \$20 million and \$2 million for the three months ended June 30, 2016 and 2015, respectively, and losses from Discontinued operations, net of taxes, of \$22 million and \$6 million for the six months ended June 30, 2016 and 2015, respectively.

### Combined Results for Discontinued Operations

The following is summarized financial information for previous Discontinued operations for which Citi continues to have minimal residual costs associated with the sales:

	Three Months Ended June 30, 2016		Six Months Ended June 30, 2015	
In millions of dollars	2016	2015	2016	2015
Total revenues, net of interest expense <sup>(1)</sup>	\$—	\$—	\$—	\$—
Income (loss) from discontinued operations	\$(36)	\$ 9	\$(39)	\$ 1
Provision (benefit) for income taxes	(13 )	3	(14 )	—
Income (loss), from discontinued operations, net of taxes	\$(23)	\$ 6	\$(25)	\$ 1

(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 2016 and 2015 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.

#### Novation of the 80% Primerica Coinsurance Agreement

During the first quarter of 2016, Citi completed a novation (an arrangement that extinguishes Citi's rights and obligations under a contract) of the Primerica 80% Coinsurance Agreement to a third-party re-insurer, resulting in revenue of \$422 million recorded in Other revenue (\$274 million after tax). Furthermore, the novation resulted in derecognition of \$1.5 billion of available for-sale securities and cash, \$0.95 billion of deferred acquisition costs and \$2.7 billion of insurance liabilities.

Income before taxes, excluding the revenue upon novation, was as follows:

	Three Months Ended June 30,	Six Months Ended June 30,
In millions of dollars	2015	2015
Income before taxes	\$ \$-42	\$ \$-77

#### Sale of OneMain Financial Business

On November 15, 2015, Citi sold its OneMain Financial business, which was reported in Citi Holdings, including 1,100 retail branches, 5,500 employees, and approximately 1.3 million customer accounts. OneMain 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 debt and \$1.1 billion of short-term borrowings. The transaction generated a pretax gain on sale of \$2.6 billion, recorded in Other revenue (\$1.6 billion after-tax) during the fourth quarter of 2015. However, when combined with the loss on redemption of certain long-term debt supporting remaining Citi Holdings' assets during the fourth quarter of 2015, the resulting net after-tax gain was \$0.8 billion.

Income before taxes was as follows:

	Three Months Ended June 30,	Six Months Ended June 30,
In millions of dollars	2015	2015
Income before taxes	\$ \$-177	\$ \$-354

### 3. BUSINESS SEGMENTS

Citigroup's activities are conducted through the Global Consumer Banking (GCB), Institutional Clients Group (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 over 100 countries and jurisdictions 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 in Citi's 2015 Annual Report on Form 10-K.

The prior-period balances reflect reclassifications to conform the presentation to the current period's presentation. Effective January 1, 2016, historical financial data was reclassified from Citicorp to Citi Holdings for the consumer businesses in Argentina, Brazil and Colombia that Citi intends to exit. These businesses, which previously were reported as part of Latin America Global Consumer Banking, are now reported as part of Citi Holdings. While Citi does not intend to exit its consumer businesses in Venezuela, these businesses are not significant, lending predominantly to support ICG activities, and are now reported as part of ICG. Similarly, Citi's remaining indirect investment in Banco de Chile is now reported as part of ICG. The following also reflects certain other regional reclassifications within ICG and certain other immaterial reclassifications. Citi's consolidated results remain unchanged for all periods presented as a result of the changes discussed above.

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		Provision (benefits) income taxes		Income (loss) from continuing operations		Identifiable assets	
	2016	2015	2016	2015	2016	2015	June 30, 2016	December 31, 2015
	Three Months Ended June 30,							
Global Consumer Banking	\$7,733	\$8,184	\$681	\$811	\$1,323	\$1,611	\$402	\$381
Institutional Clients Group	8,846	8,946	1,289	1,331	2,715	2,860	1,302	1,217
Corporate/Other	126	371	(232)	(246)	(89)	231	49	52
Total Citicorp	\$16,705	\$17,501	\$1,738	\$1,896	\$3,949	\$4,702	\$1,753	\$1,650
Citi Holdings	843	1,969	(15)	140	98	156	66	81
Total	\$17,548	\$19,470	\$1,723	\$2,036	\$4,047	\$4,858	\$1,819	\$1,731
	Six Months Ended June 30,							
	2016	2015	2016	2015	2016	2015	2016	2015
Global Consumer Banking	\$15,503	\$16,486	\$1,327	\$1,728	\$2,554	\$3,323	\$3,323	\$3,323
Institutional Clients Group	16,882	18,023	2,107	2,696	4,674	5,834	5,834	5,834
Corporate/Other	400	583	(347)	(557)	(118)	212	212	212
Total Citicorp	\$32,785	\$35,092	\$3,087	\$3,867	\$7,110	\$9,369	\$9,369	\$9,369
Citi Holdings	2,318	4,114	115	289	445	306	306	306

Total	\$35,103	\$39,206	\$3,202	\$4,156	\$7,555	\$9,675
Includes Citicorp (excluding Corporate/Other) total revenues, net of interest expense, in North America of \$8.3 billion and \$8.3 billion; in EMEA of \$2.6 billion and \$2.6 billion; in Latin America of \$2.3 billion and \$2.5 billion; and in Asia of \$3.4 billion and \$3.7 billion for the three months ended June 30, 2016 and 2015, respectively.						
(1)	Regional numbers exclude Citi Holdings and Corporate/Other, which largely operate within the U.S. Includes Citicorp (excluding Corporate/Other) total revenues, net of interest expense, in North America of \$16.2 billion and \$16.8 billion; in EMEA of \$4.8 billion and \$5.5 billion; in Latin America of \$4.5 billion and \$4.9 billion; and in Asia of \$6.9 billion and \$7.3 billion for the six months ended June 30, 2016 and 2015, respectively.					
(2)	Includes pretax provisions for credit losses and for benefits and claims in the GCB results of \$1.4 billion and \$1.4 billion; in the ICG results of \$82 million and \$(87) million; and in Citi Holdings results of \$(0.1) billion and \$0.3 billion for the three months ended June 30, 2016 and 2015, respectively. Includes pretax provisions for credit losses and for benefits and claims in the GCB results of \$2.9 billion and \$2.8 billion; in the ICG results of \$472 million and \$(1) million; and in Citi Holdings results of \$0.1 billion and \$0.8 billion for the six months ended June 30, 2016 and 2015, respectively.					

## 4. INTEREST REVENUE AND EXPENSE

Interest revenue and Interest expense consisted of the following:

In millions of dollars	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Interest revenue				
Loan interest, including fees	\$9,750	\$10,529	\$19,510	\$21,084
Deposits with banks	237	168	456	351
Federal funds sold and securities borrowed or purchased under agreements to resell	664	664	1,311	1,306
Investments, including dividends	1,937	1,770	3,792	3,481
Trading account assets <sup>(1)</sup>	1,532	1,620	2,966	3,019
Other interest <sup>(2)</sup>	236	122	488	232
Total interest revenue	\$14,356	\$14,873	\$28,523	\$29,473
Interest expense				
Deposits <sup>(3)</sup>	\$1,306	\$1,288	\$2,510	\$2,613
Federal funds purchased and securities loaned or sold under agreements to repurchase	527	443	1,029	819
Trading account liabilities <sup>(1)</sup>	96	54	184	101
Short-term borrowings	109	157	210	277
Long-term debt	1,082	1,109	2,127	2,269
Total interest expense	\$3,120	\$3,051	\$6,060	\$6,079
Net interest revenue	\$11,236	\$11,822	\$22,463	\$23,394
Provision for loan losses	1,390	1,515	3,276	3,270
Net interest revenue after provision for loan losses	\$9,846	\$10,307	\$19,187	\$20,124

(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 \$267 million and \$289 million for the three months ended June 30, 2016 and 2015, respectively, and \$502 million and \$585 million for the six months ended June 30, 2016 and 2015, respectively.



## 5. COMMISSIONS AND FEES

The primary components of Commissions and fees revenue are investment banking fees, trading-related fees, fees related to trade and securities services in ICG and credit card and bank card fees.

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:

	Three Months		Six Months	
	Ended June		Ended June	
	30,	30,	30,	30,
In millions of dollars	2016	2015	2016	2015
Investment banking	\$753	\$960	\$1,327	\$1,898
Trading-related	544	616	1,145	1,250
Trade and securities services	386	448	792	883
Credit cards and bank cards	344	497	615	998
Corporate finance <sup>(1)</sup>	241	126	364	271
Other consumer <sup>(2)</sup>	166	182	324	362
Checking-related	104	130	220	246
Loan servicing	68	119	164	214
Other	119	116	237	242
Total commissions and fees	\$2,725	\$3,194	\$5,188	\$6,364

(1) Consists primarily of fees earned from structuring and underwriting loan syndications.

(2) Primarily consists of fees for investment fund administration and management, third-party collections, commercial demand deposit accounts and certain credit card services.

## 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, prior to 2016, DVA (debt valuation adjustments on issued liabilities for which the fair value option has been elected). These adjustments are discussed further in Note 22 to the Consolidated Financial Statements.

The following table presents principal transactions revenue:

In millions of dollars	Three Months		Six Months	
	Ended June 30,		Ended June 30,	
	2016	2015	2016	2015
Global Consumer Banking	\$165	\$144	\$310	\$300
Institutional Clients Group	1,911	1,793	3,485	3,990
Corporate/Other	(256 )	182	(146 )	(239 )
Subtotal Citicorp	\$1,820	\$2,119	\$3,649	\$4,051
Citi Holdings	(4 )	54	7	93
Total Citigroup	\$1,816	\$2,173	\$3,656	\$4,144
Interest rate risks <sup>(1)</sup>	\$1,140	\$1,393	\$1,947	\$2,590
Foreign exchange risks <sup>(2)</sup>	402	718	1,015	804
Equity risks <sup>(3)</sup>	(55 )	(185 )	(5 )	(71 )
Commodity and other risks <sup>(4)</sup>	121	117	265	434
Credit products and risks <sup>(5)</sup>	208	130	434	387
Total	\$1,816	\$2,173	\$3,656	\$4,144

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 (1) 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 foreign currency translation (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

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. For additional information on Citi's incentive plans, see Note 7 to the Consolidated Financial Statements in Citi's 2015 Annual Report on Form 10-K.

## 8. RETIREMENT BENEFITS

For additional information on Citi's retirement benefits, see Note 8 to the Consolidated Financial Statements in Citi's 2015 Annual Report on Form 10-K.

## 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 June 30, 2016. All other plans (All Other Plans) are measured annually with a December 31 measurement date.

## Net (Benefit) Expense

The following tables summarize 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	Three Months Ended June 30,							
	Pension plans				Postretirement benefit plans			
	U.S. plans		Non-U.S. plans		U.S. plans		Non-U.S. plans	
	2016	2015	2016	2015	2016	2015	2016	2015
Qualified plans								
Benefits earned during the period	\$—	\$—	\$ 39	\$ 43	\$ —	\$ —	\$ 3	\$ 3
Interest cost on benefit obligation	132	131	73	80	5	8	24	30
Expected return on plan assets	(218)	(223)	(74)	(83)	(3)	—	(22)	(27)
Amortization of unrecognized								
Prior service benefit	—	(1)	(1)	—	—	—	(3)	(3)
Net actuarial loss (gain)	39	38	20	18	(1)	—	8	12
Curtailment loss <sup>(1)</sup>	—	10	—	—	—	—	—	—
Settlement loss <sup>(1)</sup>	—	—	3	—	—	—	—	—
Net qualified plans (benefit) expense	\$(47)	\$(45)	\$ 60	\$ 58	\$ 1	\$ 8	\$ 10	\$ 15
Nonqualified plans expense	9	10	—	—	—	—	—	—
Total net (benefit) expense	\$(38)	\$(35)	\$ 60	\$ 58	\$ 1	\$ 8	\$ 10	\$ 15

(1) Losses due to curtailment and settlement relate to repositioning and divestiture activities.

In millions of dollars	Six Months Ended June 30,							
	Pension plans				Postretirement benefit plans			
	U.S. plans		Non-U.S. plans		U.S. plans		Non-U.S. plans	
	2016	2015	2016	2015	2016	2015	2016	2015
Qualified plans								
Benefits earned during the period	\$1	\$2	\$77	\$87	\$—	\$—	\$6	\$7
Interest cost on benefit obligation	273	268	146	160	13	16	48	57
Expected return on plan assets	(436)	(445)	(146)	(167)	(5)	—	(43)	(56)
Amortization of unrecognized								
Prior service benefit	—	(2)	(1)	—	—	—	(6)	(6)
Net actuarial loss (gain)	75	75	39	39	(1)	—	16	23
Curtailed loss (gain) <sup>(1)</sup>	—	10	(3)	—	—	—	—	—
Settlement loss <sup>(1)</sup>	—	—	4	—	—	—	—	—
Net qualified plans (benefit) expense	\$(87)	\$(92)	\$116	\$119	\$7	\$16	\$21	\$25
Nonqualified plans expense	19	22	—	—	—	—	—	—
Total net (benefit) expense	\$(68)	\$(70)	\$116	\$119	\$7	\$16	\$21	\$25

(1) Losses and gains due to curtailment and settlement relate to repositioning and divestiture activities.

#### Funded Status and Accumulated Other Comprehensive Income (AOCI)

The following tables summarize the funded status and amounts recognized in the Consolidated Balance Sheet for the Company's Significant Plans.

#### Net Amount Recognized

In millions of dollars	Six Months Ended June 30, 2016			
	Pension plans		Postretirement benefit plans	
	U.S. plans	Non-U.S. plans	U.S. plans	Non-U.S. plans
Change in projected benefit obligation (PBO)				
Projected benefit obligation at beginning of year	\$13,943	\$6,534	\$817	\$1,291
Plans measured annually	—	(1,819)	—	(282)
Projected benefit obligation at beginning of year—Significant Plans	\$13,943	\$4,715	\$817	\$1,009
First quarter activity	574	199	22	30
Projected benefit obligation at March 31, 2016—Significant Plans	\$14,517	\$4,914	\$839	\$1,039
Benefits earned during the period	—	24	—	2
Interest cost on benefit obligation	139	60	5	20
Plan amendments	—	—	—	—
Actuarial loss (gain)	459	272	(88)	29
Benefits paid, net of participants' contributions	(203)	(55)	(23)	(13)
Foreign exchange impact and other	—	(207)	—	(70)
Projected benefit obligation at period end—Significant Plans	\$14,912	\$5,008	\$733	\$1,007

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Six Months Ended June 30, 2016

	Pension plans		Postretirement benefit plans	
	U.S. plans	Non-U.S. plans	U.S. plans	Non-U.S. plans

In millions of dollars

Change in plan assets				
Plan assets at fair value at beginning of year	\$12,137	\$ 6,104	\$166	\$ 1,133
Plans measured annually	—	(1,175 )	—	(8 )
Plan assets at fair value at beginning of year—Significant Plans	\$12,137	\$ 4,929	\$166	\$ 1,125
First quarter activity	(72 )	233	\$—	39
Plan assets at fair value at March 31, 2016—Significant Plans	\$12,065	\$ 5,162	\$166	\$ 1,164
Actual return on plan assets	380	394	5	35
Company contributions	13	13	(3 )	—
Plan participants' contributions	—	1	—	—
Benefits paid, net of government subsidy	(203 )	(56 )	(23 )	(13 )
Foreign exchange impact and other	—	(251 )	—	(78 )
Plan assets at fair value at period end—Significant Plans	\$12,255	\$ 5,263	\$145	\$ 1,108

Funded status of the Significant plans

Qualified plans <sup>(1)</sup>	\$(1,915 )	\$ 255	\$(588)	\$ 101
Nonqualified plans	(742 )	—	—	—
Funded status of the plans at period end—Significant Plans	\$(2,657 )	\$ 255	\$(588)	\$ 101

Net amount recognized

Benefit asset	\$—	\$ 807	\$—	\$ 101
Benefit liability	(2,657 )	(552 )	(588 )	—
Net amount recognized on the balance sheet—Significant Plans	\$(2,657 )	\$ 255	\$(588)	\$ 101

Amounts recognized in AOCI

Prior service benefit	—	40	—	100
Net actuarial gain (loss)	(7,322 )	(979 )	63	(456 )
Net amount recognized in equity (pretax)—Significant Plans	\$(7,322 )	\$ (939 )	\$63	\$ (356 )

Accumulated benefit obligation at period end—Significant Plan \$14,904 \$ 4,691 \$733 \$ 1,007

The U.S. qualified pension plan is fully funded under specified Employee Retirement Income Security Act of (1) 1974, as amended (ERISA), funding rules as of January 1, 2016 and no minimum required funding is expected for 2016.

The following table shows the change in AOCI related to the Company's benefit plans (Significant Plans and All Other Plans) for the periods indicated.

	Three	Six
	Months	Months
	Ended	Ended
	June 30,	June 30,
	2016	2016
Beginning of period balance, net of tax <sup>(1)(2)</sup>	\$(5,581)	\$(5,116)
Actuarial assumptions changes and plan experience	(672 )	(1,547 )
Net asset gain due to difference between actual and expected returns	508	671
Net amortization	59	115
Prior service cost	(1 )	29

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Curtailment/settlement gain <sup>(3)</sup>	3	4
Foreign exchange impact and other	72	(30 )
Change in deferred taxes, net	4	266
Change, net of tax	\$(27 )	\$(492 )
End of period balance, net of tax <sup>(1)(2)</sup>	\$(5,608)	\$(5,608)

(1) See Note 18 to the Consolidated Financial Statements for further discussion of net AOCI balance.

(2) Includes net-of-tax amounts for certain profit sharing plans outside the U.S.

(3) Gains due to curtailment and settlement relate to repositioning and divestiture activities.

## 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 AOCI.

For the Company's Significant Plans, the discount rates at the respective period ended in the tables below are utilized to measure the period-end PBO and the net periodic (benefit) expense for the subsequent period. 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. The discount rates for the non-U.S. pension and postretirement plans relate to the Significant Plans only.

The discount rates utilized during the period in determining the pension and postretirement net (benefit) expense for the Significant Plans are as follows:

Net benefit (expense) assumed discount rates during the period	Three Months Ended	
	Jun. 30, 2016	Mar. 31, 2016
U.S. plans		
Qualified pension	3.95%	4.40%
Nonqualified pension	3.90	4.35
Postretirement	3.75	4.20
Non-U.S. plans		
Pension	0.35 - 12.30	0.75 to 13.20
Weighted average	5.14	5.37
Postretirement	8.45	8.60

The discount rates utilized at period end in determining the pension and postretirement benefit obligations for the Significant Plans are as follows:

Plan obligations assumed discount rates at period ended	Jun. 30, 2016	Mar. 31, 2016	Dec. 31, 2015
U.S. plans			
Qualified pension	3.65%	3.95%	4.40%
Nonqualified pension	3.55	3.90	4.35
Postretirement	3.40	3.75	4.20
Non-U.S. plans			
Pension	0.20-11.85	0.35-12.30	0.75 to 13.20
Weighted average	4.80	5.14	5.37
Postretirement	8.20	8.45	8.60

## Sensitivities of Certain Key Assumptions

The following table summarizes the estimated effect on the Company's Significant Plans quarterly expense of a one-percentage-point change in the discount rate:

In millions of dollars	Three Months Ended June 30, 2016	
	One-percentage-point increase	One-percentage-point decrease
Pension		
U.S. plans	\$ 7	\$ (11)
Non-U.S. plans	(5)	7
Postretirement		
U.S. plans	\$ —	\$ (1)



Non-U.S. plans (2 ) 2

Since the U.S. plans were 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, expense for the U.S. plans is driven more by interest costs than service costs and an increase in the discount rate would increase expense, while a decrease in the discount rate would decrease expense.

118

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### Contributions

The Company's funding practice for U.S. and non-U.S. pension 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 during the first half of 2016.

The following table summarizes the actual Company contributions for the six months ended June 30, 2016 and 2015, as well as estimated expected Company contributions for the remainder of 2016 and the actual contributions made in the third and fourth quarters of 2015. 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		Postretirement plans					
	U.S. plans	Non-U.S. plans	U.S. plans	Non-U.S. plans	U.S. plans	Non-U.S. plans		
Company contributions <sup>(2)</sup> for the six months ended June 30	2016	2015	2016	2015	2016	2015		
Company contributions made or expected to be made during the remainder of the year	2016	2015	2016	2015	2016	2015		
	\$ 28	\$ 22	\$ 58	\$ 29	\$ 11	\$ 32	\$ 3	\$ 5
	26	30	78	105	—	203	5	4

(1) The U.S. pension plans include benefits paid directly by the Company for the nonqualified pension plans.

(2) Company contributions are composed of cash contributions made to the plans and benefits paid directly by the Company.

### 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 is the Citi Retirement Savings Plan (formerly known as the Citigroup 401(k) Plan) sponsored by the Company in the U.S.

Under the Citi Retirement Savings Plan, eligible U.S. employees receive matching contributions of up to 6% of their eligible compensation for 2016 and 2015, 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.

The following table summarizes the actual Company contributions for the three months ended June 30, 2016 and 2015, respectively.

In millions of dollars	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
U.S. plans	\$97	\$99	\$193	\$200
Non-U.S. plans	72	71	140	145

### 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.

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	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Service-related expense				
Interest cost on benefit obligation	\$1	\$1	\$2	\$2
Amortization of unrecognized				
Prior service benefit	(8 )	(8 )	(16 )	(15 )
Net actuarial loss	1	3	2	6
Total service-related benefit	\$(6)	\$(4)	\$(12)	\$(7)
Non-service-related expense (benefit)	\$5	\$(3)	\$13	\$6
Total net expense (benefit)	\$(1)	\$(7)	\$1	\$(1)

119

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## 9. 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:

	Three Months Ended June 30,		Six Months Ended June 30,	
In millions, except per-share amounts	2016	2015	2016	2015
Income from continuing operations before attribution of noncontrolling interests	\$4,047	\$4,858	\$7,555	\$9,675
Less: Noncontrolling interests from continuing operations	26	18	31	60
Net income from continuing operations (for EPS purposes)	\$4,021	\$4,840	\$7,524	\$9,615
Income (loss) from discontinued operations, net of taxes	(23)	)6	(25)	)1
Citigroup's net income	\$3,998	\$4,846	\$7,499	\$9,616
Less: Preferred dividends <sup>(1)</sup>	322	202	532	330
Net income available to common shareholders	\$3,676	\$4,644	\$6,967	\$9,286
Less: Dividends and undistributed earnings allocated to employee restricted and deferred shares with nonforfeitable rights to dividends, applicable to basic EPS	53	64	93	126
Net income allocated to common shareholders for basic EPS	\$3,623	\$4,580	\$6,874	\$9,160
Net income allocated to common shareholders for diluted EPS	\$3,623	\$4,580	\$6,874	\$9,160
Weighted-average common shares outstanding applicable to basic EPS	2,915.8	3,020.0	2,929.4	3,027.1
Effect of dilutive securities <sup>(3)</sup>				
Options <sup>(2)</sup>	0.1	4.9	0.1	4.9
Other employee plans	—	0.1	—	0.1
Adjusted weighted-average common shares outstanding applicable to diluted EPS	2,915.9	3,025.0	2,929.5	3,032.1
Basic earnings per share <sup>(4)</sup>				
Income from continuing operations	\$1.25	\$1.51	\$2.36	\$3.03
Discontinued operations	(0.01)	)—	(0.01)	)—
Net income	\$1.24	\$1.52	\$2.35	\$3.03
Diluted earnings per share <sup>(4)</sup>				
Income from continuing operations	\$1.25	\$1.51	\$2.36	\$3.02
Discontinued operations	(0.01)	)—	(0.01)	)—
Net income	\$1.24	\$1.51	\$2.35	\$3.02

(1) See Note 19 to the Consolidated Financial Statements for the potential future impact of preferred stock dividends.

During the second quarters of 2016 and 2015, weighted-average options to purchase 5.3 million and 0.9 million

(2) shares of common stock, respectively, were outstanding but not included in the computation of earnings per share because the weighted-average exercise prices of \$75.43 and \$201.01 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 the three and six months ended June 30, 2016 and 2015 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.

## 10. 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	June 30, December 31,	
	2016	2015
Federal funds sold	\$—	\$ 25
Securities purchased under agreements to resell	133,019	119,777
Deposits paid for securities borrowed	95,664	99,873
Total	\$228,683	\$ 219,675

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	June 30, December 31,	
	2016	2015
Federal funds purchased	\$547	\$ 189
Securities sold under agreements to repurchase	141,056	131,650
Deposits received for securities loaned	16,398	14,657
Total	\$158,001	\$ 146,496

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 22 and 23 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 23 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.

As of June 30, 2016

In millions of dollars	Gross amounts of recognized assets	Gross amounts offset on the Consolidated Balance Sheet <sup>(1)</sup>	Net amounts of assets included on the Consolidated Balance Sheet <sup>(2)</sup>	Amounts not offset on the Consolidated Balance Sheet but eligible for offsetting upon counterparty default <sup>(3)</sup>	
				Balance Sheet	Net amounts <sup>(4)</sup>
Securities purchased under agreements to resell	\$ 186,000	\$ 52,981	\$ 133,019	\$ 100,605	\$ 32,414
Deposits paid for securities borrowed	95,664	—	95,664	14,402	81,262
Total	\$ 281,664	\$ 52,981	\$ 228,683	\$ 115,007	\$ 113,676

In millions of dollars	Gross amounts of recognized liabilities	Gross amounts offset on the Consolidated Balance Sheet <sup>(1)</sup>	Net amounts of liabilities included on the Consolidated Balance Sheet <sup>(2)</sup>	Amounts not offset on the Consolidated Balance Sheet but eligible for offsetting upon counterparty default <sup>(3)</sup>	
				Balance Sheet	Net amounts <sup>(4)</sup>
Securities sold under agreements to repurchase	\$ 194,037	\$ 52,981	\$ 141,056	\$ 74,448	\$ 66,608
Deposits received for securities loaned	16,398	—	16,398	1,761	14,637
Total	\$ 210,435	\$ 52,981	\$ 157,454	\$ 76,209	\$ 81,245

As of December 31, 2015

In millions of dollars

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	Gross amounts of recognized assets	Gross amounts offset on the Consolidated Balance Sheet <sup>(1)</sup>	Net amounts of assets included on the Consolidated Balance Sheet <sup>(2)</sup>	Amounts not offset on the Consolidated Balance Sheet but eligible for offsetting upon counterparty default <sup>(3)</sup>	Net amounts <sup>(4)</sup>
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
				Amounts not offset on the Consolidated Balance Sheet but eligible for offsetting upon counterparty default <sup>(3)</sup>	Net amounts <sup>(4)</sup>
	Gross amounts of recognized liabilities	Gross amounts offset on the Consolidated Balance Sheet <sup>(1)</sup>	Net amounts of liabilities included on the Consolidated Balance Sheet <sup>(2)</sup>		
In millions of dollars					
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

122



- (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 tables present the gross amount of liabilities associated with repurchase agreements and securities lending agreements, by remaining contractual maturity:

In millions of dollars	As of June 30, 2016				
	Open and overnight	Up to 30 days	31–90 days	Greater than 90 days	Total
Securities sold under agreements to repurchase	\$104,435	\$45,117	\$19,486	\$24,999	\$194,037
Deposits received for securities loaned	10,877	2,514	1,540	1,467	16,398
Total	\$115,312	\$47,631	\$21,026	\$26,466	\$210,435

In millions of dollars	As of December 31, 2015				
	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 tables present the gross amount of liabilities associated with repurchase agreements and securities lending agreements, by class of underlying collateral:

In millions of dollars	As of June 30, 2016		
	Repurchase agreements	Securities lending agreements	Total
U.S. Treasury and federal agency	\$82,556	\$ 29	\$82,585
State and municipal	356	—	356
Foreign government	60,023	928	60,951
Corporate bonds	17,062	1,033	18,095
Equity securities	8,599	14,365	22,964
Mortgage-backed securities	17,523	—	17,523
Asset-backed securities	4,345	—	4,345
Other	3,573	43	3,616
Total	\$194,037	\$ 16,398	\$210,435



In millions of dollars	As of December 31, 2015		
	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

## 11. 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	June 30, December 31,	
	2016	2015
Receivables from customers	\$8,878	\$ 10,435
Receivables from brokers, dealers, and clearing organizations	27,973	17,248
Total brokerage receivables <sup>(1)</sup>	\$36,851	\$ 27,683
Payables to customers	\$38,788	\$ 35,653
Payables to brokers, dealers, and clearing organizations	23,266	18,069
Total brokerage payables <sup>(1)</sup>	\$62,054	\$ 53,722

<sup>(1)</sup> 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.

## 12. 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	June 30, December 31,	
	2016	2015
Trading account assets		
Mortgage-backed securities <sup>(1)</sup>		
U.S. government-sponsored agency guaranteed	\$27,562	\$ 24,767
Prime	212	803
Alt-A	135	543
Subprime	477	516
Non-U.S. residential	171	523
Commercial	1,536	2,855
Total mortgage-backed securities	\$30,093	\$ 30,007
U.S. Treasury and federal agency securities		
U.S. Treasury	\$23,069	\$ 15,791
Agency obligations	2,574	2,005
Total U.S. Treasury and federal agency securities	\$25,643	\$ 17,796
State and municipal securities	\$3,179	\$ 2,696

Foreign government securities	63,118	56,467
Corporate	15,156	14,579
Derivatives <sup>(2)</sup>	72,213	56,184
Equity securities	47,007	56,495
Asset-backed securities <sup>(1)</sup>	3,540	3,956
Other trading assets <sup>(3)</sup>	11,815	11,776
Total trading account assets	\$271,764	\$ 249,956
Trading account liabilities		
Securities sold, not yet purchased	\$72,003	\$ 57,827
Derivatives <sup>(2)</sup>	63,204	57,592
Other trading liabilities <sup>(3)</sup>	1,100	2,093
Total trading account liabilities	\$136,307	\$ 117,512

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 20 to the Consolidated Financial Statements.

(1) Presented net, pursuant to enforceable master netting agreements. See Note 21 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 23 to the Consolidated Financial Statements. Also includes physical commodities accounted for at the lower of cost or fair value and unfunded credit products.

## 13. INVESTMENTS

## Overview

The following table presents the Company's investments by category:

In millions of dollars	June 30, December 31,	
	2016	2015
Securities available-for-sale (AFS)	\$312,765	\$ 299,136
Debt securities held-to-maturity (HTM) <sup>(1)</sup>	35,903	36,215
Non-marketable equity securities carried at fair value <sup>(2)</sup>	1,973	2,088
Non-marketable equity securities carried at cost <sup>(3)</sup>	5,652	5,516
Total investments	\$356,293	\$ 342,955

(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	Three Months		Six Months	
	Ended June		Ended June	
	30,	30,	2016	2015
Taxable interest	\$ 1,774	\$ 1,598	\$ 3,478	\$ 3,191
Interest exempt from U.S. federal income tax	118	49	234	72
Dividend income	45	123	80	218
Total interest and dividend income	\$ 1,937	\$ 1,770	\$ 3,792	\$ 3,481

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	Three		Six Months	
	Months		Months	
	Ended June		Ended June	
	30,	30,	2016	2015
Gross realized investment gains	\$244	\$357	\$623	\$714
Gross realized investment losses	(44 )	(174 )	(237 )	(224 )
Net realized gains on sale of investments	\$200	\$183	\$386	\$490

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.

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	Three Months Ended June 30, 2016	Six Months Ended June 30, 2016	Three Months Ended June 30, 2015	Six Months Ended June 30, 2015
In millions of dollars				
Carrying value of HTM securities sold	\$7	\$22	\$7	\$49
Net realized gain (loss) on sale of HTM securities	(1)	3	(1)	5
Carrying value of securities reclassified to AFS	24	—	150	94
OTTI losses on securities reclassified to AFS	(1)	—	(6)	(5)

126

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## Securities Available-for-Sale

The amortized cost and fair value of AFS securities were as follows:

In millions of dollars	June 30, 2016				December 31, 2015			
	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 <sup>(1)</sup>								
U.S. government-sponsored agency guaranteed	\$44,698	\$ 864	\$ 65	\$45,497	\$39,584	\$ 367	\$ 237	\$39,714
Prime	5	—	—	5	2	—	—	2
Alt-A	66	7	—	73	50	5	—	55
Non-U.S. residential	4,986	23	22	4,987	5,909	31	11	5,929
Commercial	361	5	—	366	573	2	4	571
Total mortgage-backed securities	\$50,116	\$ 899	\$ 87	\$50,928	\$46,118	\$ 405	\$ 252	\$46,271
U.S. Treasury and federal agency securities								
U.S. Treasury	\$111,902	\$2,587	\$ 13	\$114,476	\$113,096	\$ 254	\$ 515	\$112,835
Agency obligations	10,940	157	5	11,092	10,095	22	37	10,080
Total U.S. Treasury and federal agency securities	\$122,842	\$2,744	\$ 18	\$125,568	\$123,191	\$ 276	\$ 552	\$122,915
State and municipal <sup>(2)</sup>								
Foreign government	\$11,667	\$ 255	\$ 669	\$11,253	\$12,099	\$ 132	\$ 772	\$11,459
Corporate	93,408	657	226	93,839	88,751	402	479	88,674
Asset-backed securities <sup>(1)</sup>	20,505	242	160	20,587	19,492	129	291	19,330
Other debt securities	8,121	7	85	8,043	9,261	5	92	9,174
Total debt securities AFS	\$307,782	\$4,804	\$ 1,245	\$311,341	\$299,600	\$ 1,349	\$ 2,438	\$298,511
Marketable equity securities AFS	\$1,411	\$ 18	\$ 5	\$1,424	\$602	\$ 26	\$ 3	\$625
Total securities AFS	\$309,193	\$4,822	\$ 1,250	\$312,765	\$300,202	\$ 1,375	\$ 2,441	\$299,136

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 20 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 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.

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
June 30, 2016						
Securities AFS						
Mortgage-backed securities						
U.S. government-sponsored agency guaranteed	\$2,398	\$ 9	\$1,764	\$ 56	\$4,162	\$ 65
Prime	4	—	1	—	5	—
Alt-A	22	—	—	—	22	—
Non-U.S. residential	365	2	2,214	20	2,579	22
Commercial	29	—	50	—	79	—
Total mortgage-backed securities	\$2,818	\$ 11	\$4,029	\$ 76	\$6,847	\$ 87
U.S. Treasury and federal agency securities						
U.S. Treasury	\$3,398	\$ 13	\$—	\$ —	\$3,398	\$ 13
Agency obligations	188	—	137	5	325	5
Total U.S. Treasury and federal agency securities	\$3,586	\$ 13	\$137	\$ 5	\$3,723	\$ 18
State and municipal	\$226	\$ 8	\$3,751	\$ 661	\$3,977	\$ 669
Foreign government	21,672	170	4,086	56	25,758	226
Corporate	3,452	85	1,623	75	5,075	160
Asset-backed securities	2,937	46	3,778	39	6,715	85
Other debt securities	204	—	—	—	204	—
Marketable equity securities AFS	30	5	1	—	31	5
Total securities AFS	\$34,925	\$ 338	\$17,405	\$ 912	\$52,330	\$ 1,250
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	34,053	371	4,021	108	38,074	479
Corporate	7,024	190	1,919	101	8,943	291
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

The following table presents the amortized cost and fair value of AFS debt securities by contractual maturity dates:

In millions of dollars	June 30, 2016		December 31, 2015	
	Amortized cost	Fair value	Amortized cost	Fair value
<b>Mortgage-backed securities<sup>(1)</sup></b>				
Due within 1 year	\$171	\$171	\$114	\$114
After 1 but within 5 years	1,218	1,230	1,408	1,411
After 5 but within 10 years	2,260	2,314	1,750	1,751
After 10 years <sup>(2)</sup>	46,467	47,213	42,846	42,995
Total	\$50,116	\$50,928	\$46,118	\$46,271
<b>U.S. Treasury and federal agency securities</b>				
Due within 1 year	\$3,903	\$3,907	\$3,016	\$3,014
After 1 but within 5 years	106,077	108,292	107,034	106,878
After 5 but within 10 years	12,764	13,275	12,786	12,684
After 10 years <sup>(2)</sup>	98	94	355	339
Total	\$122,842	\$125,568	\$123,191	\$122,915
<b>State and municipal</b>				
Due within 1 year	\$769	\$763	\$3,289	\$3,287
After 1 but within 5 years	4,109	4,118	1,781	1,781
After 5 but within 10 years	322	337	502	516
After 10 years <sup>(2)</sup>	6,467	6,035	6,527	5,875
Total	\$11,667	\$11,253	\$12,099	\$11,459
<b>Foreign government</b>				
Due within 1 year	\$25,129	\$25,129	\$25,898	\$25,905
After 1 but within 5 years	50,290	50,457	43,514	43,464
After 5 but within 10 years	15,399	15,563	17,013	16,968
After 10 years <sup>(2)</sup>	2,590	2,690	2,326	2,337
Total	\$93,408	\$93,839	\$88,751	\$88,674
<b>All other<sup>(3)</sup></b>				
Due within 1 year	\$2,821	\$2,824	\$2,354	\$2,355
After 1 but within 5 years	15,670	15,814	14,035	14,054
After 5 but within 10 years	8,455	8,387	9,789	9,593
After 10 years <sup>(2)</sup>	2,803	2,728	3,263	3,190
Total	\$29,749	\$29,753	\$29,441	\$29,192
Total debt securities AFS	\$307,782	\$311,341	\$299,600	\$298,511

(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 <sup>(1)</sup>	Net unrealized gains (losses) recognized in AOCI	Carrying value <sup>(2)</sup>	Gross unrealized gains	Gross unrealized losses	Fair value
June 30, 2016						
Debt securities held-to-maturity						
Mortgage-backed securities <sup>(3)</sup>						
U.S. government agency guaranteed	\$ 17,158	\$ 129	\$ 17,287	\$ 424	\$ —	\$ 17,711
Prime	43	(8)	35	4	(1)	38
Alt-A	371	(43)	328	73	(2)	399
Subprime	2	—	2	10	—	12
Non-U.S. residential	1,166	(54)	1,112	35	(3)	1,144
Total mortgage-backed securities	\$ 18,740	\$ 24	\$ 18,764	\$ 546	\$ (6)	\$ 19,304
State and municipal <sup>(4)</sup>	\$ 8,476	\$ (403)	\$ 8,073	\$ 495	\$ (68)	\$ 8,500
Foreign government	2,231	—	2,231	2	(1)	2,232
Asset-backed securities <sup>(3)</sup>	6,842	(7)	6,835	15	(37)	6,813
Total debt securities held-to-maturity	\$ 36,289	\$ (386)	\$ 35,903	\$ 1,058	\$ (112)	\$ 36,849
December 31, 2015						
Debt securities held-to-maturity						
Mortgage-backed securities <sup>(3)</sup>						
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
Total mortgage-backed securities	\$ 19,534	\$ (1)	\$ 19,533	\$ 383	\$ (263)	\$ 19,653
State and municipal	\$ 8,581	\$ (438)	\$ 8,143	\$ 245	\$ (87)	\$ 8,301
Foreign government	4,068	—	4,068	28	(3)	4,093
Asset-backed securities <sup>(3)</sup>	4,485	(14)	4,471	34	(41)	4,464
Total debt securities held-to-maturity <sup>(5)</sup>	\$ 36,668	\$ (453)	\$ 36,215	\$ 690	\$ (394)	\$ 36,511

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.

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 20 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.

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. 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 (5) 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
June 30, 2016						
Debt securities held-to-maturity						
Mortgage-backed securities	\$48	\$ 3	\$77	\$ 3	\$125	\$ 6
State and municipal	224	8	1,755	60	1,979	68
Foreign government	278	1	—	—	278	1
Asset-backed securities	2	—	5,693	37	5,695	37
Total debt securities held-to-maturity	\$552	\$ 12	\$7,525	\$ 100	\$8,077	\$ 112
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

Excluded from the gross unrecognized losses presented in the above table are \$(386) million and \$(453) million of net unrealized losses recorded in AOCI as of June 30, 2016 and December 31, 2015, 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 June 30, 2016 and December 31, 2015.

The following table presents the carrying value and fair value of HTM debt securities by contractual maturity dates:

In millions of dollars	June 30, 2016		December 31, 2015	
	Carrying value	Fair value	Carrying value	Fair value
<b>Mortgage-backed securities</b>				
Due within 1 year	\$—	\$—	\$—	\$—
After 1 but within 5 years	456	471	172	172
After 5 but within 10 years	347	360	660	663
After 10 years <sup>(1)</sup>	17,961	18,473	18,701	18,818
<b>Total</b>	<b>\$18,764</b>	<b>\$19,304</b>	<b>\$19,533</b>	<b>\$19,653</b>
<b>State and municipal</b>				
Due within 1 year	\$441	\$434	\$309	\$305
After 1 but within 5 years	262	263	336	335
After 5 but within 10 years	216	231	262	270
After 10 years <sup>(1)</sup>	7,154	7,572	7,236	7,391
<b>Total</b>	<b>\$8,073</b>	<b>\$8,500</b>	<b>\$8,143</b>	<b>\$8,301</b>
<b>Foreign government</b>				
Due within 1 year	\$1,655	\$1,657	\$—	\$—
After 1 but within 5 years	576	575	4,068	4,093
After 5 but within 10 years	—	—	—	—
After 10 years <sup>(1)</sup>	—	—	—	—
<b>Total</b>	<b>\$2,231</b>	<b>\$2,232</b>	<b>\$4,068</b>	<b>\$4,093</b>
<b>All other<sup>(2)</sup></b>				
Due within 1 year	\$—	\$—	\$—	\$—
After 1 but within 5 years	—	—	—	—
After 5 but within 10 years	134	134	—	—
After 10 years <sup>(1)</sup>	6,701	6,679	4,471	4,464
<b>Total</b>	<b>\$6,835</b>	<b>\$6,813</b>	<b>\$4,471</b>	<b>\$4,464</b>
<b>Total debt securities held-to-maturity</b>	<b>\$35,903</b>	<b>\$36,849</b>	<b>\$36,215</b>	<b>\$36,511</b>

(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 Securities

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 Securities

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 22 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 June 30, 2016.

#### 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 follows:

	Three Months Ended June 30, 2016	Six Months Ended June 30, 2016
OTTI on Investments and Other Assets	AFS <sup>(1)</sup> HTM <sup>(2)</sup> Other Assets	Total AFS <sup>(1)</sup> HTM <sup>(2)</sup> Other Assets <sup>(3)</sup> Total
In millions of dollars		

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	\$2	\$1	\$—	\$3	\$3	\$1	\$—	\$4
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	\$2	\$1	\$—	\$3	\$3	\$1	\$—	\$4
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 and FX losses	28	17	70	115	223	24	332	579
Total impairment losses recognized in earnings	\$30	\$18	\$70	\$118	\$226	\$25	\$332	\$583

(1) Includes OTTI on non-marketable equity securities.

(2) Includes a \$160 million impairment related to AFS securities affected by changes in the Venezuela exchange rate during the six months ended June 30, 2016.

(3) The impairment charge is related to the carrying value of an equity investment.

OTTI on Investments and Other Assets	Three Months Ended June 30, 2015			Six Months Ended June 30, 2015				
	AFS	HTM	Other Assets	Total	AFS	HTM	Other assets	Total
In millions of dollars								
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	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
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	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
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 and FX losses	19	19	5	43	88	22	5	115
Total impairment losses recognized in earnings	\$19	\$19	\$5	\$43	\$88	\$22	\$5	\$115

(1) Includes OTTI on non-marketable equity securities.

The following are three-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:

In millions of dollars	Cumulative OTTI credit losses recognized in earnings on securities still held				
	Mar. 31, 2016 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	June 30, 2016 balance
AFS debt securities					
Mortgage-backed securities	\$294	\$1	\$—	\$—	\$295
State and municipal	—	—	—	—	—
Foreign government securities	170	—	—	—	170
Corporate	110	—	2	(2)	110
All other debt securities	166	—	—	—	166
Total OTTI credit losses recognized for AFS debt securities	\$740	\$1	\$2	\$(2)	\$741
HTM debt securities					
Mortgage-backed securities <sup>(1)</sup>	\$668	\$—	\$—	\$(24)	\$644
State and municipal	—	1	—	—	1
All other debt securities	132	—	—	(1)	131
Total OTTI credit losses recognized for HTM debt securities	\$800	\$1	\$—	\$(25)	\$776

(1) Primarily consists of Alt-A securities.



In millions of dollars	Cumulative OTTI credit losses recognized in earnings on securities still held				
	Mar. 31, 2015 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	June 30, 2015 balance
AFS debt securities					
Mortgage-backed securities	\$295	\$	\$		\$ 295
State and municipal	—	—	—	—	—
Foreign government securities	170	—	—	—	170
Corporate	112	—	—	—	112
All other debt securities	149	—	—	—	149
Total OTTI credit losses recognized for AFS debt securities	\$726	\$	\$		\$ 726
HTM debt securities					
Mortgage-backed securities <sup>(1)</sup>	\$668	\$	\$		\$ 668
All other debt securities	133	—	—	—	133
Total OTTI credit losses recognized for HTM debt securities	\$801	\$	\$		\$ 801

(1) Primarily consists of Alt-A securities.

The following are six-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:

In millions of dollars	Cumulative OTTI credit losses recognized in earnings on securities still held				
	Dec. 31, 2015 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	June 30, 2016 balance
AFS debt securities					
Mortgage-backed securities	\$294	\$ 1	\$ —	\$ —	\$ 295
State and municipal	8	—	—	(8)	—
Foreign government securities	170	—	—	—	170
Corporate	112	1	2	(5)	110
All other debt securities	170	—	—	(4)	166
Total OTTI credit losses recognized for AFS debt securities	\$754	\$ 2	\$ 2	\$ (17)	\$ 741
HTM debt securities					
Mortgage-backed securities <sup>(1)</sup>	\$668	—	\$ —	\$ (24)	\$ 644
State and municipal	—	1	—	—	1

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All other debt securities	132	—	—	(1	)	131	
Total OTTI credit losses recognized for HTM debt securities	\$800	\$	1	\$	—	(25)	) \$ 776

(1) Primarily consists of Alt-A securities.

136

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Cumulative OTTI credit losses recognized in earnings on securities still held

In millions of dollars	Cumulative OTTI credit losses recognized in earnings on securities still held				June 30, 2015 balance
	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	
AFS debt securities					
Mortgage-backed securities	\$295	\$—	\$—	\$—	\$ 295
Foreign government securities	171	—	—	(1)	170
Corporate	118	—	—	(6)	112
All other debt securities	149	—	—	—	149
Total OTTI credit losses recognized for AFS debt securities	\$733	\$—	\$—	(7)	\$ 726
HTM debt securities					
Mortgage-backed securities <sup>(1)</sup>	\$670	\$—	\$—	(2)	\$ 668
All other debt securities	133	—	—	—	133
Total OTTI credit losses recognized for HTM debt securities	\$803	\$—	\$—	(2)	\$ 801

(1) Primarily consists of Alt-A securities.

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.

In millions of dollars	Fair value		Unfunded commitments		Redemption frequency (if currently eligible) monthly, quarterly, annually period	Redemption notice
	June 30, 2016	December 31, 2015	June 30, 2016	December 31, 2015		
Hedge funds	\$2	\$ 3	\$ —	\$ —	Generally quarterly	10–95 days
Private equity funds <sup>(1)(2)</sup>	714	762	136	173	—	—
Real estate funds <sup>(2)(3)</sup>	71	130	22	21	—	—
Total <sup>(4)</sup>	\$787	\$ 895	\$ 158	\$ 194	—	—

(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.
- (4) Included in the total fair value of investments above are \$0.8 billion and \$0.9 billion of fund assets that are valued using NAVs provided by third-party asset managers as of June 30, 2016 and December 31, 2015, respectively.

## 14. 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:

In millions of dollars	June 30, 2016	December 31, 2015
In U.S. offices		
Mortgage and real estate <sup>(1)</sup>	\$77,242	\$ 80,281
Installment, revolving credit, and other Cards <sup>(2)</sup>	3,486	3,480
	120,113	112,800
Commercial and industrial	7,041	6,407
	\$207,882	\$ 202,968
In offices outside the U.S.		
Mortgage and real estate <sup>(1)</sup>	\$46,049	\$ 47,062
Installment, revolving credit, and other Cards	27,830	29,480
	25,844	27,342
Commercial and industrial	17,857	17,741
Lease financing	140	362
	\$117,720	\$ 121,987
Total consumer loans	\$325,602	\$ 324,955
Net unearned income	\$817	830
Consumer loans, net of unearned income	\$326,419	\$ 325,785

(1) Loans secured primarily by real estate.

(2) Includes \$11.3 billion of loans related to the acquisition of the Costco U.S. co-branded credit card portfolio, completed on June 17, 2016.

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 three and six months ended June 30, 2016 and 2015, the Company sold and/or reclassified to held-for-sale \$2.1 billion and \$4.7 billion, and \$1.5 billion and \$14.8 billion respectively, of consumer loans.

## 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 June 30, 2016

In millions of dollars	Total current <sup>(1)(2)</sup>	30–89 days past due <sup>(3)</sup>	90 days past due <sup>(3)</sup>	Past due government guaranteed <sup>(4)</sup>	Total loans <sup>(2)</sup>	Total non-accrual	90 days past due and accruing
In North America offices							
Residential first mortgages	\$ 53,014	\$ 583	\$ 350	\$ 1,885	\$55,832	\$ 1,281	\$ 1,600
Home equity loans <sup>(5)</sup>	20,391	252	433	—	21,076	740	—
Credit cards	118,460	1,219	1,129	—	120,808	—	1,128
Installment and other	4,695	62	36	—	4,793	64	—
Commercial banking loans	8,731	15	69	—	8,815	433	11
Total	\$ 205,291	\$ 2,131	\$ 2,017	\$ 1,885	\$211,324	\$ 2,518	\$ 2,739
In offices outside North America							
Residential first mortgages	\$ 38,849	\$ 235	\$ 161	\$ —	\$39,245	\$ 399	\$ —
Credit cards	24,276	434	396	—	25,106	282	256
Installment and other	25,611	357	138	—	26,106	308	—
Commercial banking loans	24,473	19	131	—	24,623	195	—
Total	\$ 113,209	\$ 1,045	\$ 826	\$ —	\$115,080	\$ 1,184	\$ 256
Total GCB and Citi Holdings consumer	\$ 318,500	\$ 3,176	\$ 2,843	\$ 1,885	\$326,404	\$ 3,702	\$ 2,995
Other <sup>(6)</sup>	14	1	—	—	15	3	—
Total Citigroup	\$ 318,514	\$ 3,177	\$ 2,843	\$ 1,885	\$326,419	\$ 3,705	\$ 2,995

(1) Loans less than 30 days past due are presented as current.

(2) Includes \$32 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 \$1.6 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, 2015

In millions of dollars	Total current <sup>(1)(2)</sup>	30–89 days past due <sup>(3)</sup>	≥ 90 days past due <sup>(3)</sup>	Past due government guaranteed <sup>(4)</sup>	Total loans <sup>(2)</sup>	Total non-accrual	90 days past due and accruing
<b>In North America offices</b>							
Residential first mortgages	\$ 53,146	\$ 846	\$ 564	\$ 2,318	\$56,874	\$ 1,216	\$ 1,997
Home equity loans <sup>(5)</sup>	22,335	136	277	—	22,748	1,017	—
Credit cards	110,814	1,296	1,243	—	113,353	—	1,243
Installment and other	4,576	80	33	—	4,689	56	2
Commercial banking loans	8,241	16	61	—	8,318	222	17
<b>Total</b>	<b>\$ 199,112</b>	<b>\$ 2,374</b>	<b>\$ 2,178</b>	<b>\$ 2,318</b>	<b>\$205,982</b>	<b>\$ 2,511</b>	<b>\$ 3,259</b>
<b>In offices outside North America</b>							
Residential first mortgages	\$ 39,551	\$ 240	\$ 175	\$ —	\$39,966	\$ 388	\$ —
Credit cards	25,698	477	442	—	26,617	261	278
Installment and other	27,664	317	220	—	28,201	226	—
Commercial banking loans	24,764	46	31	—	24,841	247	—
<b>Total</b>	<b>\$ 117,677</b>	<b>\$ 1,080</b>	<b>\$ 868</b>	<b>\$ —</b>	<b>\$119,625</b>	<b>\$ 1,122</b>	<b>\$ 278</b>
<b>Total GCB and Citi Holdings</b>	<b>\$ 316,789</b>	<b>\$ 3,454</b>	<b>\$ 3,046</b>	<b>\$ 2,318</b>	<b>\$325,607</b>	<b>\$ 3,633</b>	<b>\$ 3,537</b>
Other <sup>(6)</sup>	164	7	7	—	178	25	—
<b>Total Citigroup</b>	<b>\$ 316,953</b>	<b>\$ 3,461</b>	<b>\$ 3,053</b>	<b>\$ 2,318</b>	<b>\$325,785</b>	<b>\$ 3,658</b>	<b>\$ 3,537</b>

(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 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 (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<sup>(1)(2)</sup> June 30, 2016

In millions of dollars	Less than 620	≥ 620 but less than 660	Equal to or greater than 660
Residential first mortgages	\$2,978	\$2,742	\$45,580
Home equity loans	1,884	1,584	16,360
Credit cards	7,332	10,234	100,186
Installment and other	310	265	2,643
<b>Total</b>	<b>\$12,504</b>	<b>\$14,825</b>	<b>\$164,769</b>

- (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.

FICO score distribution in U.S. portfolio<sup>(1)(2)</sup> December 31, 2015

In millions of dollars	Less than 620	≥ 620 but less than 660	Equal to or greater than 660
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 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<sup>(1)(2)</sup> June 30, 2016

In millions of dollars	Less than or equal to 80%	Greater than 80% but less than or equal to 100%	Greater than 100%
Residential first mortgages	\$46,838	\$4,032	\$502
Home equity loans	13,283	4,341	2,104
Total	\$60,121	\$8,373	\$2,606

(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<sup>(1)(2)</sup> December 31, 2015

In millions of dollars	Less than or equal to 80%	Greater than 80% but less than or equal to 100%	Greater 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.

#### 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.

141

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The following tables present information about total impaired consumer loans and interest income recognized on impaired consumer loans:

In millions of dollars	Balance at June 30, 2016			Average carrying value <sup>(4)</sup>	Three months ended June 30, 2016		Six months ended June 30, 2016	
	Recorded investment <sup>(1)</sup>	Unpaid principal balance <sup>(2)</sup>	Related specific allowance <sup>(3)</sup>		Interest income recognized <sup>(5)</sup>	Interest income recognized <sup>(5)</sup>	Interest income recognized <sup>(5)</sup>	Interest income recognized <sup>(5)</sup>
Mortgage and real estate								
Residential first mortgages	\$4,732	\$5,183	\$ 532	\$6,366	\$ 43	\$ 111	\$ 104	\$ 252
Home equity loans	1,329	1,858	311	1,483	9	17	18	34
Credit cards	1,849	1,884	581	1,924	39	45	80	89
Installment and other								
Individual installment and other	468	552	226	469	7	8	14	39
Commercial banking loans	587	945	125	442	2	3	4	6
Total	\$8,965	\$10,422	\$ 1,775	\$10,684	\$ 100	\$ 184	\$ 220	\$ 420

(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) \$1,081 million of residential first mortgages, \$439 million of home equity loans and \$128 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	Balance, December 31, 2015			Average carrying value <sup>(4)</sup>
	Recorded investment <sup>(1)</sup>	Unpaid principal balance <sup>(2)</sup>	Related specific allowance <sup>(3)</sup>	
Mortgage and real estate				
Residential first mortgages	\$6,038	\$ 6,610	\$ 739	\$ 8,932
Home equity loans	1,399	1,972	406	1,778
Credit cards	1,950	1,986	604	2,079
Installment and other				
Individual installment and other	464	519	197	449
Commercial banking loans	341	572	100	361
Total	\$10,192	\$ 11,659	\$ 2,046	\$ 13,599

(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.

## Consumer Troubled Debt Restructurings

The following tables present consumer TDRs occurring:

In millions of dollars except number of loans modified	At and for the three months ended June 30, 2016						Average interest rate reduction
	Number of loans modified	Post-modification recorded investment <sup>(1)(2)</sup>	Deferred principal <sup>(3)</sup>	Contingent principal forgiveness <sup>(4)</sup>	Principal forgiveness <sup>(5)</sup>		
<b>North America</b>							
Residential first mortgages	1,346	\$ 205	\$ 1	\$ —	\$ 1	1	%
Home equity loans	814	30	—	—	—	3	
Credit cards	42,792	164	—	—	—	17	
Installment and other revolving	1,381	12	—	—	—	14	
Commercial markets <sup>(6)</sup>	41	6	—	—	—	—	
Total <sup>(8)</sup>	46,374	\$ 417	\$ 1	\$ —	\$ 1		
<b>International</b>							
Residential first mortgages	613	23	—	—	—	1	%
Credit cards	28,628	90	—	—	2	12	
Installment and other revolving	11,198	58	—	—	2	7	
Commercial markets <sup>(6)</sup>	42	20	—	—	—	—	
Total <sup>(8)</sup>	40,481	\$ 191	\$ —	\$ —	\$ 4		
In millions of dollars except number of loans modified	At and for the three months ended June 30, 2015						Average interest rate reduction
	Number of loans modified	Post-modification recorded investment <sup>(1)(7)</sup>	Deferred principal <sup>(3)</sup>	Contingent principal forgiveness <sup>(4)</sup>	Principal forgiveness <sup>(5)</sup>		
<b>North America</b>							
Residential first mortgages	2,709	\$ 366	\$ 2	\$ 1	\$ 8	1	%
Home equity loans	1,292	45	—	—	1	2	
Credit cards	44,848	184	—	—	—	16	
Installment and other revolving	1,092	9	—	—	—	14	
Commercial markets <sup>(6)</sup>	99	17	—	—	—	—	
Total <sup>(8)</sup>	50,040	\$ 621	\$ 2	\$ 1	\$ 9		
<b>International</b>							
Residential first mortgages	758	25	—	—	—	—	%
Credit cards	37,587	103	—	—	2	12	
Installment and other revolving	13,167	61	—	—	2	6	
Commercial markets <sup>(6)</sup>	48	22	—	—	—	1	
Total <sup>(8)</sup>	51,560	\$ 211	\$ —	\$ —	\$ 4		

(1) Post-modification balances include past due amounts that are capitalized at the modification date.

Post-modification balances in North America include \$21 million of residential first mortgages and \$4 million of home equity loans to borrowers who have gone through Chapter 7 bankruptcy in the three months ended June 30, (2)2016. These amounts include \$13 million of residential first mortgages and \$4 million of home equity loans that were newly classified as TDRs in the three months ended June 30, 2016, based on previously received OCC guidance.

Represents portion of contractual loan principal that is non-interest bearing but still due from the borrower. Such (3)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 banking 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 \$62 million of residential first mortgages and \$15 million of home equity loans to borrowers who have gone through Chapter 7 bankruptcy in the three months ended June 30, 2015. These amounts include \$35 million of residential first mortgages and \$12 million of home equity loans that were newly classified as TDRs in the three months ended June 30, 2015, 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.

In millions of dollars except number of loans modified	At and for the six months ended June 30, 2016						
	Number of loans modified	Post-modification recorded investment <sup>(1)(2)</sup>	Deferred principal <sup>(3)</sup>	Contingent principal forgiveness <sup>(4)</sup>	Principal forgiveness <sup>(5)</sup>	Average interest rate reduction <sup>(3)</sup>	
North America							
Residential first mortgages	2,814	\$ 417	\$ 3	\$ —	\$ 2	1	%
Home equity loans	1,672	60	—	—	—	3	
Credit cards	91,901	353	—	—	—	17	
Installment and other revolving	2,766	24	—	—	—	14	
Commercial banking <sup>(6)</sup>	64	11	—	—	—	—	
Total <sup>(8)</sup>	99,217	\$ 865	\$ 3	\$ —	\$ 2		
International							
Residential first mortgages	1,032	\$ 38	\$ —	\$ —	\$ —	1	%
Credit cards	80,835	213	—	—	4	12	
Installment and other revolving	32,842	140	—	—	4	7	
Commercial banking <sup>(6)</sup>	73	52	—	—	—	—	
Total <sup>(8)</sup>	114,782	\$ 443	\$ —	\$ —	\$ 8		
In millions of dollars except number of loans modified	At and for the six months ended June 30, 2015						
	Number of loans modified	Post-modification recorded investment <sup>(1)(7)</sup>	Deferred principal <sup>(3)</sup>	Contingent principal forgiveness <sup>(4)</sup>	Principal forgiveness <sup>(5)</sup>	Average interest rate reduction <sup>(3)</sup>	
North America							
Residential first mortgages	5,802	\$ 773	\$ 6	\$ 3	\$ 17	1	%
Home equity loans	2,550	90	1	—	2	2	
Credit cards	95,158	396	—	—	—	16	
Installment and other revolving	2,076	18	—	—	—	13	
Commercial banking <sup>(6)</sup>	156	28	—	—	—	—	
Total <sup>(8)</sup>	105,742	\$ 1,305	\$ 7	\$ 3	\$ 19		
International							
Residential first mortgages	1,641	\$ 49	\$ —	\$ —	\$ —	—	%
Credit cards	78,018	201	—	—	4	13	
Installment and other revolving	29,114	131	—	—	4	5	
Commercial banking <sup>(6)</sup>	125	49	—	—	—	1	
Total <sup>(8)</sup>	108,898	\$ 430	\$ —	\$ —	\$ 8		

(1) Post-modification balances include past due amounts that are capitalized at the modification date.

Post-modification balances in North America include \$41 million of residential first mortgages and \$9 million of home equity loans to borrowers who have gone through Chapter 7 bankruptcy in the six months ended June 30,

(2) 2016. These amounts include \$27 million of residential first mortgages and \$9 million of home equity loans that were newly classified as TDRs in the six months ended June 30, 2016, based on previously received OCC guidance.

Represents portion of contractual loan principal that is non-interest bearing but still due from the borrower. Such (3) 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 banking 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 \$127 million of residential first mortgages and \$29 million of home equity loans to borrowers who have gone through Chapter 7 bankruptcy in the six months ended June 30, 2015. These amounts include \$73 million of residential first mortgages and \$24 million of home equity loans that were newly classified as TDRs in the six months ended June 30, 2015, 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 banking loans, where default is defined as 90 days past due.

	Three		Six	
	Months		Months	
	Ended		Ended	
	June 30,		June 30,	
In millions of dollars	2016	2015	2016	2015
North America				
Residential first mortgages	\$52	\$117	\$139	\$227
Home equity loans	6	10	14	21
Credit cards	46	49	95	92
Installment and other revolving	2	2	4	3
Commercial banking	1	1	2	3
Total	\$107	\$179	\$254	\$346
International				
Residential first mortgages	\$3	\$6	\$6	\$12
Credit cards	37	36	73	71
Installment and other revolving	24	23	47	46
Commercial banking	6	7	15	15
Total	\$70	\$72	\$141	\$144



### Corporate Loans

Corporate loans represent loans and leases managed by ICG. The following table presents information by corporate loan type:

In millions of dollars	June 30, 2016	December 31, 2015
In U.S. offices		
Commercial and industrial	\$50,286	\$ 41,147
Financial institutions	32,001	36,396
Mortgage and real estate <sup>(1)</sup>	40,175	37,565
Installment, revolving credit and other	32,491	33,374
Lease financing	1,546	1,780
	\$156,499	\$ 150,262
In offices outside the U.S.		
Commercial and industrial	\$87,125	\$ 82,358
Financial institutions	27,856	28,704
Mortgage and real estate <sup>(1)</sup>	5,455	5,106
Installment, revolving credit and other	24,825	20,853
Lease financing	255	303
Governments and official institutions	5,757	4,911
	\$151,273	\$ 142,235
Total corporate loans	\$307,772	\$ 292,497
Net unearned income	(676	)(665
Corporate loans, net of unearned income	\$307,096	\$ 291,832

(1) Loans secured primarily by real estate.

The Company sold and/or reclassified to held-for-sale \$0.8 billion and \$1.3 billion of corporate loans during the three and six months ended June 30, 2016, respectively and \$0.5 billion and \$1.1 billion during the three and six months ended June 30, 2015, respectively. The Company did not have significant purchases of corporate loans classified as held-for-investment for the three and six months ended June 30, 2016 or 2015.

### 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 past due 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 June 30, 2016

In millions of dollars	30–89 days past due and accruing <sup>(1)</sup>	≥ 90 days past due and accruing <sup>(1)</sup>	Total past due and accruing	Total non-accrual <sup>(2)</sup>	Total current <sup>(3)</sup>	Total loans <sup>(4)</sup>
Commercial and industrial	\$ 44	\$ —	\$ 44	\$ 1,962	\$132,551	\$134,557
Financial institutions	51	—	51	194	59,147	59,392
Mortgage and real estate	325	—	325	183	44,940	45,448
Leases	35	9	44	60	1,697	1,801
Other	65	71	136	61	61,599	61,796
Loans at fair value						4,102
Purchased distressed loans						—
Total	\$ 520	\$ 80	\$ 600	\$ 2,460	\$299,934	\$307,096

## Corporate Loan Delinquency and Non-Accrual Details at December 31, 2015

In millions of dollars	30–89 days past due and accruing <sup>(1)</sup>	≥ 90 days past due and accruing <sup>(1)</sup>	Total past due and accruing	Total non-accrual <sup>(2)</sup>	Total current <sup>(3)</sup>	Total loans <sup>(4)</sup>
Commercial and industrial	\$ 87	\$ 4	\$ 91	\$ 1,071	\$118,465	\$119,627
Financial institutions	16	—	16	173	64,128	64,317
Mortgage and real estate	137	7	144	232	42,095	42,471
Leases	—	—	—	76	2,006	2,082
Other	29	—	29	44	58,286	58,359
Loans at fair value						4,971
Purchased distressed loans						5
Total	\$ 269	\$ 11	\$ 280	\$ 1,596	\$284,980	\$291,832

(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 <sup>(1)</sup>	
	June 30, 2016	December 31, 2015
Investment grade <sup>(2)</sup>		
Commercial and industrial	\$92,775	\$ 85,828
Financial institutions	50,507	53,522
Mortgage and real estate	21,066	18,869
Leases	1,289	1,725
Other	55,129	51,449
Total investment grade	\$220,766	\$ 211,393
Non-investment grade <sup>(2)</sup>		
Accrual		
Commercial and industrial	\$39,819	\$ 32,726
Financial institutions	8,691	10,622
Mortgage and real estate	2,263	2,800
Leases	452	282
Other	6,607	6,867
Non-accrual		
Commercial and industrial	1,962	1,071
Financial institutions	194	173
Mortgage and real estate	183	232
Leases	60	76
Other	61	44
Total non-investment grade	\$60,292	\$ 54,893
Private bank loans managed on a delinquency basis <sup>(2)</sup>	\$21,936	\$ 20,575
Loans at fair value	4,102	4,971
Corporate loans, net of unearned income	\$307,096	\$ 291,832

(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

In millions of dollars	June 30, 2016			Three Months Ended June 30, 2016			Six Months Ended June 30, 2016		
	Recorded investment <sup>(1)</sup>	Unpaid principal balance	Related specific allowance	Average carrying value <sup>(2)</sup>	Interest recognized <sup>(3)</sup>	Interest recognized <sup>(3)</sup>	Interest recognized <sup>(3)</sup>	Interest recognized <sup>(3)</sup>	Interest recognized <sup>(3)</sup>
Non-accrual corporate loans									
Commercial and industrial	\$ 1,962	\$ 2,343	\$ 417	\$ 1,490	\$ 7		\$ 17		
Financial institutions	194	203	9	174	1		3		
Mortgage and real estate	183	304	11	214	1		2		
Lease financing	60	60	1	53	—		—		
Other	61	117	47	60	3		3		
Total non-accrual corporate loans	\$ 2,460	\$ 3,027	\$ 485	\$ 1,991	\$ 12		\$ 25		

In millions of dollars	December 31, 2015			Average carrying value <sup>(2)</sup>		
	Recorded investment <sup>(1)</sup>	Unpaid principal balance	Related specific allowance	Average carrying value <sup>(2)</sup>	Interest recognized <sup>(3)</sup>	Interest recognized <sup>(3)</sup>
Non-accrual corporate loans						
Commercial and industrial	\$ 1,071	\$ 1,224	\$ 246	\$ 859		
Financial institutions	173	196	10	194		
Mortgage and real estate	232	336	21	240		
Lease financing	76	76	54	62		
Other	44	114	32	39		
Total non-accrual corporate loans	\$ 1,596	\$ 1,946	\$ 363	\$ 1,394		

In millions of dollars	June 30, 2016		December 31, 2015	
	Recorded investment <sup>(1)</sup>	Related specific allowance	Recorded investment <sup>(1)</sup>	Related specific allowance
Non-accrual corporate loans with valuation allowances				
Commercial and industrial	\$ 941	\$ 417	\$ 571	\$ 246
Financial institutions	14	9	18	10
Mortgage and real estate	34	11	60	21
Lease financing	59	1	75	54
Other	55	47	40	32
Total non-accrual corporate loans with specific allowance	\$ 1,103	\$ 485	\$ 764	\$ 363
Non-accrual corporate loans without specific allowance				
Commercial and industrial	\$ 1,021		\$ 500	
Financial institutions	180		155	
Mortgage and real estate	149		172	
Lease financing	1		1	
Other	6		4	
Total non-accrual corporate loans without specific allowance	\$ 1,357	N/A	\$ 832	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 three- and six-month periods ended June 30, 2015 was \$4 million and \$5 million, respectively.

## Corporate Troubled Debt Restructurings

The following table presents corporate TDR activity at and for the three months ended June 30, 2016:

In millions of dollars	Carrying Value	TDRs involving changes in the amount and/or timing of principal payments <sup>(1)</sup>	TDRs involving changes in the amount and/or timing of interest payments <sup>(2)</sup>	TDRs involving changes in the amount and/or timing of both principal and interest payments
Commercial and industrial	\$ 105	\$ 73	\$ 32	\$ —
Mortgage and real estate	1	—	—	1
Other	142	—	142	—
Total	\$ 248	\$ 73	\$ 174	\$ 1

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 corporate TDR activity at and for the three months ended June 30, 2015:

In millions of dollars	Carrying Value	TDRs involving changes in the amount and/or timing of principal payments <sup>(1)</sup>	TDRs involving changes in the amount and/or timing of interest payments <sup>(2)</sup>	TDRs involving changes in the amount and/or timing of both principal and interest payments
Commercial and industrial	\$ 66	\$ 33	\$ —	—\$ 33
Mortgage and real estate	11	1	—	10
Total	\$ 77	\$ 34	\$ —	—\$ 43

(1) 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 corporate TDR activity at and for the six months ended June 30, 2016:

In millions of dollars	Carrying Value	TDRs involving changes in the amount and/or timing of principal payments <sup>(1)</sup>	TDRs involving changes in the amount and/or timing of interest payments <sup>(2)</sup>	TDRs involving changes in the amount and/or timing of both principal and interest payments
Commercial and industrial	\$ 203	\$ 73	\$ 32	\$ 98
Mortgage and real estate	5	—	—	5
Other	142	—	142	—
Total	\$ 350	\$ 73	\$ 174	\$ 103

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)

(2) TDRs involving changes in the amount or timing of interest payments may involve a below-market interest rate.

The following table presents corporate TDR activity at and for the six months ended June 30, 2015:

In millions of dollars	Carrying Value	TDRs involving changes in the amount and/or timing of principal payments <sup>(1)</sup>	TDRs involving changes in the amount and/or timing of interest payments <sup>(2)</sup>	TDRs involving changes in the amount and/or timing of both principal and interest payments
Commercial and industrial	\$ 66	\$ 33	\$	—\$ 33
Mortgage and real estate	12	2	—	10
Total	\$ 78	\$ 35	\$	—\$ 43

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 banking loans, where default is defined as 90 days past due.

In millions of dollars	TDR balances at June 30, 2016	TDR loans in payment default during the three months ended June 30, 2016	TDR loans in payment default six months ended June 30, 2016	TDR balances at June 30, 2015	TDR loans in payment default during the three months ended June 30, 2015	TDR loans in payment default six months ended June 30, 2015
Commercial and industrial	\$ 323	\$ 7	\$ 7	\$ 118	\$ —	\$ —
Loans to financial institutions	—	—	—	1	1	1
Mortgage and real estate	130	—	—	113	—	—
Other	288	—	—	326	—	—
Total <sup>(1)</sup>	\$ 741	\$ 7	\$ 7	\$ 558	\$ 1	\$ 1

(1) The above tables reflect activity for loans outstanding as of the end of the reporting period that were considered TDRs.



## 15. ALLOWANCE FOR CREDIT LOSSES

In millions of dollars	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Allowance for loan losses at beginning of period	\$12,712	\$14,598	\$12,626	\$15,994
Gross credit losses	(2,048 )	(2,335 )	(4,191 )	(4,793 )
Gross recoveries <sup>(1)</sup>	432	415	851	916
Net credit losses (NCLs) <sup>(2)</sup>	\$(1,616 )	\$(1,920 )	\$(3,340 )	\$(3,877 )
NCLs	\$1,616	\$1,920	\$3,340	\$3,877
Net reserve releases	(90 )	(199 )	(48 )	(290 )
Net specific reserve releases	(136 )	(206 )	(16 )	(317 )
Total provision for loan losses	\$1,390	\$1,515	\$3,276	\$3,270
Other, net <sup>(3)</sup>	(182 )	(118 )	(258 )	(1,312 )
Allowance for loan losses at end of period	\$12,304	\$14,075	\$12,304	\$14,075
Allowance for credit losses on unfunded lending commitments at beginning of period	\$1,473	\$1,023	\$1,402	\$1,063
Provision (release) for unfunded lending commitments	(30 )	(48 )	41	(85 )
Other, net	(11 )	(2 )	(11 )	(5 )
Allowance for credit losses on unfunded lending commitments at end of period <sup>(4)</sup>	\$1,432	\$973	\$1,432	\$973
Total allowance for loans, leases, and unfunded lending commitments	\$13,736	\$15,048	\$13,736	\$15,048

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

As a result of the entry into an agreement in March 2015 to sell OneMain Financial (OneMain), OneMain was classified as held-for-sale (HFS) at the end of the first quarter of 2015. As a result of HFS accounting treatment, approximately \$160 million of net credit losses were recorded as a reduction in revenue (Other revenue) during the second quarter of 2015.

The second quarter of 2016 includes a reduction of approximately \$101 million related to the sale or transfer to HFS of various loan portfolios, including a reduction of \$24 million related to the transfer of a real estate loan portfolio to HFS. Additionally, the second quarter includes a reduction of approximately \$75 million related to FX translation. The first quarter of 2016 includes a reduction of approximately \$148 million related to the sale or transfer to HFS of various loan portfolios, including a reduction of \$29 million related to the transfer of a real estate loan portfolio to HFS. Additionally, the first quarter of 2016 includes an increase of approximately \$63

million related to FX translation. The second quarter of 2015 includes a reduction of approximately \$88 million related to the sale or transfer to HFS of various loan portfolios, including a reduction of \$34 million related to a transfer of a real estate loan portfolio to HFS. Additionally, the second quarter of 2015 includes a reduction of approximately \$39 million related to FX translation. The first quarter of 2015 includes a reduction of approximately \$1.0 billion related to the sale or transfer to HFS of various loan portfolios, including a reduction of \$281 million related to a transfer of a real estate loan portfolio to HFS. Additionally, the first quarter of 2015 includes a reduction of approximately \$145 million related to FX translation.

(4) Represents additional credit loss reserves for unfunded lending commitments and letters of credit recorded in Other liabilities on the Consolidated Balance Sheet.

## Allowance for Credit Losses and Investment in Loans

In millions of dollars	Three Months Ended			June 30, 2015		
	June 30, 2016	Corporate	Consumer	Total	Corporate	Consumer
Allowance for loan losses at beginning of period	\$2,905	\$9,807	\$12,712	\$2,546	\$12,052	\$14,598

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Charge-offs	(158	)(1,890	)(2,048	)(126	)(2,209	)(2,335	)
Recoveries	16	416	432	19	396	415	
Replenishment of net charge-offs	142	1,474	1,616	107	1,813	1,920	
Net reserve releases	(16	)(74	)(90	)(32	)(167	)(199	)
Net specific reserve releases	(11	)(125	)(136	)(119	)(87	)(206	)
Other	(6	)(176	)(182	)11	(129	)(118	)
Ending balance	\$2,872	\$ 9,432	\$ 12,304	\$ 2,406	\$ 11,669	\$ 14,075	

152

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In millions of dollars	Six Months Ended					
	June 30, 2016			June 30, 2015		
	Corporate	Consumer	Total	Corporate	Consumer	Total
Allowance for loan losses at beginning of period	\$2,791	\$ 9,835	\$12,626	\$2,447	\$13,547	\$15,994
Charge-offs	(382 )	(3,809 )	(4,191 )	(152 )	(4,641 )	(4,793 )
Recoveries	29	822	851	52	864	916
Replenishment of net charge-offs	353	2,987	3,340	100	3,777	3,877
Net reserve releases	(12 )	(36 )	(48 )	80	(370 )	(290 )
Net specific reserve builds (releases)	90	(106 )	(16 )	(116 )	(201 )	(317 )
Other	3	(261 )	(258 )	(5 )	(1,307 )	(1,312 )
Ending balance	\$2,872	\$ 9,432	\$12,304	\$2,406	\$11,669	\$14,075

In millions of dollars	June 30, 2016			December 31, 2015		
	Corporate	Consumer	Total	Corporate	Consumer	Total
Allowance for loan losses						
Determined in accordance with ASC 450	\$2,386	\$7,650	\$10,036	\$2,408	\$7,776	\$10,184
Determined in accordance with ASC 310-10-35	486	1,775	2,261	380	2,046	2,426
Determined in accordance with ASC 310-30	—	7	7	3	13	16
Total allowance for loan losses	\$2,872	\$9,432	\$12,304	\$2,791	\$9,835	\$12,626
Loans, net of unearned income						
Loans collectively evaluated for impairment in accordance with ASC 450	\$300,328	\$317,210	\$617,538	\$285,053	\$315,314	\$600,367
Loans individually evaluated for impairment in accordance with ASC 310-10-35	2,666	8,965	11,631	1,803	10,192	11,995
Loans acquired with deteriorated credit quality in accordance with ASC 310-30	—	212	212	5	245	250
Loans held at fair value	4,102	32	4,134	4,971	34	5,005
Total loans, net of unearned income	\$307,096	\$326,419	\$633,515	\$291,832	\$325,785	\$617,617

## 16. GOODWILL AND INTANGIBLE ASSETS

## Goodwill

The changes in Goodwill were as follows:

In millions of dollars

Balance, December 31, 2015	\$22,349
Foreign exchange translation and other	239
Divestitures	(13 )
Balance at March 31, 2016	\$22,575
Foreign exchange translation and other	(79 )
Balance at June 30, 2016	\$22,496

The goodwill impairment testing process, including the methodology and assumptions used to estimate the fair value of the reporting units, is disclosed in more detail in Note 1 of Citigroup's 2015 Annual Report on Form 10-K. During the first quarter of 2016, Citigroup announced its intention to exit its consumer businesses in Argentina, Brazil and Colombia. These businesses, which previously had been reported as part of Latin America GCB, are reported as part of Citi Holdings—Consumer Latin America beginning in the first quarter of 2016. In addition, the other component businesses of Latin America GCB, except the Mexico consumer business, were either transferred to the ICG reporting units (Banking and Markets) or North America GCB reporting unit (International Personal Banking). Furthermore, the remaining businesses in EMEA GCB, except for the commercial business which was transferred to the ICG—Banking reporting unit, are reported under Asia GCB.

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, 2016 for the impacted reporting units resulting in no impairment under the legacy and current reporting unit structures. There were no other triggering events during the first quarter of 2016.

During the second quarter of 2016, there were no triggering events that would more-likely-than-not reduce the fair value of a reporting unit below its carrying value for all reporting units with goodwill balances.

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 June 30, 2016.

In millions of dollars

Reporting unit <sup>(1)(2)</sup>	Goodwill
North America Global Consumer Banking	\$6,766
Asia Global Consumer Banking <sup>(3)</sup>	5,002
Latin America Global Consumer Banking <sup>(4)</sup>	1,176
ICG—Banking	2,892
ICG—Markets and Securities Services	6,580

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Citi Holdings—Consumer Latin America	80
Total	\$ 22,496

- (1) Citi Holdings—Other and Citi Holdings—ICG are excluded from the table as there is no goodwill allocated to them.
- (2) Citi Holdings—Consumer EMEA, is excluded from the table as the entire reporting unit, together with allocated goodwill, is classified as held-for-sale as of June 30, 2016.
- (3) Asia Global Consumer Banking includes the consumer businesses in UK, Russia, Poland, UAE and Bahrain beginning the first quarter of 2016.
- (4) Latin America Global Consumer Banking contains only the consumer business in Mexico beginning the first quarter of 2016.



## Intangible Assets

The components of intangible assets were as follows:

In millions of dollars	June 30, 2016			December 31, 2015		
	Gross carrying amount	Accumulated amortization	Net carrying amount	Gross carrying amount	Accumulated amortization	Net carrying amount
Purchased credit card relationships	\$8,394	\$ 6,543	\$ 1,851	\$7,606	\$ 6,520	\$ 1,086
Core deposit intangibles	869	818	51	1,050	969	81
Other customer relationships	530	289	241	471	252	219
Present value of future profits	35	30	5	37	31	6
Indefinite-lived intangible assets	238	—	238	284	—	284
Other <sup>(1)</sup>	5,764	2,629	3,135	4,659	2,614	2,045
Intangible assets (excluding MSR's)	\$15,830	\$ 10,309	\$ 5,521	\$14,107	\$ 10,386	\$ 3,721
Mortgage servicing rights (MSR's)	1,324	—	1,324	1,781	—	1,781
Total intangible assets	\$17,154	\$ 10,309	\$ 6,845	\$15,888	\$ 10,386	\$ 5,502

(1) Includes contract-related intangible assets.

The changes in intangible assets were as follows:

In millions of dollars	Net carrying amount at			Net carrying amount at	
	December 31, 2015	Acquisitions/divestitures <sup>(1)</sup>	Amortization	FX translation and other	June 30, 2016
Purchased credit card relationships	\$ 1,086	\$ 848	\$ (98 )	\$ 15	\$ 1,851
Core deposit intangibles	81	(13 )	(15 )	(2 )	51
Other customer relationships	219	—	(12 )	34	241
Present value of future profits	6	—	—	(1 )	5
Indefinite-lived intangible assets	284	(18 )	—	(28 )	238
Other	2,045	1,205	(133 )	18	3,135
Intangible assets (excluding MSR's)	\$ 3,721	\$ 2,022	\$ (258 )	\$ 36	\$ 5,521
Mortgage servicing rights (MSR's) <sup>(2)</sup>	1,781	—	—	—	1,324
Total intangible assets	\$ 5,502	—	—	—	\$ 6,845

Reflects the recognition during the second quarter of 2016 of additional purchased credit card relationships and (1) contract-related intangible assets as a result of the acquisition of the Costco cards portfolio, as well as the renewal and extension of the co-branded credit card program agreement with American Airlines.

(2) For additional information on Citi's MSR's, including the rollforward for the six months ended June 30, 2016, see Note 20 to the Consolidated Financial Statements.

## 17. DEBT

## Short-Term Borrowings

In millions of dollars	June 30, December 31,	
	2016	2015
	Balance	Balance
Commercial paper	\$9,982	\$ 9,995
Other borrowings	8,426	11,084
Total	\$18,408	\$ 21,079

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	June 30, December	
	2016	31, 2015
Citigroup Inc. <sup>(1)</sup>	\$148,686	\$142,157
Bank <sup>(2)</sup>	52,627	55,131
Broker-dealer <sup>(3)</sup>	6,135	3,987
Total	\$207,448	\$201,275

(1) Parent holding company, Citigroup Inc.

(2) Represents Citibank entities as well as other bank entities. At June 30, 2016 and December 31, 2015, collateralized long-term advances from the Federal Home Loan Banks were \$19.6 billion and \$17.8 billion, respectively.

(3) Represents broker-dealer subsidiaries that are consolidated into Citigroup Inc., the parent holding company.

Long-term debt outstanding includes trust preferred securities with a balance sheet carrying value of \$1.7 billion at both June 30, 2016 and December 31, 2015.

The following table summarizes the Company's outstanding trust preferred securities at June 30, 2016:

Trust	Issuance date	Securities issued	Liquidation value <sup>(1)</sup>	Coupon rate <sup>(2)</sup>	Junior subordinated debentures owned by trust			Redeemable by issuer beginning
					Common shares issued to parent	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

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Citigroup Capital XIII	Sept. 2010	89,840,000	2,246	3 mo LIBOR + 637 bps	1,000	2,246	Oct. 30, 2040	Oct. 30, 2015
Citigroup Capital XVIII	June 2007	99,901	134	6.829	50	134	June 28, 2067	June 28, 2017
Total obligated			\$ 2,574			\$2,580		

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.

## 18. CHANGES IN ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

Changes in each component of Citigroup's Accumulated other comprehensive income (loss) were as follows:  
Three Months Ended June 30, 2016

In millions of dollars	Net unrealized gains (losses) on investment securities	Debt valuation adjustment (DVA) <sup>(1)</sup>	Cash flow hedges <sup>(2)</sup>	Benefit plans <sup>(3)</sup>	Foreign currency translation adjustment (CTA), net of hedges <sup>(4)</sup>	Accumulated other comprehensive income (loss)		
Balance, March 31, 2016	\$ 1,127	\$ 178	\$ (300 )	\$(5,581)	\$(22,050)	\$( 26,626 )		
Other comprehensive income before reclassifications	1,025	16	115	(66 )	(552 )	538		
Increase (decrease) due to amounts reclassified from AOCI	(98 )	(4 )	36	39	—	(27 )		
Change, net of taxes	\$ 927	\$ 12	\$ 151	\$(27 )	\$(552 )	\$ 511		
Balance at June 30, 2016	\$ 2,054	\$ 190	\$ (149 )	\$(5,608)	\$(22,602)	\$( 26,115 )		
Six Months Ended June 30, 2016:								
Balance, December 31, 2015			\$(907 )	\$—	\$(617)	\$(5,116)	\$(22,704)	\$(29,344)
Adjustment to opening balance, net of taxes <sup>(1)</sup>			—	(15 )	—	—	—	(15 )
Adjusted balance, beginning of period			\$(907 )	\$(15 )	\$(617)	\$(5,116)	\$(22,704)	\$(29,359)
Other comprehensive income before reclassifications	3,051	208	406	(566 )	102	3,201		
Increase (decrease) due to amounts reclassified from AOCI	(90 )	(3 )	62	74	—	43		
Change, net of taxes	\$2,961	\$205	\$468	\$(492 )	\$102	\$3,244		
Balance at June 30, 2016	\$2,054	\$190	\$(149)	\$(5,608)	\$(22,602)	\$(26,115)		
Three Months Ended June 30, 2015								

In millions of dollars	Net unrealized gains (losses) on investment securities	Cash flow hedges <sup>(2)</sup>	Benefit plans <sup>(3)</sup>	Foreign currency translation adjustment (CTA), net of hedges <sup>(4)</sup>	Accumulated other comprehensive income (loss)
Balance, March 31, 2015	\$ 648	\$( 823 )	\$(5,249)	\$(19,267)	\$( 24,691 )
Other comprehensive income before reclassifications	(844 )	22	539	(148 )	(431 )
Increase (decrease) due to amounts reclassified from AOCI	(91 )	70	39	—	18
Change, net of taxes	\$( 935 )	\$ 92	\$578	\$(148 )	\$( 413 )
Balance, June 30, 2015	\$( 287 )	\$( 731 )	\$(4,671)	\$(19,415)	\$( 25,104 )
Six Months Ended June 30, 2015:					
Balance, December 31, 2014	\$57	\$(909)	\$(5,159)	\$(17,205)	\$(23,216)
Other comprehensive income before reclassifications	(103 )	54	408	(2,210 )	(1,851 )
Increase (decrease) due to amounts reclassified from AOCI	(241 )	124	80	—	(37 )
Change, net of taxes	\$(344)	\$178	\$488	\$(2,210 )	\$(1,888 )
Balance, June 30, 2015	\$(287)	\$(731)	\$(4,671)	\$(19,415)	\$(25,104)

Beginning in the first quarter of 2016, changes in DVA are reflected as a component of AOCI, pursuant to the (1) adoption of only the provisions of ASU 2016-01 relating to the presentation of DVA on fair value option liabilities. See Note 1 to the Consolidated Financial Statements for further information regarding this change.

(2) Primarily driven by Citigroup's pay fixed/receive floating interest rate swap programs that hedge the floating rates on liabilities.

Primarily reflects adjustments based on the quarterly actuarial valuations of the Company's significant pension and (3) 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, Japanese yen, euro, and Brazilian real against the U.S. dollar, and changes in related tax effects and hedges for the quarter ended June 30, 2016. Primarily reflects the movements in (by order of impact) the Japanese yen, euro, Brazilian real and Chilean peso against the (4) U.S. dollar, and changes in related tax effects and hedges for quarter ended March 31, 2016. Primarily reflects the movements in (by order of impact) the Mexican peso, British pound, Korean won and euro against the U.S. dollar, and changes in related tax effects and hedges for the quarter ended June 30, 2015. Primarily reflects the movements in (by order of impact) the euro, Mexican peso, British pound, and Brazilian real against the U.S. dollar, and changes in related tax effects and hedges for the quarter ended March 31, 2015.

The pretax and after-tax changes in each component of Accumulated other comprehensive income (loss) were as follows:

#### Three Months Ended June 30, 2016

In millions of dollars	Pretax	Tax effect	After-tax
Balance, March 31, 2016	\$(34,668)	\$8,042	\$(26,626)
Change in net unrealized gains (losses) on investment securities	1,482	(555)	)927
Debt valuation adjustment (DVA)	20	(8)	)12
Cash flow hedges	257	(106)	)151
Benefit plans	(31)	)4	(27)
Foreign currency translation adjustment	(774)	)222	(552)
Change	\$954	\$(443)	)\$511
Balance, June 30, 2016	\$(33,714)	\$7,599	\$(26,115)

#### Six Months Ended June 30, 2016

In millions of dollars	Pretax	Tax effect	After-tax
Balance, December 31, 2015	\$(38,440)	\$9,096	\$(29,344)
Adjustment to opening balance <sup>(1)</sup>	(26)	)11	(15)
Adjusted balance, beginning of period	\$(38,466)	\$9,107	\$(29,359)
Change in net unrealized gains (losses) on investment securities	4,706	(1,745)	)2,961
Debt valuation adjustment (DVA)	327	(122)	)205
Cash flow hedges	739	(271)	)468
Benefit plans	(758)	)266	(492)
Foreign currency translation adjustment	(262)	)364	102
Change	\$4,752	\$(1,508)	)\$3,244
Balance, June 30, 2016	\$(33,714)	\$7,599	\$(26,115)

(1) Represents the (\$15) million adjustment related to the initial adoption of ASU 2016-01. See Note 1 to the Consolidated Financial Statements.

## Three Months Ended June 30, 2015

In millions of dollars	Pretax	Tax effect	After-tax
Balance, March 31, 2015	\$(32,279)	\$7,588	\$(24,691)
Change in net unrealized gains (losses) on investment securities	(1,517)	)582	(935)
Cash flow hedges	118	(26)	)92
Benefit plans	810	(232)	)578
Foreign currency translation adjustment	(280)	)132	(148)
Change	\$(869)	)\$456	\$(413)
Balance, June 30, 2015	\$(33,148)	\$8,044	\$(25,104)

## Six Months Ended June 30, 2015

In millions of dollars	Pretax	Tax effect	After-tax
Balance, December 31, 2014	\$(31,060)	\$7,844	\$(23,216)
Change in net unrealized gains (losses) on investment securities	(468)	)124	(344)
Cash flow hedges	274	(96)	)178
Benefit plans	689	(201)	)488
Foreign currency translation adjustment	(2,583)	)373	(2,210)
Change	\$(2,088)	)\$200	\$(1,888)
Balance, June 30, 2015	\$(33,148)	\$8,044	\$(25,104)

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During the three and six months ended June 30, 2016, the Company recognized pretax gain of \$39 million (\$27 million net of tax) and pretax loss of \$75 million (\$43 million net of tax), respectively, related to amounts reclassified out of AOCI into the Consolidated Statement of Income as follows:

	Increase (decrease) in AOCI due to amounts reclassified to Consolidated Statement of Income	
	Three Months Ended June 30, 2016	Six Months Ended June 30, 2016
In millions of dollars	2016	2016
Realized (gains) losses on sales of investments	\$(200)	\$(386 )
OTTI gross impairment losses	48	251
Subtotal, pretax	\$(152)	\$(135 )
Tax effect	54	45
Net realized (gains) losses on investment securities, after-tax <sup>(1)</sup>	\$(98 )	\$(90 )
Realized DVA (gains) losses on fair value option liabilities	\$(6 )	\$(5 )
Subtotal, pretax	\$(6 )	\$(5 )
Tax effect	2	2
Net realized debt valuation adjustment, after-tax	\$(4 )	\$(3 )
Interest rate contracts	\$41	\$57
Foreign exchange contracts	17	43
Subtotal, pretax	\$58	\$100
Tax effect	(22 )	(38 )
Amortization of cash flow hedges, after-tax <sup>(2)</sup>	\$36	\$62
Amortization of unrecognized Prior service cost (benefit)	\$(11 )	\$(21 )
Net actuarial loss	69	135
Curtailment/settlement impact <sup>(3)</sup>	3	1
Subtotal, pretax	\$61	\$115
Tax effect	(22 )	(41 )
Amortization of benefit plans, after-tax <sup>(3)</sup>	\$39	\$74
Foreign currency translation adjustment	\$—	\$—
Total amounts reclassified out of AOCI, pretax	\$(39 )	\$75
Total tax effect	12	(32 )
Total amounts reclassified out of AOCI, after-tax	\$(27 )	\$43

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 13 to the Consolidated Financial Statements for additional details.

(2) See Note 21 to the Consolidated Financial Statements for additional details.

(3) See Note 8 to the Consolidated Financial Statements for additional details.





During the three and six months ended June 30, 2015, the Company recognized pretax loss of \$43 million (\$18 million net of tax) and pretax gain of \$42 million (\$37 million net of tax), respectively, related to amounts reclassified out of AOCI into the Consolidated Statement of Income as follows:

	Increase (decrease) in AOCI due to amounts reclassified to Consolidated Statement of Income	
	Three Months Ended June 30, 2015	Six Months Ended June 30, 2015
In millions of dollars	2015	2015
Realized (gains) losses on sales of investments	\$(183)	\$(490)
OTTI gross impairment losses	43	115
Subtotal, pretax	\$(140)	\$(375)
Tax effect	49	134
Net realized (gains) losses on investment securities, after-tax <sup>(1)</sup>	\$(91)	\$(241)
Interest rate contracts	\$74	\$120
Foreign exchange contracts	37	77
Subtotal, pretax	\$111	\$197
Tax effect	(41)	(73)
Amortization of cash flow hedges, after-tax <sup>(2)</sup>	\$70	\$124
Amortization of unrecognized Prior service cost (benefit)	\$(10)	\$(21)
Net actuarial loss	72	147
Curtailment/settlement impact <sup>(3)</sup>	10	10
Subtotal, pretax	\$72	\$136
Tax effect	(33)	(56)
Amortization of benefit plans, after-tax <sup>(3)</sup>	\$39	\$80
Foreign currency translation adjustment	\$—	\$—
Total amounts reclassified out of AOCI, pretax	\$43	\$(42)
Total tax effect	(25)	5
Total amounts reclassified out of AOCI, after-tax	\$18	\$(37)

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 13 to the Consolidated Financial Statements for additional details.

(2) See Note 21 to the Consolidated Financial Statements for additional details.

(3) See Note 8 to the Consolidated Financial Statements for additional details.

## 19. 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	
						June 30, 2016	December 31, 2015
Series AA <sup>(1)</sup>	January 25, 2008	February 15, 2018	8.125 %	\$ 25	3,870,330	\$ 97	\$ 97
Series E <sup>(2)</sup>	April 28, 2008	April 30, 2018	8.400	1,000	121,254	121	121
Series A <sup>(3)</sup>	October 29, 2012	January 30, 2023	5.950	1,000	1,500,000	1,500	1,500
Series B <sup>(4)</sup>	December 13, 2012	February 15, 2023	5.900	1,000	750,000	750	750
Series C <sup>(5)</sup>	March 26, 2013	April 22, 2018	5.800	25	23,000,000	575	575
Series D <sup>(6)</sup>	April 30, 2013	May 15, 2023	5.350	1,000	1,250,000	1,250	1,250
Series J <sup>(7)</sup>	September 19, 2013	September 30, 2023	7.125	25	38,000,000	950	950
Series K <sup>(8)</sup>	October 31, 2013	November 15, 2023	6.875	25	59,800,000	1,495	1,495
Series L <sup>(9)</sup>	February 12, 2014	February 12, 2019	6.875	25	19,200,000	480	480
Series M <sup>(10)</sup>	April 30, 2014	May 15, 2024	6.300	1,000	1,750,000	1,750	1,750
Series N <sup>(11)</sup>	October 29, 2014	November 15, 2019	5.800	1,000	1,500,000	1,500	1,500
Series O <sup>(12)</sup>	March 20, 2015	March 27, 2020	5.875	1,000	1,500,000	1,500	1,500
Series P <sup>(13)</sup>	April 24, 2015	May 15, 2025	5.950	1,000	2,000,000	2,000	2,000
Series Q <sup>(14)</sup>	August 12, 2015	August 15, 2020	5.950	1,000	1,250,000	1,250	1,250
Series R <sup>(15)</sup>	November 13, 2015	November 15, 2020	6.125	1,000	1,500,000	1,500	1,500
Series S <sup>(16)</sup>	February 2, 2016	February 12, 2021	6.300	25	41,400,000	1,035	\$ —
Series T <sup>(17)</sup>	April 25, 2016	August 15, 2026	6.250	1,000	1,500,000	1,500	\$ —
						\$ 19,253	\$ 16,718

Issued as depositary shares, each representing a 1/1,000<sup>th</sup> 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 1/25<sup>th</sup> 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 1/25<sup>th</sup> 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 1/25<sup>th</sup> 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 1/1,000<sup>th</sup> 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 1/25<sup>th</sup> 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 1/1,000<sup>th</sup> 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 1/1,000<sup>th</sup> 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 1/1,000<sup>th</sup> 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 1/25<sup>th</sup> 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 1/25<sup>th</sup> 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 1/25<sup>th</sup> 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 depository shares, each representing a 1/25<sup>th</sup> 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.

(14) Issued as depository shares, each representing 1/25<sup>th</sup> 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 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.

(15) Issued as depository shares, each representing 1/25<sup>th</sup> 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, 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.

(16) Issued as depository shares, each representing 1/1,000<sup>th</sup> 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.

(17) Issued as depository shares, each representing 1/25<sup>th</sup> 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 a fixed rate until August 15, 2026, 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.

During the second quarter of 2016, Citi distributed \$322 million in dividends on its outstanding preferred stock. As of June 30, 2016, Citi estimates it will distribute preferred dividends of approximately \$546 million during the remainder of 2016, in each case assuming such dividends are declared by the Citi Board of Directors.

## 20. 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 or similar 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, certain 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.

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:

In millions of dollars	As of June 30, 2016			Maximum exposure to loss in significant unconsolidated VIEs <sup>(1)</sup>				
	Total involvement with SPE assets	Consolidated VIE / SPE assets	Significant unconsolidated VIE assets <sup>(3)</sup>	Funded exposures <sup>(2)</sup>		Unfunded exposures		
				Debt investments	Equity investments	Funding commitments	Guarantees and derivatives	Total
Credit card securitizations	\$51,457	\$ 51,457	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Mortgage securitizations <sup>(4)</sup>								
U.S. agency-sponsored	230,600	—	230,600	4,177	—	—	87	4,264
Non-agency-sponsored	16,563	1,391	15,172	295	35	—	1	331
Citi-administered asset-backed commercial paper conduits (ABCP)	21,245	21,245	—	—	—	—	—	—
Collateralized loan obligations (CLOs)	15,743	—	15,743	3,708	—	—	83	3,791
Asset-based financing	57,543	1,228	56,315	20,045	413	5,051	363	25,872
Municipal securities tender option bond trusts (TOBs)	7,379	2,819	4,560	113	—	2,831	—	2,944
Municipal investments	18,304	36	18,268	2,392	2,946	2,451	—	7,789
Client intermediation	408	179	229	54	—	—	—	54
Investment funds	2,710	789	1,921	31	156	68	—	255
Other	4,402	592	3,810	210	550	77	47	884
Total <sup>(5)</sup>	\$426,354	\$ 79,736	\$ 346,618	\$31,025	\$ 4,100	\$10,478	\$ 581	\$46,184
	As of December 31, 2015			Maximum exposure to loss in significant unconsolidated VIEs <sup>(1)</sup>				
				Funded exposures <sup>(2)</sup>		Unfunded exposures		
				Debt investments	Equity investments	Funding commitments	Guarantees and derivatives	Total
In millions of dollars	Total involvement with SPE assets	Consolidated VIE / SPE assets	Significant unconsolidated VIE assets <sup>(3)</sup>					
Credit card securitizations	\$54,916	\$ 54,916	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Mortgage securitizations <sup>(4)</sup>								
U.S. agency-sponsored	217,291	—	217,291	3,571	—	—	95	3,666
Non-agency-sponsored	13,036	1,586	11,450	527	—	—	1	528
Citi-administered asset-backed commercial paper conduits (ABCP)	21,280	21,280	—	—	—	—	—	—
Collateralized loan obligations (CLOs)	16,719	—	16,719	3,150	—	—	86	3,236
Asset-based financing	58,862	1,364	57,498	21,270	269	3,616	436	25,591
Municipal securities tender option bond trusts (TOBs)	8,572	3,830	4,742	2	—	3,100	—	3,102
Municipal investments	20,290	44	20,246	2,196	2,487	2,335	—	7,018
Client intermediation	434	335	99	49	—	—	—	49
Investment funds	1,730	842	888	13	138	102	—	253

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Other	4,915	597	4,318	292	554	—	52	898
Total <sup>(5)</sup>	\$418,045	\$ 84,794	\$ 333,251	\$31,070	\$ 3,448	\$9,153	\$ 670	\$44,341

Note: Certain adjustments have been made to the December 31, 2015 information to conform to the current period's presentation.

- (1) The definition of maximum exposure to loss is included in the text that follows this table.
- (2) Included on Citigroup's June 30, 2016 and December 31, 2015 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.
- (4) Citigroup mortgage securitizations also include agency and non-agency (private-label) re-securitization activities. These SPEs are not consolidated. See "Re-securitizations" below for further discussion.
- (5) Citi's total involvement with Citicorp SPE assets was \$398.2 billion and \$383.2 billion as of June 30, 2016 and December 31, 2015, 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 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;
- certain 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 12 and 13 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 \$11 billion and \$12 billion at June 30, 2016 and December 31, 2015, 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., loan or security) 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, 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	June 30, 2016		December 31, 2015	
	Liquidity facilities	Loan / equity commitments	Liquidity facilities	Loan / equity commitments
Asset-based financing	\$5	\$ 5,046	\$5	\$ 3,611
Municipal securities tender option bond trusts (TOBs)	2,831	—	3,100	—
Municipal investments	—	2,451	—	2,335
Investment funds	—	68	—	102
Other	—	77	—	—
Total funding commitments	\$2,836	\$ 7,642	\$3,105	\$ 6,048

## 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	June 30, December 31,	
	2016	2015
Cash	\$ 0.1	\$ 0.2
Trading account assets	0.4	0.6
Investments	4.8	5.3
Total loans, net of allowance	74.3	78.6
Other	0.1	0.1
Total assets	\$ 79.7	\$ 84.8
Short-term borrowings	\$ 13.0	\$ 14.0
Long-term debt	27.7	31.3
Other liabilities	2.1	2.1
Total liabilities <sup>(1)</sup>	\$ 42.8	\$ 47.4

(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 \$40.8 billion and \$45.3 billion as of June 30, 2016 and December 31, 2015, 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 at June 30, 2016 and December 31, 2015; and (ii) credit guarantees provided by Citi to certain consolidated municipal tender

option bond trusts of \$82 million at June 30, 2016 and December 31, 2015.

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	June 30, December 31,	
	2016	2015
Cash	\$ 0.1	\$ 0.1
Trading account assets	7.6	6.2
Investments	3.7	3.0
Total loans, net of allowance	22.5	23.6
Other	1.3	1.7
Total assets	\$ 35.2	\$ 34.6

167

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### 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 exposure to 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	June 30, December 31,	
	2016	2015
Ownership interests in principal amount of trust credit card receivables		
Sold to investors via trust-issued securities	\$ 26.2	\$ 29.7
Retained by Citigroup as trust-issued securities	7.9	9.4
Retained by Citigroup via non-certificated interests	17.0	16.5
Total	\$ 51.1	\$ 55.6

The following tables summarize selected cash flow information related to Citigroup's credit card securitizations:

	Three months ended June 30, 2016
In billions of dollars	2015
Proceeds from new securitizations	\$ —
Pay down of maturing notes	(1.3)
	Six months ended June 30, 2016
In billions of dollars	2015
Proceeds from new securitizations	\$ —
Pay down of maturing notes	(3.5)

### 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 2.2 years as of June 30, 2016 and 2.4 years as of December 31, 2015.

#### Master Trust Liabilities (at Par Value)

In billions of dollars	June 30, 2016	Dec. 31, 2015
Term notes issued to third parties	\$ 25.0	\$ 28.4
Term notes retained by Citigroup affiliates	6.1	7.5
Total Master Trust liabilities	\$ 31.1	\$ 35.9

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 0.4 years as of June 30, 2016 and 0.9 years as of December 31, 2015.

#### Omni Trust Liabilities (at Par Value)

In billions of dollars	June 30, 2016	Dec. 31, 2015
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	Three months ended June 30,			
	2016		2015	
	U.S. agency-sponsored mortgages	Non-agency-sponsored mortgages	U.S. agency-sponsored mortgages	Non-agency-sponsored mortgages

Proceeds from new securitizations	\$10.3	\$ 2.3	\$10.1	\$ 2.5
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Contractual servicing fees received	0.1	—	0.1	—
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In billions of dollars	Six months ended June 30,			
	2016		2015	
	U.S. agency-sponsored mortgages	Non-agency-sponsored mortgages	U.S. agency-sponsored mortgages	Non-agency-sponsored mortgages

Proceeds from new securitizations <sup>(1)</sup>	\$20.9	\$ 6.5	\$18.5	\$ 6.1
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Contractual servicing fees received	0.2	—	0.2	—
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(1) The proceeds from new securitizations in 2016 include \$0.5 billion related to personal loan securitizations.

Gains recognized on the securitization of U.S. agency-sponsored mortgages were \$20 million and \$45 million for the three and six months ended June 30, 2016, respectively. For the three and six months ended June 30, 2016, gains recognized on the securitization of non-agency sponsored mortgages were \$19 million and \$28 million, respectively.

Gains recognized on the securitization of U.S. agency-sponsored mortgages were \$47 million and \$90 million for the three and six months ended June 30, 2015, respectively. For the three and six months ended June 30, 2015, gains recognized on the securitization of non-agency sponsored mortgages were \$15 million and \$31 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:

	Three months ended June 30, 2016		
	U.S. agency-sponsored mortgages	Non-agency-sponsored mortgages <sup>(1)</sup>	
		Senior interests	Subordinated interests
Discount rate	0.8% to 11.5%	—	—
Weighted average discount rate	9.1	%—	—
Constant prepayment rate	8.6% to 26.8%	—	—
Weighted average constant prepayment rate	13.3	%—	—
Anticipated net credit losses <sup>(2)</sup>	NM	—	—
Weighted average anticipated net credit losses	NM	—	—
Weighted average life	0.5 to 11.4 years	—	—

Note: Citi held no retained interests in non-agency-sponsored mortgages securitized during the second quarter of 2016.

	Three months ended June 30, 2015		
	U.S. agency-sponsored mortgages	Non-agency-sponsored mortgages <sup>(1)</sup>	
		Senior interests	Subordinated interests
Discount rate	0.0% to 8.2%	<del>11.2%</del> to 12.1%	
Weighted average discount rate	5.3	% <del>11.6</del>	%
Constant prepayment rate	5.7% to 15.5%	<del>3.5%</del> to 8.0%	
Weighted average constant prepayment rate	9.5	% <del>5.6</del>	%
Anticipated net credit losses <sup>(2)</sup>	NM	<del>38.1%</del> to 52.1%	
Weighted average anticipated net credit losses	NM	45.7	%
Weighted average life	3.5 to 12.8 years	<del>8.9</del> to 12.9 years	

	Six months ended June 30, 2016		
	U.S. agency-sponsored mortgages	Non-agency-sponsored mortgages <sup>(1)</sup>	
		Senior interests	Subordinated interests
Discount rate	0.8% to 11.5%	—	—
Weighted average discount rate	8.7	%—	—
Constant prepayment rate	8.6% to 26.8%	—	—
Weighted average constant prepayment rate	12.5	%—	—
Anticipated net credit losses <sup>(2)</sup>	NM	—	—
Weighted average anticipated net credit losses	NM	—	—
Weighted average life	0.5 to 17.5 years	—	—

Note: Citi held no retained interests in non-agency-sponsored mortgages securitized during 2016.

	Six months ended June 30, 2015		
	U.S. agency-sponsored mortgages	Non-agency-sponsored mortgages <sup>(1)</sup>	
		Senior interests	Subordinated interests



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	U.S. agency- sponsored mortgages	Senior interests	Subordinated interests	
Discount rate	0.0% to 8.2%	2.8	%4.4% to 12.1%	
Weighted average discount rate	5.6	%2.8	%7.2	%
Constant prepayment rate	5.7% to 34.9%	—	3.3% to 8.0%	
Weighted average constant prepayment rate	12.9	%—	4.2	%
Anticipated net credit losses <sup>(2)</sup>	NM	40.0	%38.1% to 55.9%	
Weighted average anticipated net credit losses	NM	40.0	%52.0	%
Weighted average life	3.5 to 12.8 years	9.7 years	0.0 to 12.9 years	

170

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(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.

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.

(2) 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.

	June 30, 2016		
	U.S. agency-sponsored mortgages	Senior interests	Subordinated interests
Discount rate	0.3% to 27.0%	0.3% to 8.5%	1.6% to 30.1%
Weighted average discount rate	5.4	% 5.2	% 12.3
Constant prepayment rate	10.0% to 46.5%	4.7% to 19.7%	0.5% to 42.0%
Weighted average constant prepayment rate	20.0	% 5.2	% 8.7
Anticipated net credit losses <sup>(2)</sup>	NM	0.5% to 90.2%	2.8% to 93.0%
Weighted average anticipated net credit losses	NM	83.8	% 48.3
Weighted average life	0.5 to 18.5 years	4.3 to 14.8 years	1.5 to 11.3 years
	December 31, 2015		
	U.S. agency-sponsored mortgages	Senior interests	Subordinated interests
Discount rate	0.0% to 27.0%	1.6% to 67.6%	2.0% to 24.9%
Weighted average discount rate	4.9	% 7.6	% 8.4
Constant prepayment rate	5.7% to 27.8%	4.2% to 100.0%	0.5% to 20.8%
Weighted average constant prepayment rate	12.3	% 14.0	% 7.5
Anticipated net credit losses <sup>(2)</sup>	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

(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.

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.

(2) NM Anticipated net credit losses are not meaningful due to U.S. agency guarantees.



	June 30, 2016		
	Non-agency-sponsored mortgages <sup>(1)</sup>		
	U.S.		
In millions of dollars	agency-sponsored mortgages	Senior interests	Subordinated interests
Carrying value of retained interests	\$2,555	\$ 33	\$ 190
Discount rates			
Adverse change of 10%	\$(45 )	\$( 7 )	\$( 11 )
Adverse change of 20%	(90 )	(13 )	(20 )
Constant prepayment rate			
Adverse change of 10%	(104 )	(2 )	(5 )
Adverse change of 20%	(204 )	(3 )	(10 )
Anticipated net credit losses			
Adverse change of 10%	NM	(10 )	(2 )
Adverse change of 20%	NM	(18 )	(4 )

	December 31, 2015		
	Non-agency-sponsored mortgages <sup>(1)</sup>		
	U.S.		
In millions of dollars	agency-sponsored mortgages	Senior interests	Subordinated interests
Carrying value of retained interests	\$3,546	\$ 179	\$ 533
Discount rates			
Adverse change of 10%	\$(79 )	\$( 8 )	\$( 25 )
Adverse change of 20%	(155 )	(15 )	(49 )
Constant prepayment rate			
Adverse change of 10%	(111 )	(3 )	(9 )
Adverse change of 20%	(213 )	(6 )	(18 )
Anticipated net credit losses			
Adverse change of 10%	NM	(6 )	(7 )
Adverse change of 20%	NM	(11 )	(14 )

Note: There were no subordinated interests in mortgage securitizations in Citi Holdings as of June 30, 2016 and December 31, 2015.

(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.

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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 \$1.3 billion and \$1.9 billion at June 30, 2016 and 2015, respectively. The MSRs correspond to principal loan balances of \$186 billion and \$209 billion as of June 30, 2016 and 2015, respectively. The following tables summarize the changes in capitalized MSRs:

In millions of dollars	Three months ended June 30,	
	2016	2015
Balance, as of March 31	\$1,524	\$1,685
Originations	35	68
Changes in fair value of MSRs due to changes in inputs and assumptions	(137)	)262
Other changes <sup>(1)</sup>	(98)	)(82)
Sale of MSRs	—	(9)
Balance, as of June 30	\$1,324	\$1,924
In millions of dollars	Six months ended June 30,	
	2016	2015
Balance, beginning of year	\$1,781	\$1,845
Originations	68	111
Changes in fair value of MSRs due to changes in inputs and assumptions	(362)	)191
Other changes <sup>(1)</sup>	(177)	)(182)
Sale of MSRs <sup>(2)</sup>	14	(41)
Balance, as of June 30	\$1,324	\$1,924

(1) Represents changes due to customer payments and passage of time.

(2) Current period's amount is related to a sale of credit challenged MSRs for which Citi paid the new servicer.

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 MSR 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:

	Three months ended June 30,		Six months ended June 30,	
In millions of dollars	2016	2015	2016	2015
Servicing fees	\$126	\$141	\$254	\$281
Late fees	4	4	8	8
Ancillary fees	4	15	9	22
Total MSR fees	\$134	\$160	\$271	\$311

In the Consolidated Statement of Income these fees are primarily classified as Commissions and fees, and changes in MSR fair values are classified 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. Citi did not transfer non-agency (private-label) securities to re-securitization entities during the three and six months ended June 30, 2016. During the three and six months ended June 30, 2015, Citi transferred non-agency (private-label) securities with an original par value of \$195 million and \$649 million, 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 June 30, 2016, the fair value of Citi-retained interests in private-label re-securitization transactions structured by Citi totaled approximately \$169 million (all related to re-securitization transactions executed prior to 2016), which has been recorded in Trading account assets. Of this amount, substantially all was related to subordinated beneficial interests. 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). Of this amount, approximately \$18 million was related to senior beneficial interests, and approximately \$410 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 June 30, 2016 and December 31, 2015 was approximately \$2.1 billion and \$3.7 billion, respectively.

The Company also re-securitizes U.S. government-agency guaranteed mortgage-backed (agency) securities. During the three and six months ended June 30, 2016, Citi transferred agency securities with a fair value of approximately \$6.9 billion and \$14.2 billion, respectively, to re-securitization entities compared to approximately \$4.6 billion and \$8.9 billion for the three and six months ended June 30, 2015.

As of June 30, 2016, the fair value of Citi-retained interests in agency re-securitization transactions structured by Citi totaled approximately \$2.8 billion (including \$785 million related to re-securitization transactions executed in 2016) compared to \$1.8 billion as of December 31, 2015 (including \$1.5 billion related to re-securitization transactions executed in 2015), 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 June 30, 2016 and December 31, 2015 was approximately \$71.2 billion and \$65.0 billion, respectively.

As of June 30, 2016 and December 31, 2015, 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 June 30, 2016 and December 31, 2015, the conduits had approximately \$21.2 billion and \$21.3 billion of purchased assets outstanding, respectively, and had incremental funding commitments with clients of approximately \$13.5 billion and \$11.6 billion, respectively.

Substantially all of the funding of the conduits is in the form of short-term commercial paper. At June 30, 2016 and December 31, 2015, the weighted average remaining lives of the commercial paper issued by the conduits were approximately 49 and 56 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 as of June 30, 2016 and December 31, 2015. 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 June 30, 2016 and December 31, 2015, the Company owned \$11.3 billion and \$11.4 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:

	June 30, 2016	Dec. 31, 2015
Discount rate	1.1% to 41.9%	1.4% to 49.6%
	June	Dec.
In millions of dollars	30,	31,
	2016	2015
Carrying value of retained interests	\$908	\$918
Discount rates		
Adverse change of 10%	\$(5 )	\$(5 )
Adverse change of 20%	(10 )	(10 )

## 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; 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.

	June 30, 2016	
	Total unconsolidated assets	Maximum exposure to unconsolidated VIEs
In millions of dollars		
Type		
Commercial and other real estate	\$14,981	\$ 5,483
Corporate loans	1,050	1,948
Hedge funds and equities	386	56
Airplanes, ships and other assets	39,898	18,385
Total	\$56,315	\$ 25,872
	December 31, 2015	
	Total unconsolidated assets	Maximum exposure to unconsolidated VIEs
In millions of dollars		
Type		
Commercial and other real estate	\$17,459	\$ 6,528
Corporate loans	1,274	1,871
Hedge funds and equities	385	55
Airplanes, ships and other assets	38,380	17,137
Total	\$57,498	\$ 25,591

## 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 puttable 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 June 30, 2016 and December 31, 2015, the Company held \$148 million and \$2 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 June 30, 2016, the Company had no outstanding voluntary advances to customer TOB trusts.

For certain non-customer trusts, the Company also provides credit enhancement. At June 30, 2016 and December 31, 2015, approximately \$82 million 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 June 30, 2016 and December 31, 2015, liquidity agreements provided with respect to customer TOB trusts totaled \$2.9 billion and \$3.1 billion, respectively, of which \$2.2 billion and \$2.2 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 \$8.6 billion and \$8.1 billion as of June 30, 2016 and December 31, 2015, 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 three and six months ended June 30, 2016 totaled approximately \$0.8 billion and \$1.4 billion, respectively, compared to \$0.6 billion and \$0.8 billion for the three and six months ended June 30, 2015.

### 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.

Prior to January 1, 2016, the Company determined that a majority of the investment entities managed by Citigroup were provided a deferral from the requirements of ASC 810, because they met the criteria in ASU No. 2010-10, Consolidation (Topic 810): Amendments for Certain Investment Funds. As part of the amended guidance under ASU 2015-02, Consolidation (Topic 810): Amendments to the Consolidation Analysis, effective January 1, 2016, these entities were evaluated and the Company determined that these entities continue to meet the definition of a VIE because the limited partners in the fund do not have the ability to remove the Company as investment manager. The Company is considered the primary beneficiary and consolidates those VIE entities where it has both the power to direct the activities and a potentially significant variable interest.

## 21. 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, commodities 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, market prices, 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 satisfy a derivative liability where the value of any collateral held by Citi 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 netting 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 <sup>(1)(2)</sup>		Other derivative instruments			
	June 30, 2016	December 31, 2015	Trading derivatives		Management hedges <sup>(3)</sup>	
			June 30, 2016	December 31, 2015	June 30, 2016	December 31, 2015
Interest rate contracts						
Swaps	\$ 190,434	\$ 166,576	\$ 22,790,256	\$ 22,208,794	\$ 34,575	\$ 28,969
Futures and forwards	—	—	5,944,024	6,868,340	33,385	38,421
Written options	—	—	3,197,007	3,033,617	5,616	2,606
Purchased options	—	—	2,941,662	2,887,605	5,450	4,575
Total interest rate contract notionals	\$ 190,434	\$ 166,576	\$ 34,872,949	\$ 34,998,356	\$ 79,026	\$ 74,571
Foreign exchange contracts						
Swaps	\$ 21,384	\$ 23,007	\$ 5,576,865	\$ 4,765,687	\$ 23,098	\$ 23,960
Futures, forwards and spot	71,422	72,124	3,510,377	2,563,649	4,472	3,034
Written options	—	448	1,449,764	1,125,664	—	—
Purchased options	—	819	1,485,184	1,131,816	—	—
Total foreign exchange contract notionals	\$ 92,806	\$ 96,398	\$ 12,022,190	\$ 9,586,816	\$ 27,570	\$ 26,994
Equity contracts						
Swaps	\$ —	\$ —	\$ 171,361	\$ 180,963	\$ —	\$ —
Futures and forwards	—	—	29,938	33,735	—	—
Written options	—	—	376,780	298,876	—	—
Purchased options	—	—	341,476	265,062	—	—
Total equity contract notionals	\$ —	\$ —	\$ 919,555	\$ 778,636	\$ —	\$ —
Commodity and other contracts						
Swaps	\$ —	\$ —	\$ 71,194	\$ 70,561	\$ —	\$ —
Futures and forwards	783	789	135,979	106,474	—	—
Written options	—	—	79,109	72,648	—	—
Purchased options	—	—	73,843	66,051	—	—
Total commodity and other contract notionals	\$ 783	\$ 789	\$ 360,125	\$ 315,734	\$ —	\$ —
Credit derivatives <sup>(4)</sup>						
Protection sold	\$ —	\$ —	\$ 1,071,410	\$ 950,922	\$ —	\$ —

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Protection purchased	—	—	1,108,387	981,586	26,901	23,628
Total credit derivatives	\$—	\$—	\$2,179,797	\$1,932,508	\$26,901	\$23,628
Total derivative notionals	\$284,023	\$263,763	\$50,354,616	\$47,612,050	\$133,497	\$125,193

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 \$2,150 million and \$2,102 million at June 30, 2016 and December 31, 2015, 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.

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 (4) 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 June 30, 2016 and December 31, 2015. 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 June 30, 2016	Derivatives classified in Trading account assets / liabilities <sup>(1)(2)(3)</sup>		Derivatives classified in Other assets / liabilities <sup>(2)(3)</sup>	
	Assets	Liabilities	Assets	Liabilities
Derivatives instruments designated as ASC 815 hedges				
Over-the-counter	\$914	\$168	\$2,553	\$86
Cleared	7,596	1,945	—	185
Interest rate contracts	\$8,510	\$2,113	\$2,553	\$271
Over-the-counter	\$1,849	\$1,175	\$142	\$1,335
Cleared	—	4	—	—
Foreign exchange contracts	\$1,849	\$1,179	\$142	\$1,335
Total derivative instruments designated as ASC 815 hedges	\$10,359	\$3,292	\$2,695	\$1,606
Derivatives instruments not designated as ASC 815 hedges				
Over-the-counter	\$358,279	\$336,680	\$200	\$17
Cleared	199,439	204,020	673	694
Exchange traded	109	75	—	—
Interest rate contracts	\$557,827	\$540,775	\$873	\$711
Over-the-counter	\$173,386	\$169,489	\$—	\$54
Cleared	266	230	—	—
Exchange traded	52	22	—	—
Foreign exchange contracts	\$173,704	\$169,741	\$—	\$54
Over-the-counter	\$16,150	\$21,209	\$—	\$—
Cleared	987	67	—	—
Exchange traded	8,378	8,378	—	—
Equity contracts	\$25,515	\$29,654	\$—	\$—
Over-the-counter	\$11,411	\$13,356	\$—	\$—
Exchange traded	1,006	1,399	—	—
Commodity and other contracts	\$12,417	\$14,755	\$—	\$—
Over-the-counter	\$29,440	\$30,066	\$394	\$229
Cleared	3,492	3,169	118	302
Credit derivatives <sup>(4)</sup>	\$32,932	\$33,235	\$512	\$531
Total derivatives instruments not designated as ASC 815 hedges	\$802,395	\$788,160	\$1,385	\$1,296
Total derivatives	\$812,754	\$791,452	\$4,080	\$2,902
Cash collateral paid/received <sup>(5)(6)</sup>	\$9,292	\$16,592	\$7	\$—
Less: Netting agreements <sup>(7)</sup>	(690,888)	(690,888)	—	—
Less: Netting cash collateral received/paid <sup>(8)</sup>	(58,945)	(53,952)	(1,793)	(40)
Net receivables/payables included on the consolidated balance sheet <sup>(9)</sup>	\$72,213	\$63,204	\$2,294	\$2,862
Additional amounts subject to an enforceable master netting agreement but not offset on the Consolidated Balance Sheet				
Less: Cash collateral received/paid	\$(1,236)	\$(24)	\$—	\$—
Less: Non-cash collateral received/paid	(14,754)	(7,696)	(758)	—
Total net receivables/payables <sup>(9)</sup>	\$56,223	\$55,484	\$1,536	\$2,862

(1) The trading derivatives fair values are presented in Note 12 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 \$16,313 million related to protection purchased and \$16,619 million (4) related to protection sold as of June 30, 2016. The credit derivatives trading liabilities comprise \$17,435 million related to protection purchased and \$15,800 million related to protection sold as of June 30, 2016.

For the trading account assets/liabilities, reflects the net amount of the \$63,244 million and \$75,537 million of (5) gross cash collateral paid and received, respectively. Of the gross cash collateral paid, \$53,952 million was used to offset trading derivative liabilities and, of the gross cash collateral received, \$58,945 million was used to offset trading derivative assets.

For cash collateral paid with respect to non-trading derivative assets, reflects the net amount of \$47 million of gross cash collateral paid, of which \$40 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 \$1,793 million of gross cash collateral received, of which \$1,793 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 \$478 billion, \$204 billion and \$9 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 \$9 billion of derivative asset and \$9 billion of derivative liability fair values not subject to enforceable master netting agreements, respectively.

In millions of dollars at December 31, 2015	Derivatives classified in Trading account assets / liabilities <sup>(1)(2)(3)</sup>		Derivatives classified in Other assets / liabilities <sup>(2)(3)</sup>	
	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
Cleared	—	—	—	—
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 <sup>(4)</sup>	\$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 <sup>(5)(6)</sup>	\$4,911	\$13,628	\$8	\$37
Less: Netting agreements <sup>(7)</sup>	(524,481)	(524,481)	—	—

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Less: Netting cash collateral received/paid <sup>(8)</sup>	(43,227 )	(42,609 )	(1,949 )	(53 )
Net receivables/payables included on the Consolidated Balance Sheet <sup>(9)</sup>	\$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 <sup>(9)</sup>	\$45,550	\$52,459	\$1,485	\$1,624

183

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- (1) The trading derivatives fair values are presented in Note 12 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 (3) 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 derivative liabilities and, of the gross cash collateral received, \$43,227 million was used to offset derivative assets.  
For cash collateral paid with respect to non-trading derivative assets, reflects the net amount of \$61 million of the gross cash collateral received, 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 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 liability fair values not subject to enforceable master netting agreements, respectively.

For the three and six months ended June 30, 2016 and 2015, 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.

	Gains (losses) included in Other revenue			
	Three Months Ended June 30,		Six Months Ended June 30,	
In millions of dollars	2016	2015	2016	2015
Interest rate contracts	\$11	\$(51)	\$26	\$(36)
Foreign exchange	11	(31)	15	(46)
Credit derivatives	(348)	61	(562)	71
Total Citigroup	\$(326)	\$(21)	\$(521)	\$(11)

184

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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 documentation requirements and assessing 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 account for 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 changes in fair value of the related interest rate swap are 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 AOCI—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.

#### Hedging of Commodity Price Risk

Citigroup hedges the change in fair value attributable to price movements in physical commodities inventory. The hedging instrument employed is a futures contract to sell the underlying commodity. In this hedge, the change in value of the hedged inventory is reflected in earnings, which serves to offset the change in fair value of the futures contract that is also reflected in earnings. Citigroup excludes the differential between spot and the contractual forward rates under the futures contract from the assessment of hedge effectiveness. Since the assessment is based on changes in fair value attributable to change in spot prices on both the physical commodity and the futures contract, 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 <sup>(1)</sup>			
	Three Months Ended June 30, 2016		Six Months Ended June 30, 2015	
Gain (loss) on the derivatives in designated and qualifying fair value hedges				
Interest rate contracts	\$1,082	\$(1,680)	\$3,197	\$(1,039)
Foreign exchange contracts	(397)	16	(1,758)	1,404
Commodity contracts	89	(75)	438	41
Total gain (loss) on the derivatives in designated and qualifying fair value hedges	\$774	\$(1,739)	\$1,877	\$406
Gain (loss) on the hedged item in designated and qualifying fair value hedges				
Interest rate hedges	\$(1,053)	\$1,606	\$(3,143)	\$998
Foreign exchange hedges	454	36	1,761	(1,385)
Commodity hedges	(89)	76	(433)	(28)
Total gain (loss) on the hedged item in designated and qualifying fair value hedges	\$(688)	\$1,718	\$(1,815)	\$(415)
Hedge ineffectiveness recognized in earnings on designated and qualifying fair value hedges				
Interest rate hedges	\$32	\$(74)	\$59	\$(41)
Foreign exchange hedges	25	21	(50)	(17)
Total hedge ineffectiveness recognized in earnings on designated and qualifying fair value hedges	\$57	\$(53)	\$9	\$(58)
Net gain (loss) excluded from assessment of the effectiveness of fair value hedges				
Interest rate contracts	\$(3)	\$—	\$(5)	\$—
Foreign exchange contracts <sup>(2)</sup>	32	31	53	36
Commodity hedges <sup>(2)</sup>	—	1	5	13
Total net gain (loss) excluded from assessment of the effectiveness of fair value hedges	\$29	\$32	\$53	\$49

(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.

(2) 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.

186

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## 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.

The amount of hedge ineffectiveness on the cash flow hedges recognized in earnings for the three and six months ended June 30, 2016, and 2015 is not significant. The pretax change in AOCI from cash flow hedges is presented below:

	Three Months Ended June 30,		Six Months Ended June 30,	
In millions of dollars	2016	2015	2016	2015
Effective portion of cash flow hedges included in AOCI				
Interest rate contracts	\$220	\$17	\$635	\$237
Foreign exchange contracts	(21)	(10)	3	(160)
Total effective portion of cash flow hedges included in AOCI	\$199	\$7	\$638	\$77
Effective portion of cash flow hedges reclassified from AOCI to earnings				
Interest rate contracts	\$(41)	\$(74)	\$(57)	\$(120)
Foreign exchange contracts	(17)	(37)	(43)	(77)
Total effective portion of cash flow hedges reclassified from AOCI to earnings <sup>(1)</sup>	\$(58)	\$(111)	\$(100)	\$(197)

(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 AOCI 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 AOCI within 12 months of June 30, 2016 is approximately \$0.1 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 18 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 AOCI.

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 AOCI.

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 AOCI, related to the effective portion of the net investment hedges, is \$(47) million and \$(1,420) million for the three and six months ended June 30, 2016 and \$(243) million and \$757 million for the three and six months ended June 30, 2015, 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 June 30, 2016 and December 31, 2015, 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.

The following tables summarize the key characteristics of Citi's credit derivatives portfolio by counterparty and derivative form:

In millions of dollars at June 30, 2016	Fair values		Notionals	
	Receivable <sup>(1)</sup>	Payable <sup>(2)</sup>	Protection purchased	Protection sold
<b>By industry/counterparty</b>				
Banks	\$17,816	\$15,918	\$571,921	\$577,825
Broker-dealers	4,473	5,254	144,346	139,533
Non-financial	99	127	4,200	2,120
Insurance and other financial institutions	11,056	12,467	414,821	351,932
<b>Total by industry/counterparty</b>	<b>\$33,444</b>	<b>\$33,766</b>	<b>\$1,135,288</b>	<b>\$1,071,410</b>
<b>By instrument</b>				
Credit default swaps and options	\$31,520	\$31,321	\$1,106,801	\$1,057,519
Total return swaps and other	1,924	2,445	28,487	13,891
<b>Total by instrument</b>	<b>\$33,444</b>	<b>\$33,766</b>	<b>\$1,135,288</b>	<b>\$1,071,410</b>
<b>By rating</b>				
Investment grade	\$13,072	\$13,254	\$859,824	\$810,124
Non-investment grade	20,372	20,512	275,464	261,286
<b>Total by rating</b>	<b>\$33,444</b>	<b>\$33,766</b>	<b>\$1,135,288</b>	<b>\$1,071,410</b>
<b>By maturity</b>				
Within 1 year	\$5,641	\$6,412	\$346,615	\$328,419
From 1 to 5 years	23,864	23,655	720,154	689,587
After 5 years	3,939	3,699	68,519	53,404
<b>Total by maturity</b>	<b>\$33,444</b>	<b>\$33,766</b>	<b>\$1,135,288</b>	<b>\$1,071,410</b>

(1) The fair value amount receivable is composed of \$16,825 million under protection purchased and \$16,619 million under protection sold.

(2) The fair value amount payable is composed of \$17,966 million under protection purchased and \$15,800 million under protection sold.

In millions of dollars at December 31, 2015	Fair values		Notionals	
	Receivable <sup>(1)</sup>	Payable <sup>(2)</sup>	Protection purchased	Protection sold
<b>By industry/counterparty</b>				
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
<b>Total by industry/counterparty</b>	<b>\$35,717</b>	<b>\$34,731</b>	<b>\$1,005,214</b>	<b>\$950,922</b>
<b>By instrument</b>				
Credit default swaps and options	\$34,849	\$34,158	\$981,999	\$940,650
Total return swaps and other	868	573	23,215	10,272
<b>Total by instrument</b>	<b>\$35,717</b>	<b>\$34,731</b>	<b>\$1,005,214</b>	<b>\$950,922</b>
<b>By rating</b>				
Investment grade	\$12,694	\$13,142	\$764,040	\$720,521
Non-investment grade	23,023	21,589	241,174	230,401
<b>Total by rating</b>	<b>\$35,717</b>	<b>\$34,731</b>	<b>\$1,005,214</b>	<b>\$950,922</b>
<b>By maturity</b>				
Within 1 year	\$3,871	\$3,559	\$265,632	\$254,225
From 1 to 5 years	27,991	27,488	669,834	639,460

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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.

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 June 30, 2016 and December 31, 2015 was \$29 billion and \$22 billion, respectively. The Company had posted \$25 billion and \$19 billion as collateral for this exposure in the normal course of business as of June 30, 2016 and December 31, 2015, 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 June 30, 2016, the Company could be required to post an additional \$3.2 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 \$3.3 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 2015 Annual Report on Form 10-K, 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 June 30, 2016, both the asset carrying amounts derecognized and gross cash proceeds received as of the date of derecognition were \$1.3 billion. At June 30, 2016, the fair value of these previously derecognized assets was \$1.3 billion and the fair value of the total return swaps was \$21 million recorded as gross derivative assets and \$30 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.

## 22. 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 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 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 June 30, 2016 and December 31, 2015:

In millions of dollars	Credit and funding valuation adjustments contra-liability (contra-asset)	
	June 30, 2016	December 31, 2015
Counterparty CVA	\$(2,015)	\$(1,470)
Asset FVA	(679)	(584)
Citigroup (own-credit) CVA	603	471

Liability FVA	154	106
Total CVA—derivative instruments	\$(1,937)	\$(1,477)

(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 periods indicated:

	Credit/funding/debt valuation adjustments gain (loss)			
	Three Months Ended June 30,		Six Months Ended June 30,	
In millions of dollars	2016	2015	2016	2015
Counterparty CVA	\$14	\$(20)	\$(93)	\$(159)
Asset FVA	(15)	94	(95)	52
Own-credit CVA	(13)	20	121	(16)
Liability FVA	18	(12)	48	45
Total CVA—derivative instruments	\$4	\$82	\$(19)	\$(78)
DVA related to own FVO liabilities <sup>(2)</sup>	\$20	\$230	\$327	\$318

(1) FVA is included with CVA for presentation purposes.

Effective January 1, 2016, Citigroup early adopted on a prospective basis only the provisions of ASU No. 2016-01, Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities, related to the presentation of DVA on fair value option liabilities. Accordingly, beginning in

(2) the first quarter 2016, the portion of the change in fair value of these liabilities related to changes in Citigroup's own credit spreads (DVA) is reflected as a component of AOCI; previously these amounts were recognized in Citigroup's revenues and net income. DVA amounts in AOCI will be recognized in revenue and net income if realized upon the settlement of the related liability.

#### 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.

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 June 30, 2016 and December 31, 2015. 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 June 30, 2016	Level 1 <sup>(1)</sup>	Level 2 <sup>(1)</sup>	Level 3	Gross inventory	Netting <sup>(2)</sup>	Net balance
<b>Assets</b>						
Federal funds sold and securities borrowed or purchased under agreements to resell	\$—	\$171,688	\$1,819	\$173,507	\$(28,691)	\$144,816
<b>Trading non-derivative assets</b>						
<b>Trading mortgage-backed securities</b>						
U.S. government-sponsored agency guaranteed Residential	—	26,832	730	27,562	—	27,562
Commercial	—	194	801	995	—	995
Total trading mortgage-backed securities	—	1,146	390	1,536	—	1,536
U.S. Treasury and federal agency securities	\$—	\$28,172	\$1,921	\$30,093	\$—	\$30,093
State and municipal	\$21,287	\$4,353	\$3	\$25,643	\$—	\$25,643
Foreign government	—	3,062	117	3,179	—	3,179
Corporate	43,274	19,763	81	63,118	—	63,118
Equity securities	553	14,198	405	15,156	—	15,156
Asset-backed securities	41,219	1,818	3,970	47,007	—	47,007
Other trading assets	—	870	2,670	3,540	—	3,540
Total trading non-derivative assets	\$106,336	\$81,209	\$12,006	\$199,551	\$—	\$199,551
<b>Trading derivatives</b>						
Interest rate contracts	\$48	\$562,908	\$3,381	\$566,337		
Foreign exchange contracts	58	174,695	800	175,553		
Equity contracts	2,672	21,520	1,323	25,515		
Commodity contracts	175	11,290	952	12,417		
Credit derivatives	—	29,847	3,085	32,932		
Total trading derivatives	\$2,953	\$800,260	\$9,541	\$812,754		
Cash collateral paid <sup>(3)</sup>				\$9,292		
Netting agreements					\$(690,888)	
Netting of cash collateral received					(58,945)	
Total trading derivatives	\$2,953	\$800,260	\$9,541	\$822,046	\$(749,833)	\$72,213
<b>Investments</b>						
<b>Mortgage-backed securities</b>						
U.S. government-sponsored agency guaranteed Residential	\$—	\$45,403	\$94	\$45,497	\$—	\$45,497
Commercial	—	5,040	25	5,065	—	5,065
Total investment mortgage-backed securities	—	361	5	366	—	366
U.S. Treasury and federal agency securities	\$—	\$50,804	\$124	\$50,928	\$—	\$50,928
	\$113,604	\$11,961	\$3	\$125,568	\$—	\$125,568

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State and municipal	—	9,237	2,016	11,253	—	11,253
Foreign government	44,585	49,113	141	93,839	—	93,839
Corporate	4,607	15,520	460	20,587	—	20,587
Equity securities	1,251	45	128	1,424	—	1,424
Asset-backed securities	—	7,446	597	8,043	—	8,043
Other debt securities	—	1,118	5	1,123	—	1,123
Non-marketable equity securities <sup>(4)</sup>	—	47	1,139	1,186	—	1,186
Total investments	\$164,047	\$145,291	\$4,613	\$313,951	\$—	\$313,951

197

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In millions of dollars at June 30, 2016	Level 1 <sup>(1)</sup>	Level 2 <sup>(1)</sup>	Level 3	Gross inventory	Netting <sup>(2)</sup>	Net balance
Loans <sup>(5)</sup>	\$—	\$2,900	\$1,234	\$4,134	\$—	\$4,134
Mortgage servicing rights	—	—	1,324	1,324	—	1,324
Non-trading derivatives and other financial assets measured on a recurring basis, gross	\$—	\$9,107	\$111	\$9,218		
Cash collateral paid <sup>(6)</sup>				7		
Netting of cash collateral received					\$(1,793 )	
Non-trading derivatives and other financial assets measured on a recurring basis	\$—	\$9,107	\$111	\$9,225	\$(1,793 )	\$7,432
Total assets	\$273,336	\$1,210,455	\$30,648	\$1,523,738	\$(780,317)	\$743,421
Total as a percentage of gross assets <sup>(7)</sup>	18.0	%79.9	%2.0	%		
Liabilities						
Interest-bearing deposits	\$—	\$1,038	\$433	\$1,471	\$—	\$1,471
Federal funds purchased and securities loaned or sold under agreements to repurchase	—	73,728	1,107	74,835	(28,691 )	46,144
Trading account liabilities						
Securities sold, not yet purchased	62,396	9,595	12	72,003	—	72,003
Other trading liabilities	—	1,100	—	1,100	—	1,100
Total trading liabilities	\$62,396	\$10,695	\$12	\$73,103	\$—	\$73,103
Trading derivatives						
Interest rate contracts	\$20	\$539,113	\$3,755	\$542,888		
Foreign exchange contracts	10	170,081	829	170,920		
Equity contracts	2,503	24,757	2,394	29,654		
Commodity contracts	209	11,577	2,969	14,755		
Credit derivatives	—	29,396	3,839	33,235		
Total trading derivatives	\$2,742	\$774,924	\$13,786	\$791,452		
Cash collateral received <sup>(8)</sup>				\$16,592		
Netting agreements					\$(690,888)	
Netting of cash collateral paid					(53,952 )	
Total trading derivatives	\$2,742	\$774,924	\$13,786	\$808,044	\$(744,840)	\$63,204
Short-term borrowings	\$—	\$1,797	\$53	\$1,850	\$—	\$1,850
Long-term debt	—	16,793	9,138	25,931	—	25,931
Non-trading derivatives and other financial liabilities measured on a recurring basis, gross	\$—	\$2,897	\$5	\$2,902		
Cash collateral received <sup>(9)</sup>				—		
Netting of cash collateral paid					\$(40 )	
Total non-trading derivatives and other financial liabilities measured on a recurring basis	\$—	\$2,897	\$5	\$2,902	\$(40 )	\$2,862
Total liabilities	\$65,138	\$881,872	\$24,534	\$988,136	\$(773,571)	\$214,565
Total as a percentage of gross liabilities <sup>(7)</sup>	6.7	%90.8	%2.5	%		

(1) For the three and six months ended June 30, 2016, the Company transferred assets of approximately \$0.7 billion and \$0.9 billion from Level 1 to Level 2, respectively, primarily related to foreign government securities and equity securities not traded in active markets. During the three and six months ended June 30, 2016, the Company transferred assets of approximately \$1.0 billion and \$2.3 billion from Level 2 to Level 1, respectively, primarily related to foreign government bonds traded with sufficient frequency to constitute an active market. During the three and six months ended June 30, 2016, there were no material transfers of liabilities from Level 1 to Level 2 or from Level 2 to Level 1.

- 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 \$63,244 million of gross cash collateral paid, of which \$53,952 million was used to offset trading derivative liabilities.  
Amounts exclude \$0.8 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).
  - (5) There is no allowance for loan losses recorded for loans reported at fair value.
  - (6) Reflects the net amount of \$47 million of gross cash collateral paid, of which \$40 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 \$75,537 million of gross cash collateral received, of which \$58,945 million was used to offset trading derivative assets.
  - (9) Reflects the net amount of \$1,793 million of gross cash collateral received, of which \$1,793 million was used to offset non-trading derivative assets.

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Fair Value Levels

In millions of dollars at December 31, 2015	Level 1 <sup>(1)</sup>	Level 2 <sup>(1)</sup>	Level 3	Gross inventory	Netting <sup>(2)</sup>	Net balance
<b>Assets</b>						
Federal funds sold and securities borrowed or purchased under agreements to resell	\$—	\$177,538	\$1,337	\$178,875	\$(40,911)	\$137,964
<b>Trading non-derivative assets</b>						
<b>Trading mortgage-backed securities</b>						
U.S. government-sponsored agency guaranteed	—	24,023	744	24,767	—	24,767
Residential	—	1,059	1,326	2,385	—	2,385
Commercial	—	2,338	517	2,855	—	2,855
Total trading mortgage-backed securities	\$—	\$27,420	\$2,587	\$30,007	\$—	\$30,007
U.S. Treasury and federal agency securities	\$14,208	\$3,587	\$1	\$17,796	\$—	\$17,796
State and municipal	—	2,345	351	2,696	—	2,696
Foreign government	35,715	20,555	197	56,467	—	56,467
Corporate	302	13,901	376	14,579	—	14,579
Equity securities	50,429	2,382	3,684	56,495	—	56,495
Asset-backed securities	—	1,217	2,739	3,956	—	3,956
Other trading assets	—	9,293	2,483	11,776	—	11,776
Total trading non-derivative assets	\$100,654	\$80,700	\$12,418	\$193,772	\$—	\$193,772
<b>Trading derivatives</b>						
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 <sup>(3)</sup>				\$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
<b>Investments</b>						
<b>Mortgage-backed securities</b>						
U.S. government-sponsored agency guaranteed	\$—	\$39,575	\$139	\$39,714	\$—	\$39,714
Residential	—	5,982	4	5,986	—	5,986
Commercial	—	569	2	571	—	571
Total investment mortgage-backed securities	\$—	\$46,126	\$145	\$46,271	\$—	\$46,271
U.S. Treasury and federal agency securities	\$111,536	\$11,375	\$4	\$122,915	\$—	\$122,915
State and municipal	—	9,267	2,192	11,459	—	11,459
Foreign government	42,073	46,341	260	88,674	—	88,674
Corporate	3,605	15,122	603	19,330	—	19,330
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 <sup>(4)</sup>	—	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 <sup>(1)</sup>	Level 2 <sup>(1)</sup>	Level 3	Gross inventory	Netting <sup>(2)</sup>	Net balance
Loans <sup>(5)</sup>	\$—	\$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 <sup>(6)</sup>				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 <sup>(7)</sup>	20.0	%77.5	%2.5	%		
<b>Liabilities</b>						
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
<b>Trading account liabilities</b>						
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
<b>Trading account derivatives</b>						
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 <sup>(8)</sup>				\$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	—	17,750	7,543	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 <sup>(9)</sup>				37		
Netting of cash collateral paid					\$(53 )	
Non-trading derivatives and other financial liabilities measured on a recurring basis	\$—	\$1,626	\$14	\$1,677	\$(53 )	\$1,624
Total liabilities	\$50,970	\$706,117	\$21,371	\$792,123	\$(608,054)	\$184,069
Total as a percentage of gross liabilities <sup>(7)</sup>	6.5	%90.7	%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.

(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 \$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).
- (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.

## Changes in Level 3 Fair Value Category

The following tables present the changes in the Level 3 fair value category for the three and six months ended June 30, 2016 and 2015. 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	Mar. 31, 2016	Net realized/unrealized gains (losses) transfers incl. in				Purchases	Issuances	Sales	Settlements	Jun. 30, 2016	Unrealized gains (losses) still held <sup>(3)</sup>
		Principal transactions	Other <sup>(1)</sup>	into Level 3 <sup>(2)</sup>	out of Level 3						
<b>Assets</b>											
Federal funds sold and securities borrowed or purchased under agreements to resell	\$1,909	\$ (62 )	\$ —	\$ (28 )	\$ —	\$ —	\$ —	\$ —	\$ —	\$1,819	\$ (54 )
Trading non-derivative assets											
Trading mortgage-backed securities											
U.S. government-sponsored agency guaranteed	1,039	—	—	83	(362 )	405	—	(443 )	8	730	—
Residential	1,192	(61 )	—	25	(44 )	46	—	(351 )	(6 )	801	(72 )
Commercial	581	4	—	123	(75 )	107	—	(350 )	—	390	(5 )
Total trading mortgage-backed securities	\$2,812	\$ (57 )	\$ —	\$ 231	\$ (481 )	\$ 558	\$ —	\$ (1,144 )	\$ 2	\$1,921	\$ (77 )
U.S. Treasury and federal agency securities	\$3	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$3	\$ —
State and municipal	209	1	—	5	(57 )	65	—	(106 )	—	117	(2 )
Foreign government	219	(7 )	—	—	(13 )	34	—	(152 )	—	81	(2 )
Corporate	477	272	—	35	(60 )	165	—	(479 )	(5 )	405	77
Equity securities	3,755	(491 )	—	174	(26 )	670	—	(112 )	—	3,970	(438 )
Asset-backed securities	2,814	6	—	40	(181 )	694	—	(703 )	—	2,670	5
Other trading assets	2,574	(89 )	—	680	(869 )	1,074	(13 )	(509 )	(9 )	2,839	(125 )
Total trading non-derivative assets	\$12,863	\$ (365 )	\$ —	\$ 1,165	\$ (1,687 )	\$ 3,260	\$ (13 )	\$ (3,205 )	\$ (12 )	\$12,006	\$ (562 )



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Trading derivatives, net <sup>(4)</sup>										
Interest rate contracts	\$ (755 )	\$ 182	\$ <del>144</del>	\$ (51 )	\$ 137	\$ (18 )	\$ (100 )	\$ 87	\$ (374 )	\$ 136
Foreign exchange contracts	295	(324 )	— 1	(90 )	89	—	(52 )	52	(29 )	(428 )
Equity contracts	(876 )	76	— (11 )	(284 )	22	38	(12 )	(24 )	(1,071 )	108
Commodity contracts	(1,949 )	(139 )	— 3	(36 )	356	—	(352 )	100	(2,017 )	(122 )
Credit derivatives	(321 )	(637 )	— (33 )	(52 )	41	—	—	248	(754 )	(603 )
Total trading derivatives, net <sup>(4)</sup>	\$ (3,606 )	\$ (842 )	\$ <del>104</del>	\$ (513 )	\$ 645	\$ 20	\$ (516 )	\$ 463	\$ (4,245 )	\$ (909 )

201

In millions of dollars	Mar. 31, 2016	Net realized/unrealized gains (losses) incl. in		Transfers		Purchases	Issuances	Sales	Settlements	Jun. 30, 2016	Unrealized gains (losses) still held <sup>(3)</sup>
		Principal transactions	Other <sup>(1)(2)</sup>	into Level 3	out of Level 3						
<b>Investments</b>											
<b>Mortgage-backed securities</b>											
U.S. government-sponsored agency guaranteed	\$111	\$ —	\$ 6	\$ 5	\$(23 )	\$ 1	\$ —	\$(6 )	\$ —	\$ 94	\$ 1
Residential	—	—	—	—	—	25	—	—	—	25	—
Commercial	3	—	—	3	(1 )	—	—	—	—	5	—
Total investment mortgage-backed securities	\$114	\$ —	\$ 6	\$ 8	\$(24 )	\$ 26	\$ —	\$(6 )	\$ —	\$124	\$ 1
U.S. Treasury and federal agency securities	\$3	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 3	\$ —
State and municipal	2,098	—	127	130	(374 )	89	—	(54 )	—	2,016	99
Foreign government	175	—	17	—	—	41	—	(89 )	(3 )	141	—
Corporate	498	—	31	—	(8 )	93	—	(154 )	—	460	(5 )
Equity securities	126	—	—	2	—	—	—	—	—	128	—
Asset-backed securities	701	—	61	—	(22 )	72	—	(215 )	—	597	51
Other debt securities	—	—	—	—	—	5	—	—	—	5	—
Non-marketable equity securities	1,165	—	26	13	—	6	—	—	(71 )	1,139	26
Total investments	\$4,880	\$ —	\$ 268	\$ 153	\$(428 )	\$ 332	\$ —	\$(518 )	\$(74 )	\$4,613	\$ 172
Loans	\$1,723	\$ —	\$ 19	\$ —	\$ —	\$ 211	\$ 58	\$(297 )	\$(480 )	\$1,234	\$(34 )
Mortgage servicing rights	1,524	—	(137 )	—	—	—	35	—	(98 )	1,324	(154 )
Other financial assets measured on a recurring basis	57	—	16	37	(2 )	—	67	(4 )	(60 )	111	(61 )
<b>Liabilities</b>											
Interest-bearing deposits	\$191	\$ —	\$ 39	\$ 318	\$ —	\$ —	\$ 1	\$ —	\$(38 )	\$433	\$ 39
Federal funds purchased and securities loaned or sold under agreements to repurchase	1,238	4	—	—	—	—	—	—	(127 )	1,107	4
<b>Trading account liabilities</b>											
Securities sold, not yet purchased	118	(11)	—	38	(18 )	(61 )	(41 )	34	(69 )	12	(30 )
Short-term borrowings	46	(24)	—	12	—	—	7	—	(36 )	53	(15 )
Long-term debt	8,736	(48)	—	712	(756 )	—	990	61	(653 )	9,138	(48 )
Other financial liabilities measured on a recurring basis	14	—	1	—	(6 )	(2 )	1	—	(1 )	5	(1 )

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In millions of dollars	Dec. 31, 2015	Net realized/unrealized gains (losses) incl. in			Purchases	Issuances	Sales	Settlements	Jun. 30, 2016	Unrealized gains (losses) still held <sup>(3)</sup>	
		Principal transactions	Other <sup>(1)(2)</sup>	Transfers into Level 3							out of Level 3
<b>Assets</b>											
Federal funds sold and securities borrowed or purchased under agreements to resell	\$1,337	\$ 8	\$ —	\$ —	\$(28)	\$503	\$ —	\$ —	\$(1)	\$1,819	\$(55)
Trading non-derivative assets											
Trading mortgage-backed securities											
U.S.											
government-sponsored agency guaranteed Residential	744	12	—	418	(582)	761	—	(634)	11	730	(3)
Commercial	1,326	(12)	—	129	(87)	257	—	(806)	(6)	801	(40)
Total trading mortgage-backed securities	517	13	—	179	(102)	352	—	(569)	—	390	(13)
U.S. Treasury and federal agency securities	\$2,587	\$ 13	\$ —	\$ 726	\$(771)	\$1,370	\$ —	\$(2,009)	\$ 5	\$1,921	\$(56)
State and municipal	\$1	\$ —	\$ —	\$ 2	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 3	\$(1)
Foreign government	351	8	—	18	(216)	168	—	(212)	—	117	(1)
Corporate	197	(8)	—	2	(17)	75	—	(168)	—	81	1
Equity securities	376	284	—	80	(76)	334	—	(588)	(5)	405	89
Asset-backed securities	3,684	(535)	—	267	(60)	749	—	(135)	—	3,970	(474)
Other trading assets	2,739	134	—	157	(195)	1,186	—	(1,351)	—	2,670	29
Total trading non-derivative assets	2,483	(116)	—	1,458	(1,482)	1,357	(2)	(840)	(19)	2,839	(223)
Trading derivatives, net <sup>(4)</sup>	\$12,418	\$(220)	\$ —	\$ 2,710	\$(2,817)	\$5,239	\$(2)	\$(5,303)	\$(19)	\$12,006	\$(636)
Interest rate contracts	(495)	(326)	—	309	39	142	(18)	(103)	78	(374)	(154)
Foreign exchange contracts	620	(677)	—	4	(60)	106	—	(91)	69	(29)	(572)
Equity contracts	(800)	108	—	64	(428)	46	38	(71)	(28)	(1,071)	107
Commodity contracts	(1,861)	(281)	—	(49)	(26)	356	—	(352)	196	(2,017)	(288)
Credit derivatives	307	(1,152)	—	(114)	(23)	42	—	186	(754)	(1,086)	
Total trading derivatives, net <sup>(4)</sup>	\$(2,229)	\$(2,328)	\$ —	\$ 214	\$(498)	\$692	\$ 20	\$(617)	\$ 501	\$(4,245)	\$(1,993)

In millions of dollars	Dec. 31, 2015	Net realized/unrealized gains (losses) incl. in		Transfers		Purchases	Issuances	Sales	Settlements	Jun. 30, 2016	Unrealized gains (losses) still held <sup>(3)</sup>
		Principal transactions	Other <sup>(1)(2)</sup>	into Level 3	out of Level 3						
<b>Investments</b>											
Mortgage-backed securities											
U.S. government-sponsored agency guaranteed	\$ 139	\$ —	\$( 25 )	\$ 12	\$( 62 )	\$ 40	\$ —	\$( 9 )	\$( 1 )	\$ 94	\$ 41
Residential	4	—	1	—	—	25	—	( 5 )	—	25	—
Commercial	2	—	—	6	( 3 )	—	—	—	—	5	—
Total investment mortgage-backed securities	\$ 145	\$ —	\$( 24 )	\$ 18	\$( 65 )	\$ 65	\$ —	\$( 14 )	\$( 1 )	\$ 124	\$ 41
U.S. Treasury and federal agency securities	\$ 4	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$( 1 )	\$ —	\$ 3	\$ —
State and municipal	2,192	—	162	391	( 783 )	240	—	( 186 )	—	2,016	118
Foreign government	260	—	19	33	—	103	—	( 271 )	( 3 )	141	( 106 )
Corporate	603	—	45	5	( 45 )	94	—	( 242 )	—	460	( 1 )
Equity securities	124	—	—	4	—	—	—	—	—	128	—
Asset-backed securities	596	—	35	—	( 23 )	204	—	( 215 )	—	597	24
Other debt securities	—	—	—	—	—	5	—	—	—	5	—
Non-marketable equity securities	1,135	—	24	51	—	18	—	—	( 89 )	1,139	20
Total investments	\$ 5,059	\$ —	\$ 261	\$ 502	\$( 916 )	\$ 729	\$ —	\$( 929 )	\$( 93 )	\$ 4,613	\$ 96
Loans	\$ 2,166	\$ —	\$( 58 )	\$ 89	\$( 538 )	\$ 570	\$ 219	\$( 675 )	\$( 539 )	\$ 1,234	\$( 63 )
Mortgage servicing rights	\$ 1,781	\$ —	\$( 362 )	\$ —	\$ —	\$ —	\$ 68	\$ 14	\$( 177 )	\$ 1,324	\$( 154 )
Other financial assets measured on a recurring basis	\$ 180	\$ —	\$ 33	\$ 40	\$( 5 )	\$ —	\$ 130	\$( 124 )	\$( 143 )	\$ 111	\$( 277 )
<b>Liabilities</b>											
Interest-bearing deposits	\$ 434	\$ —	\$ 35	\$ 322	\$( 209 )	\$ —	\$ 5	\$ —	\$( 84 )	\$ 433	\$ 39
Federal funds purchased and securities loaned or sold under agreements to repurchase	1,247	( 2 )	—	—	—	—	—	16	( 177 )	1,107	( 25 )
Trading account liabilities											
Securities sold, not yet purchased	199	14	—	97	( 43 )	( 61 )	( 41 )	70	( 195 )	12	( 29 )
Short-term borrowings	9	( 2 )	—	17	( 4 )	—	41	—	( 37 )	53	( 19 )
Long-term debt	7,543	( 26 )	—	1,221	( 1,843 )	—	2,872	61	( 742 )	9,138	( 86 )
Other financial liabilities measured on a recurring basis	14	—	( 7 )	—	( 10 )	( 6 )	2	—	( 2 )	5	( 3 )

Changes in fair value for available-for-sale investments are recorded in AOCI, unless related to other-than-temporary impairment, while gains and losses from sales are recorded in Realized gains (losses) from (1) sales of investments on the Consolidated Statement of Income. Effective January 1, 2016, changes in fair value of fair value option liabilities related to changes in Citigroup's own credit spreads (DVA) are reflected as a component of Accumulated other comprehensive income (AOCI).

(2) Unrealized gains (losses) on MSRs are recorded in Other revenue on the Consolidated Statement of Income.

(3) Represents the amount of total gains or losses for the period, included in earnings (and AOCI 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 June 30, 2016.

(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	Mar. 31, 2015	Net realized/unrealized gains (losses) incl. in Transfers					Purchases	Issuances	Sales	Settlements	Jun. 30, 2015	Unrealized gains (losses) still held <sup>(3)</sup>
		Principal transactions	Other <sup>(1)</sup>	into Level 3 <sup>(2)</sup>	out of Level 3							
<b>Assets</b>												
Federal funds sold and securities borrowed or purchased under agreements to resell	\$4,022	\$ (95 )	\$ —	\$ —	\$ (2,756)	\$ 20	\$ —	\$ —	\$ (121 )	\$ 1,070	\$ —	
<b>Trading non-derivative assets</b>												
<b>Trading mortgage-backed securities</b>												
<b>U.S.</b>												
government-sponsored agency guaranteed Residential	\$ 818	\$ 26	\$ —	\$ 188	\$ (340 )	\$ 172	\$ —	\$ (267 )	\$ 14	\$ 611	\$ 7	
Commercial	2,130	129	—	133	(66 )	631	—	(751 )	—	2,206	14	
Total trading mortgage-backed securities	599	(2 )	—	68	(65 )	92	—	(324 )	—	368	(1 )	
U.S. Treasury and federal agency securities	\$ 3,547	\$ 153	\$ —	\$ 389	\$ (471 )	\$ 895	\$ —	\$ (1,342)	\$ 14	\$ 3,185	\$ 20	
State and municipal	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	
Foreign government	247	(2 )	—	13	—	—	—	(9 )	—	249	1	
Corporate	115	—	—	—	(8 )	39	—	(59 )	(5 )	82	(2 )	
Equity securities	767	128	—	41	(26 )	164	—	(355 )	(11 )	708	(45 )	
Asset-backed securities	2,598	(25 )	—	38	(173 )	360	—	(57 )	—	2,741	66	
Other trading assets	3,553	106	—	505	(81 )	1,696	—	(1,543 )	—	4,236	181	
Total trading non-derivative assets	4,393	201	—	107	(1,536)	630	19	(704 )	(12 )	3,098	29	
Trading derivatives, net <sup>(4)</sup>	\$ 15,220	\$ 561	\$ —	\$ 1,093	\$ (2,295)	\$ 3,784	\$ 19	\$ (4,069)	\$ (14 )	\$ 14,299	\$ 250	
Interest rate contracts	(334 )	(358 )	—	(2 )	(46 )	12	—	169	136	(423 )	(152 )	
Foreign exchange contracts	646	(123 )	—	(42 )	(85 )	83	—	(83 )	(5 )	391	(153 )	
Equity contracts	(774 )	351	—	—	15	61	—	(75 )	67	(355 )	(70 )	
Commodity contracts	(1,729 )	(56 )	—	1	(6 )	—	—	—	63	(1,727 )	89	
Credit derivatives	(663 )	(24 )	—	(51 )	(45 )	—	—	(3 )	212	(574 )	(228 )	
Total trading derivatives, net <sup>(4)</sup>	\$ (2,854 )	\$ (210 )	\$ —	\$ (94 )	\$ (167 )	\$ 156	\$ —	\$ 8	\$ 473	\$ (2,688 )	\$ (514 )	
<b>Investments</b>												
<b>Mortgage-backed securities</b>												
<b>U.S.</b>												
government-sponsored agency guaranteed Residential	\$ 70	\$ —	\$ 1	\$ 59	\$ (33 )	\$ —	\$ —	\$ (1 )	\$ —	\$ 96	\$ 1	
	10	—	(3 )	—	—	11	—	(8 )	—	10	—	

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Commercial	2	—	—	—	(2	)—	—	—	—	—	—
Total investment mortgage-backed securities	\$82	\$—	\$ (2 )	\$59	\$(35	)\$11	\$—	\$(9	)\$—	\$106	\$1
U.S. Treasury and federal agency securities	\$5	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$5	\$—
State and municipal	2,247	—	(39 )	54	(99	)166	—	(176	)—	2,153	(43 )
Foreign government	575	—	(3 )	(8	)—	310	—	(223	)158	493	4
Corporate	584	—	72	—	(3	)55	—	(9	)1	698	—
Equity securities	519	—	2	—	(7	)—	—	(31	)—	483	(1 )
Asset-backed securities	517	—	20	—	(48	)14	—	—	—	503	22
Other debt securities	—	—	—	—	—	—	—	—	—	—	—
Non-marketable equity securities	1,289	—	(53 )	75	(6	)4	—	(53	)18	1,238	11
Total investments	\$5,818	\$—	\$ (3 )	\$180	\$(198	)\$560	\$—	\$(501	)\$ (177 )	\$5,679	\$(6 )

205

In millions of dollars	Net realized/unrealized gains (losses) incl. in								Unrealized gains (losses) still held <sup>(3)</sup>	
	Mar. 31, 2015	Principal transactions	Other <sup>(1)(2)</sup>	Level 3	Level 1	Purchases	Issuances	Sales		Settlements
Loans	\$3,906	\$ —	(\$ 20 )	\$ \$(85 )	\$ 365	\$ 42	\$(278)	\$(90 )	\$3,840	\$ 26
Mortgage servicing rights	1,685	—	270	—	—	68	(9 )	(90 )	1,924	(77 )
Other financial assets measured on a recurring basis	148	—	10	145	—	38	(9 )	(57 )	139	348
<b>Liabilities</b>										
Interest-bearing deposits	\$465	\$ —	\$ 101	\$ —	\$ —	\$ —	\$ —	\$ (17 )	\$347	\$ (164 )
Federal funds purchased and securities loaned or sold under agreements to repurchase	1,060	29	—	—	—	—	(8 )	(58 )	965	25
Trading account liabilities										
Securities sold, not yet purchased	223	(12)	—	105	44	—	87	(26 )	257	(38 )
Short-term borrowings	120	17	—	163	—	33	—	(16 )	133	(1 )
Long-term debt	7,196	82	—	374,091	—	1,452	—	(184 )	7,665	213
Other financial liabilities measured on a recurring basis	8	—	(4 )	—	(4 )	(1 )	2	—	(5 )	4 (4 )



In millions of dollars	Dec. 31, 2014	Net realized/unrealized gains (losses) incl. in				Purchases	Issuances	Sales	Settlements	Jun. 30, 2015	Unrealized gains (losses) still held <sup>(3)</sup>
		Principal transactions	Other <sup>(1)</sup>	into Level 3 <sup>(2)</sup>	out of Level 3						
<b>Assets</b>											
Federal funds sold and securities borrowed or purchased under agreements to resell	\$3,398	\$(135)	\$—	\$—	\$(2,856)	\$784	\$—	\$—	\$(121)	\$1,070	\$—
Trading non-derivative assets											
Trading mortgage-backed securities											
U.S. government-sponsored agency guaranteed	1,085	29	—	482	(850)	339	—	(488)	14	611	5
Residential	2,680	206	—	178	(282)	1,129	—	(1,705)	—	2,206	(91)
Commercial	440	13	—	156	(78)	412	—	(575)	—	368	(8)
Total trading mortgage-backed securities	\$4,205	\$248	\$—	\$816	\$(1,210)	\$1,880	\$—	\$(2,768)	\$14	\$3,185	\$(94)
U.S. Treasury and federal agency securities	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—	\$—
State and municipal	241	(10)	—	27	(7)	9	—	(11)	—	249	2
Foreign government	206	(3)	—	27	(100)	105	—	(99)	(54)	82	4
Corporate	820	204	—	54	(85)	511	—	(785)	(11)	708	48
Equity securities	2,219	(46)	—	162	(188)	742	—	(148)	—	2,741	55
Asset-backed securities	3,294	233	—	570	(115)	2,759	—	(2,505)	—	4,236	179
Other trading assets	4,372	60	—	317	(1,928)	1,632	32	(1,367)	(20)	3,098	15
Total trading non-derivative assets	\$15,357	\$686	\$—	\$1,973	\$(3,633)	\$7,638	\$32	\$(7,683)	\$(71)	\$14,299	\$209
Trading derivatives, net <sup>(4)</sup>											
Interest rate contracts	\$(211)	\$(428)	\$—	\$(136)	\$(39)	\$18	\$—	\$166	\$207	\$(423)	\$(58)
Foreign exchange contracts	778	(424)	—	(1)	(81)	174	—	(178)	123	391	(63)
Equity contracts	(863)	322	—	(23)	116	150	—	(140)	83	(355)	(166)
Commodity contracts	(1,622)	(390)	—	183	10	—	—	—	92	(1,727)	(158)
Credit derivatives	(743)	(122)	—	31	8	—	—	(3)	255	(574)	(191)
Total trading derivatives, net <sup>(4)</sup>	\$(2,661)	\$(1,042)	\$—	\$54	\$14	\$342	\$—	\$(155)	\$760	\$(2,688)	\$(636)
<b>Investments</b>											
Mortgage-backed securities											
U.S. government-sponsored	\$38	\$—	\$—	\$104	\$(45)	\$—	\$—	\$(1)	\$—	\$96	\$(1)

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agency guaranteed											
Residential	8	—	(1 )	—	—	11	—	(8 )	—	10	1
Commercial	1	—	—	2	(3 )	—	—	—	—	—	—
Total investment											
mortgage-backed securities	\$47	\$—	\$(1 )	\$106	\$(48 )	\$11	\$—	\$(9 )	\$—	\$106	\$—
U.S. Treasury and federal agency securities	\$6	\$—	\$—	\$—	\$—	\$—	\$—	\$(1 )	\$—	\$5	\$—
State and municipal	2,180	—	(7 )	159	(238 )	399	—	(340 )	—	2,153	(31 )
Foreign government	678	—	48	(8 )	(105 )	484	—	(334 )	(270 )	493	5
Corporate	672	—	46	2	(44 )	69	—	(13 )	(34 )	698	—
Equity securities	681	—	(86 )	7	(10 )	—	—	(109 )	—	483	—
Asset-backed securities	549	—	(20 )	—	(58 )	33	—	(1 )	—	503	22
Other debt securities	—	—	—	—	—	—	—	—	—	—	—
Non-marketable equity securities	1,460	—	(10 )	75	6	4	—	(53 )	(244 )	1,238	74
Total investments	\$6,273	\$—	\$(30 )	\$341	\$(497 )	\$1,000	\$—	\$(860 )	\$(548 )	\$5,679	\$70

207

In millions of dollars	Dec. 31, 2014	Net realized/unrealized gains (losses) incl. in	Transfers		Purchases	Issuances	Sales	Settlements	Jun. 30, 2015	Unrealized gains (losses) still held <sup>(3)</sup>	
			into Level 3	out of Level 3							
Loans	\$3,108	\$ —	\$ (74 )	\$ 689	\$ (85 )	\$ 574	\$ 363	\$ (375 )	\$ (360 )	\$3,840	\$ 29
Mortgage servicing rights	1,845	—	193	—	—	—	111	(41 )	(184 )	1,924	(390 )
Other financial assets measured on a recurring basis	78	—	16	80	(7 )	3	98	(14 )	(115 )	139	596
<b>Liabilities</b>											
Interest-bearing deposits	\$486	\$ —	\$ 101	\$ —	\$ —	\$ —	\$ —	\$ —	\$ (38 )	\$347	\$ (265 )
Federal funds purchased and securities loaned or sold under agreements to repurchase	1,043	(23)	—	—	—	—	—	(7 )	(94 )	965	15
Trading account liabilities											
Securities sold, not yet purchased	424	(22)	—	197	(187 )	—	—	157	(356 )	257	(50 )
Short-term borrowings	344	10	—	17	(15 )	—	49	—	(252 )	133	(3 )
Long-term debt	7,290	368	—	1,086	(2,038 )	—	2,401	—	(706 )	7,665	(17 )
Other financial liabilities measured on a recurring basis	7	—	(7 )	—	(4 )	(2 )	2	—	(6 )	4	(3 )

Changes in fair value of available-for-sale investments are recorded in AOCI, unless related to

(1) 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 AOCI 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 June 30, 2015.

(4) Total Level 3 derivative assets and liabilities have been netted in these tables for presentation purposes only.

#### Level 3 Fair Value Rollforward

There were no significant Level 3 transfers for the period from March 31, 2016 to June 30, 2016.

The following were the significant Level 3 transfers for the period December 31, 2015 to June 30, 2016:

• Transfers of Other trading assets of \$1.5 billion from Level 2 to Level 3, and of \$1.5 billion from Level 3 to Level 2, related to trading loans, reflecting changes in the volume of market quotations.

• Transfers of Long-term debt of \$1.2 billion from Level 2 to Level 3, and of \$1.8 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.

The following were the significant Level 3 transfers for the period March 31, 2015 to June 30, 2015:

• Transfers of Federal Funds sold and securities borrowed or purchased under agreements to resell of \$2.8 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 Other trading assets of \$1.5 billion related to trading loans for which there was increased transparency into market quotations.

Transfers of Long-term debt of \$1.1 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, 2014 to June 30, 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 Other trading assets of \$1.9 billion related to trading loans for which there was increased transparency into market quotations.

Transfers of Long-term debt of \$1.1 billion from Level 2 to Level 3, and of \$2.0 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.

## Valuation Techniques and Inputs for Level 3 Fair Value Measurements

The Company's Level 3 inventory consists of both cash instruments 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 June 30, 2016	Fair value <sup>(1)</sup> (in millions)	Methodology	Input	Low <sup>(2)(3)</sup>	High <sup>(2)(3)</sup>	Weighted average <sup>(4)</sup>
<b>Assets</b>						
Federal funds sold and securities borrowed or purchased under agreements to resell	\$ 804	Model-based	Interest rate	(0.44 )%	2.74	% 1.61 %
Mortgage-backed securities	\$ 1,021	Price-based	Price	\$6.00	\$ 119.62	\$76.52
	972	Yield analysis	Yield	0.90	% 14.62	% 4.06 %
State and municipal, foreign government, corporate and other debt securities	\$ 3,828	Price-based	Price	\$0.01	\$ 141.45	\$92.24
	1,750	Cash flow	Credit spread	35 bps	600 bps	229 bps
Equity securities <sup>(5)</sup>	\$ 3,796	Model-based	WAL	4 years	29 years	4.49 years
			Interest rate	2.86	% 10.75	% 3.63 %
Asset-backed securities	\$ 3,008	Price-based	Price	\$5.00	\$ 100.00	\$70.39
Non-marketable equity	\$ 581	Comparables analysis	EBITDA multiples	7.00 x	10.35 x	8.79 x
	519	Price-based	Discount to price	—	% 90.00	% 10.85 %
			Price-to-book ratio	—	% 2.16	% 1.10 %
			Price	\$—	\$28.28	\$2.32
<b>Derivatives—gross</b>						
Interest rate contracts (gross)	\$ 7,548	Model-based	IR log-normal volatility	61.89	% 151.86	% 82.56 %
			Mean reversion	1.00	% 20.00	% 10.50 %
Foreign exchange contracts (gross)	\$ 1,457	Model-based	Foreign exchange (FX) volatility	3.64	% 58.13	% 17.05 %
	172	Cash flow	IR-IR correlation	(51.00)%	40.00	% 35.23 %
			IR-FX correlation	40.00	% 60.00	% 50.00 %
			IR basis	(0.90 )%	(0.40 )%	(0.83 )%
Equity contracts (gross) <sup>(7)</sup>	\$ 3,370	Model-based	Equity volatility	12.05	% 61.31	% 30.75 %

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			Equity forward	66.94	% 106.31	% 95.53	%
			Equity-Equity correlation	(81.18)	% 100.00	% 57.09	%
			Equity - FX correlation	(88.20)	% 56.90	% (21.74)	%
			WAL	4		4 years	4 years
Commodity contracts (gross)	\$ 3,921	Model-based	Forward price	42.87	% 191.93	% 115.58	%
			Commodity volatility	2.00	% 53.36	% 23.44	%
			Commodity correlation	(51.05)	% 92.17	% 56.68	%
Credit derivatives (gross)	\$ 6,195	Model-based	Recovery rate	10.00	% 75.00	% 33.49	%
	927	Price-based	Credit correlation	50.00	% 95.00	% 52.14	%
			Upfront points	4.48	% 100.00	% 64.24	%

209

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As of June 30, 2016	Fair value <sup>(1)</sup> (in millions)	Methodology	Input	Low <sup>(2)(3)</sup>	High <sup>(2)(3)</sup>	Weighted average <sup>(4)</sup>	
			Price	\$—	\$105.00	\$45.43	
			Credit spread	1 bps	1,705 bps	449 bps	
Nontrading derivatives and other financial assets and liabilities measured on a recurring basis (gross) <sup>(6)</sup>	\$ 117	Model-based	Redemption rate	6.10	% 99.50	% 74.35	%
			Recovery rate	33.00	% 40.00	% 33.59	%
			Upfront points	22.00	% 22.00	% 22.00	%
Loans	\$ 624	Model-based	Price	\$—	\$107.39	\$31.68	
	598	Price-based	Credit spread	46 bps	500 bps	108 bps	
Mortgage servicing rights	\$ 1,232	Cash flow	Yield	—	% 23.32	% 6.85	%
	289	Model-based	WAL	3.01 years	5.88 years	4.49 years	
Liabilities							
Interest-bearing deposits	\$ 433	Model-based	IR log-normal volatility	61.89	% 151.86	% 82.56	%
			Interest rate	0.47	% 1.83	% 1.55	%
Federal funds purchased and securities loaned or sold under agreements to repurchase	\$ 1,107	Model-based	Interest rate	0.99	% 1.14	% 1.10	%
Trading account liabilities							
Securities sold, not yet purchased	\$ 7	Yield analysis	Price	\$—	\$109.29	\$199.85	
			Commodity correlation	(51.05 )	% 92.17	% 56.68	%
			Commodity volatility	2.00	% 53.36	% 23.44	%
			Forward price	\$42.87	\$191.93	\$112.58	
			Equity volatility	10.15	% 40.42	% 23.29	%
			Yield	1.51	% 2.22	% 1.83	%
Short-term borrowings and long-term debt	\$ 9,279	Model-based	Equity volatility	15.05	% 61.31	% 27.89	%
			Equity forward	66.94	% 102.58	% 94.32	%
			Equity-equity correlation	(81.18 )	% 100.00	% 49.17	%
			Equity-FX correlation	(88.20 )	% 56.90	% (21.73 )	%
			Mean Reversion	1.00	% 20.00	% 10.50	%
			IR log-normal volatility	61.89	% 151.86	% 82.56	%
As of December 31, 2015	Fair value <sup>(1)</sup> (in millions)	Methodology	Input	Low <sup>(2)(3)</sup>	High <sup>(2)(3)</sup>	Weighted average <sup>(4)</sup>	
Assets	\$ 1,337	Model-based		29.02	% 137.02	% 37.90	%

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Federal funds sold and securities borrowed or purchased under agreements to resell			IR log-normal volatility				
			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 <sup>(5)</sup>	\$ 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	0.19 x	1.09 x	0.60 x	
			Price	\$—	\$132.78	\$46.66	

210



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As of December 31, 2015	Fair value <sup>(1)</sup> (in millions)	Methodology	Input	Low <sup>(2)(3)</sup>	High <sup>(2)(3)</sup>	Weighted average <sup>(4)</sup>
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
			IR-FX correlation	(20.30)%	60.00	% 48.85
Equity contracts (gross) <sup>(7)</sup>	\$ 3,976	Model-based	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
	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) <sup>(6)</sup>	\$ 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

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			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 )%	

(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

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.

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.

#### 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

Stronger companies have tighter credit spreads, and weaker companies have wider credit spreads. 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.

### Price

Price 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 during the three months ended:

In millions of dollars	Fair value	Level 2	Level 3
June 30, 2016			
Loans held-for-sale	\$7,549	\$5,814	\$1,735
Other real estate owned	85	16	69
Loans <sup>(1)</sup>	1,502	464	1,038
Other Assets <sup>(2)</sup>	2,991	2,991	—
Total assets at fair value on a nonrecurring basis	\$12,127	\$9,285	\$2,842

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 <sup>(1)</sup>	1,173	836	337
Other Assets	—	—	—
Total assets at fair value on a nonrecurring basis	\$11,606	\$7,603	\$4,003

(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.

(2) Represents the carrying value of an equity investment which was impaired.

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 June 30, 2016	Fair value <sup>(1)</sup> (in millions)	Methodology	Input	Low <sup>(5)</sup>	High	Weighted average <sup>(2)</sup>
Loans held-for-sale	\$ 2,047	Price-based	Price	\$ —	\$100.00	\$33.27
Other real estate owned	\$ 68	Price-based	Discount to price <sup>(4)</sup>	0.3%	13.00	%2.45 %
Loans <sup>(3)</sup>	\$ 576	Recovery analysis	Recovery rates	— %	97.85	%83.69 %



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183 Price-based Discount to price<sup>(4)</sup> 13.00 35.00 %8.90 %

- (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, 2015	Fair value <sup>(1)</sup> (in millions)	Methodology	Input	Low <sup>(5)</sup>	High	Weighted average <sup>(2)</sup>	
Loans held-for-sale	\$ 3,486	Price-based	Price	\$ —	\$100.00	\$81.05	
Other real estate owned	\$ 90	Price-based	Discount to price <sup>(4)</sup>	0.3%	13.00	%2.86	%
			Appraised value	\$ —	\$8,518,230	\$3,813,045	
Loans <sup>(3)</sup>	\$ 157	Recovery analysis	Recovery rate	11.7%	60.00	%23.49	%
	87	Price-based	Discount to price <sup>(4)</sup>	13.00	34.00	%7.99	%

(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.

#### 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	Three Months Ended June 30,	
	2016	2015
Loans held-for-sale	\$(35 )	\$(20 )
Other real estate owned	(4 )	(3 )
Loans <sup>(1)</sup>	(48 )	(61 )
Other Assets <sup>(2)</sup>	\$(23 )	\$—
Total nonrecurring fair value gains (losses)	\$(110)	\$(84)

(1) Represents loans held for investment whose carrying amount is based on the fair value of the underlying collateral, primarily real estate loans.

(2) Represents net impairment losses related to an equity investment.

In millions of dollars	Six Months Ended June 30,	
	2016	2015
Loans held-for-sale	\$(32 )	\$(20 )
Other real estate owned	(5 )	(4 )
Loans <sup>(1)</sup>	(105 )	(107 )
Other Assets <sup>(2)</sup>	\$(211)	—
Total nonrecurring fair value gains (losses)	\$(353)	\$(131)

(1) Represents loans held for investment whose carrying amount is based on the fair value of the underlying collateral, primarily real estate loans.

(2) Represents net impairment losses related to an equity investment.

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	June 30, 2016		Estimated fair value		
	Carrying value	Estimated fair value	Level 1	Level 2	Level 3
<b>Assets</b>					
Investments	\$41.6	\$ 43.1	\$1.7	\$37.5	\$ 3.9
Federal funds sold and securities borrowed or purchased under agreements to resell	83.9	83.9	—	80.8	3.1
Loans <sup>(1)(2)</sup>	615.1	617.5	—	6.8	610.7
Other financial assets <sup>(2)(3)</sup>	215.4	215.4	6.5	143.6	65.3
<b>Liabilities</b>					
Deposits	\$936.4	\$ 935.1	\$—	\$784.1	\$151.0
Federal funds purchased and securities loaned or sold under agreements to repurchase	111.9	111.9	—	111.5	0.4
Long-term debt <sup>(4)</sup>	181.5	185.1	—	158.6	26.5
Other financial liabilities <sup>(5)</sup>	108.2	108.2	—	14.7	93.5
In billions of dollars	December 31, 2015		Estimated fair value		
	Carrying value	Estimated fair value	Level 1	Level 2	Level 3
<b>Assets</b>					
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 <sup>(1)(2)</sup>	597.5	599.4	—	6.0	593.4

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Other financial assets <sup>(2)(3)</sup>	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 <sup>(4)</sup>	176.0	180.8	—	153.8	27.0
Other financial liabilities <sup>(5)</sup>	97.6	97.6	—	18.0	79.6

217

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The carrying value of loans is net of the Allowance for loan losses of \$12.3 billion for June 30, 2016 and \$12.6 (1) billion for December 31, 2015. In addition, the carrying values exclude \$1.9 billion and \$2.4 billion of lease finance receivables at June 30, 2016 and December 31, 2015, 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, as existing assets and liabilities run off and new transactions are executed. 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 June 30, 2016 and December 31, 2015 were liabilities of \$6.4 billion and \$7.0 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.

## 23. 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, other than DVA (see below). 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 made. The changes in fair value are

recorded in current earnings, other than DVA, which from January 1, 2016 is reported in AOCI. Additional discussion regarding the applicable areas in which fair value elections were made is presented in Note 22 to the Consolidated Financial Statements.

The Company has elected fair value accounting for its mortgage servicing rights. See Note 20 to the Consolidated Financial Statements for further discussions regarding the accounting and reporting of MSRs.

The following table presents the changes in fair value of those items for which the fair value option has been elected:

	Changes in fair value gains (losses) for the			
	Three Months Ended June 30, 2016		Six Months Ended June 30, 2015	
In millions of dollars				
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	\$ 19	\$(95)	\$47	\$(93)
Trading account assets	(320)	136	(62)	227
Investments	(22)	4	(21)	49
Loans				
Certain corporate loans <sup>(1)</sup>	36	40	60	(9)
Certain consumer loans <sup>(1)</sup>	—	—	(1)	2
Total loans	\$36	\$40	\$59	\$(7)
Other assets				
MSRs	(137)	262	\$(362)	\$191
Certain mortgage loans held for sale <sup>(2)</sup>	91	70	171	172
Other assets	—	—	370	—
Total other assets	\$(46)	\$332	\$179	\$363
Total assets	\$(333)	\$417	\$202	\$539
Liabilities				
Interest-bearing deposits	\$(18)	23	\$(68)	33
Federal funds purchased and securities loaned or sold under agreements to repurchase selected portfolios of securities sold under agreements to repurchase and securities loaned	(2)	—	(8)	2
Trading account liabilities	3	(44)	97	(15)
Short-term borrowings	(114)	(67)	(34)	(68)
Long-term debt	(117)	707	(540)	896
Total liabilities	\$(248)	\$619	\$(553)	\$848

<sup>(1)</sup> Includes mortgage loans held by mortgage loan securitization VIEs consolidated upon the adoption of ASC 810, Consolidation (SFAS 167), on January 1, 2010.

<sup>(2)</sup>

Includes gains (losses) associated with interest rate lock-commitments for those loans that have been originated and elected under the fair value option.

### Own Debt Valuation Adjustments (DVA)

Own debt valuation adjustments are recognized on Citi's liabilities for which the fair value option has been elected by reference to Citi's credit spreads observed in the bond market. Among other variables, the fair value of liabilities for which the fair value option has been 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 spread (or instrument-specific credit risk) were gains of \$20 million and \$231 million for the three months ended June 30, 2016 and 2015, and gains of \$327 million and \$318 million for the six months ended June 30, 2016 and 2015, 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. Effective January 1, 2016, changes in fair value of fair value option liabilities related to changes in Citigroup's own credit spreads (DVA) are reflected as a component of AOCI; previously these amounts were recognized in Citigroup's Revenues and Net income along with all other changes in fair value. See Note 1 to the Consolidated Financial Statements for additional information.

### 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 offsetting 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 also elected the fair value option for certain other 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	June 30, 2016		December 31, 2015	
	Trading assets	Loans	Trading assets	Loans
Carrying amount reported on the Consolidated Balance Sheet	\$9,321	\$4,134	\$9,314	\$5,005
Aggregate unpaid principal balance in excess of fair value	744	84	980	280
Balance of non-accrual loans or loans more than 90 days past due	4	2	5	2



Aggregate unpaid principal balance in excess of fair value for non-accrual loans or loans more than 90 days past due 9 1 13 1

In addition to the amounts reported above, \$1,855 million and \$2,113 million of unfunded commitments related to certain credit products selected for fair value accounting were

outstanding as of June 30, 2016 and December 31, 2015, 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 six months ended June 30, 2016 and 2015 due to instrument-specific credit risk totaled to a gain of \$56 million and loss of \$27 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 \$0.8 billion and \$0.6 billion at June 30, 2016 and December 31, 2015, 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 trades unallocated precious metals investments and executes forward purchase and forward 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 or sale contract with the trading counterparty indexed to unallocated precious metals is accounted for as a derivative, at fair value through earnings. As of June 30, 2016, there were approximately \$18.1 billion and \$11.4 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 Held for Sale (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	June 30, 2016	December 31, 2015
Carrying amount reported on the Consolidated Balance Sheet	\$ 1,122	\$ 745

Aggregate fair value in excess of unpaid principal balance	49	20
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 six months ended June 30, 2016 and 2015 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	June 30, December 31,	
	2016	2015
Interest rate linked	\$ 10.3	\$ 9.6
Foreign exchange linked	0.2	0.3
Equity linked	11.1	9.9
Commodity linked	1.1	1.4
Credit linked	1.0	1.6
Total	\$ 23.7	\$ 22.8

Prior to 2016, the total change in the fair value of these structured liabilities was reported in Principal transactions in the Company's Consolidated Statement of Income. Beginning in the first quarter of 2016, the portion of the changes in fair value attributable to changes in Citigroup's own credit spreads (DVA) are reflected as a component of AOCI while all other changes in fair value will continue to be reported in Principal transactions. Changes in the fair value of these structured liabilities include accrued interest, which is also 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 may be 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 elections have 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. Prior to 2016, the total change in the fair value of these non-structured liabilities was reported in Principal transactions in the Company's Consolidated Statement of Income. Beginning in the first quarter of 2016, the portion of the changes in fair value attributable to changes in Citigroup's own credit spreads (DVA) are reflected as a component of AOCI while all other changes in fair value will continue to be reported in Principal transactions.

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	June 30, December 31,	
	2016	2015
Carrying amount reported on the Consolidated Balance Sheet	\$ 25,931	\$ 25,293
Aggregate unpaid principal balance in excess of fair value	564	1,569

The following table provides information about short-term borrowings carried at fair value:

In millions of dollars	June 30, December 31,	
	2016	2015
Carrying amount reported on the Consolidated Balance Sheet	\$ 1,850	\$ 1,207

Aggregate unpaid principal balance in excess of fair value      6      130

222

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## 24. GUARANTEES AND COMMITMENTS

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 at June 30, 2016 and December 31, 2015:

In billions of dollars at June 30, 2016 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	\$25.5	\$69.9	\$ 95.4	\$ 146
Performance guarantees	7.7	3.8	11.5	21
Derivative instruments considered to be guarantees	4.6	73.9	78.5	1,113
Loans sold with recourse	—	0.2	0.2	14
Securities lending indemnifications <sup>(1)</sup>	83.2	—	83.2	—
Credit card merchant processing <sup>(1)</sup>	81.1	—	81.1	—
Credit card arrangements with partners	—	1.5	1.5	206
Custody indemnifications and other	0.3	46.6	46.9	58
Total	\$202.4	\$195.9	\$ 398.3	\$ 1,558

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	\$ 152
Performance guarantees	7.4	4.1	11.5	23
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 <sup>(1)</sup>	79.0	—	79.0	—
	84.2	—	84.2	—

Credit card merchant processing<sup>(1)</sup>

Custody

indemnifications and other	—	51.7	51.7	56
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Total	\$ 198.0	\$ 203.9	\$ 401.9	\$ 2,027
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(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 21 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 21 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 \$121 million and \$152 million at June 30, 2016 and December 31, 2015, 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 June 30, 2016 and December 31, 2015, this maximum potential exposure was estimated to be \$81 billion and \$84 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 June 30, 2016 and December 31, 2015, the losses incurred and the carrying amounts of Citi's contingent obligations related to merchant processing activities were immaterial.

#### Credit card arrangements with partners

Citi, in certain of its credit card partner arrangements, provides guarantees to the partner regarding the volume of certain customer originations during the term of the agreement. To the extent such origination targets are not met, the guarantees serve to compensate the partner for certain payments that otherwise would have been generated in connection with such originations.

#### 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 June 30, 2016 and December 31, 2015, 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 June 30, 2016 or December 31, 2015 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 \$7.3 billion at June 30, 2016, compared to \$6.3 billion at December 31, 2015) 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 June 30, 2016 and December 31, 2015 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 21 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 (a) Citi will pass through to the client all interest paid by the CCP on cash initial margin; (b) Citi will not utilize its right as a clearing member to transform cash margin into other assets; and (c) 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 \$4.5 billion and \$4.3 billion as of June 30, 2016 and December 31, 2015, 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 June 30, 2016 and December 31, 2015, the total carrying amounts of the liabilities related to the guarantees and indemnifications included in the tables above amounted to approximately \$1.6 billion and \$2.0 billion, respectively. The carrying value of financial and performance guarantees is included in Other liabilities. For loans sold with recourse, the carrying value of the liability is included in Other liabilities.

#### Collateral

Cash collateral available to Citi to reimburse losses realized under these guarantees and indemnifications amounted to \$51 billion and \$52 billion at June 30, 2016 and December 31, 2015, respectively. Securities and other marketable assets held as collateral amounted to \$36 billion and \$33 billion at June 30, 2016 and December 31, 2015, 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 \$4.0 billion and \$4.2 billion at June 30, 2016 and December 31, 2015, 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 of June 30, 2016 and December 31, 2015. 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.

Maximum potential amount of future  
payments

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In billions of dollars at June 30, 2016	Investment grade	Non-investment grade	Not rated	Total
Financial standby letters of credit	\$63.8	\$ 18.9	\$12.7	\$95.4
Performance guarantees	6.4	4.3	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	—	—	83.2	83.2
Credit card merchant processing	—	—	81.1	81.1
Credit card arrangements with partners	—	—	1.5	1.5
Custody indemnifications and other	46.8	0.1	—	46.9
Total	\$117.0	\$ 23.3	\$258.0	\$398.3

226

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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
Custody indemnifications and other	51.6	0.1	—	51.7
Total	\$127.4	\$ 19.6	\$254.9	\$401.9

## Credit Commitments and Lines of Credit

The table below summarizes Citigroup's credit commitments as of June 30, 2016 and December 31, 2015:

In millions of dollars	U.S.	Outside of U.S.	June 30, 2016	December 31, 2015
Commercial and similar letters of credit	\$1,204	\$4,121	\$5,325	\$ 6,102
One- to four-family residential mortgages	1,604	1,807	3,411	3,196
Revolving open-end loans secured by one- to four-family residential properties	12,361	2,088	14,449	14,726
Commercial real estate, construction and land development	7,940	1,280	9,220	10,522
Credit card lines	571,146	98,243	669,389	573,057
Commercial and other consumer loan commitments	167,467	89,125	256,592	271,076
Other commitments and contingencies	2,838	6,888	9,726	9,982
Total	\$764,560	\$203,552	\$968,112	\$ 888,661

The majority of unused commitments are contingent upon customers' maintaining specific credit standards.

Commercial commitments generally have floating interest rates and fixed expiration dates and may require payment of fees. Such fees (net of certain direct costs) are deferred and, upon exercise of the commitment, amortized over the life of the loan or, if exercise is deemed remote, amortized over the commitment period.

## Commercial and similar letters of credit

A commercial letter of credit is an instrument by which Citigroup substitutes its credit for that of a customer to enable the customer to finance the purchase of goods or to incur other commitments. Citigroup issues a letter on behalf of its client to a supplier and agrees to pay the supplier upon presentation of documentary evidence that the supplier has performed in accordance with the terms of the letter of credit. When a letter of credit is drawn, the customer is then required to reimburse Citigroup.

## One- to four-family residential mortgages

A one- to four-family residential mortgage commitment is a written confirmation from Citigroup to a seller of a property that the bank will advance the specified sums enabling the buyer to complete the purchase.

## Revolving open-end loans secured by one- to four-family residential properties

Revolving open-end loans secured by one- to four-family residential properties are essentially home equity lines of credit. A home equity line of credit is a loan secured by a primary residence or second home to the extent of the excess of fair market value over the debt outstanding for the first mortgage.

## Commercial real estate, construction and land development

Commercial real estate, construction and land development include unused portions of commitments to extend credit for the purpose of financing commercial and multifamily residential properties as well as land development projects. Both secured-by-real-estate and unsecured commitments are included in this line, as well as

undistributed loan proceeds, where there is an obligation to advance for construction progress payments. However, this line only includes those extensions of credit that, once funded, will be classified as Total loans, net on the Consolidated Balance Sheet.

## Credit card lines

Citigroup provides credit to customers by issuing credit cards. The credit card lines are cancellable by providing notice to the cardholder or without such notice as permitted by local law.

Commercial and other consumer loan commitments

Commercial and other consumer loan commitments include overdraft and liquidity facilities, as well as commercial commitments to make or purchase loans, to purchase third-party receivables, to provide note issuance or revolving underwriting facilities and to invest in the form of equity.

Other commitments and contingencies

Other commitments and contingencies include committed or unsettled regular-way reverse repurchase agreements and all other transactions related to commitments and contingencies not reported on the lines above.



## 25. CONTINGENCIES

The following information supplements and amends, as applicable, the disclosures in Note 28 to the Consolidated Financial Statements of Citigroup's 2015 Annual Report on Form 10-K and Note 25 to the Consolidated Financial Statements of Citigroup's First Quarter of 2016 Form 10-Q. For purposes of this Note, Citigroup, its affiliates and subsidiaries and current and former officers, directors and employees, are sometimes collectively referred to as Citigroup and Related Parties.

In accordance with ASC 450, Citigroup establishes accruals for contingencies, including the litigation and regulatory matters disclosed herein, when Citigroup believes it is probable that a loss has been incurred and the amount of the loss can be reasonably estimated. Once established, accruals are adjusted from time to time, as appropriate, in light of additional information. The amount of loss ultimately incurred in relation to those matters may be substantially higher or lower than the amounts accrued for those matters.

If Citigroup has not accrued for a matter because the matter does not meet the criteria for accrual (as set forth above), or Citigroup believes an exposure to loss exists in excess of the amount accrued for a particular matter, in each case assuming a material loss is reasonably possible, Citigroup discloses the matter. In addition, for such matters, Citigroup discloses an estimate of the aggregate reasonably possible loss or range of loss in excess of the amounts accrued for those matters as to which an estimate can be made. At June 30, 2016, Citigroup's estimate was materially unchanged from its estimate of approximately \$3.0 billion in the aggregate as of March 31, 2016.

As available information changes, the matters for which Citigroup is able to estimate will change, and the estimates themselves will change. In addition, while many estimates presented in financial statements and other financial disclosure involve significant judgment and may be subject to significant uncertainty, estimates of the range of reasonably possible loss arising from litigation and regulatory proceedings are subject to particular uncertainties. For example, at the time of making an estimate, Citigroup may have only preliminary, incomplete or inaccurate information about the facts underlying the claim; its assumptions about the future rulings of the court or other tribunal on significant issues, or the behavior and incentives of adverse parties or regulators, may prove to be wrong; and the outcomes it is attempting to predict are often not amenable to the use of statistical or other quantitative analytical tools. In addition, from time to time an outcome may occur that Citigroup had not accounted for in its estimates because it had deemed such an outcome to be remote. For all these reasons, the amount of loss in excess of accruals ultimately incurred for the matters as to which an estimate has been made could be substantially higher or lower than the range of loss included in the estimate.

Subject to the foregoing, it is the opinion of Citigroup's management, based on current knowledge and after taking into account its current legal accruals, that the eventual outcome of all matters described in this Note would not be likely to have a material adverse effect on the consolidated financial condition

of Citigroup. Nonetheless, given the substantial or indeterminate amounts sought in certain of these matters and the inherent unpredictability of such matters, an adverse outcome in certain of these matters could, from time to time, have a material adverse effect on Citigroup's consolidated results of operations or cash flows in particular quarterly or annual periods.

For further information on ASC 450 and Citigroup's accounting and disclosure framework for contingencies, including for litigation and regulatory matters disclosed herein, see Note 28 to the Consolidated Financial Statements of Citigroup's 2015 Annual Report on Form 10-K.

### Credit Crisis-Related Litigation and Other Matters

#### Mortgage-Related Litigation and Other Matters

Derivative Actions and Related Proceedings: On June 7, 2016, defendants moved to dismiss plaintiff's derivative complaint in *IRA FOR THE BENEFIT OF VICTORIA SHAEV v. CORBAT, ET AL.* Additional information concerning this action is publicly available in court filings under the docket number 652066/2016 (N.Y. Sup. Ct.) (Bransten, J.).

#### Lehman Brothers Bankruptcy Proceedings

On June 6, 2016, a motion for approval of the settlement in LEHMAN BROTHERS FINANCE AG v. CITIBANK, N.A., ET AL. was filed with the bankruptcy court. Additional information concerning this action is publicly available in court filings under the docket numbers 14-02050 and 09-10583 (Bankr. S.D.N.Y.) (Chapman, J.).

#### Terra Firma Litigation

On June 15, 2016, by consent of the parties, the English High Court of Justice dismissed Terra Firma's lawsuit against Citigroup Global Markets Limited (CGML), Citibank and Citigroup with prejudice and ordered Terra Firma to pay the Citigroup defendants' costs associated with defending the lawsuit. Additional information concerning this action is publicly available in court filings under the claim reference Terra Firma Investments (GP) 2 Ltd. & Ors v Citigroup Global Markets Ltd. & Ors (CL-2013-000293).

#### Interest Rate Swaps Matters

Numerous interest rate swap (IRS) market participants, including Citigroup, Citibank, Citigroup Global Markets Inc. and CGML, were named as defendants in industry-wide putative class actions filed in the United States District Courts for the Southern District of New York and the Northern District of Illinois. These actions have been consolidated before Judge Paul A. Engelmayer in the United States District Court for the Southern District of New York under the caption IN RE INTEREST RATE SWAPS ANTITRUST LITIGATION. Plaintiffs in these actions allege that defendants colluded to prevent the development of exchange-like trading for IRS, thereby causing the putative classes to suffer losses in connection with their IRS investments. Plaintiffs assert federal antitrust claims and claims for unjust enrichment. Also consolidated under the same caption are two individual actions filed by swap execution facilities, asserting federal and state antitrust claims as well as claims for unjust

enrichment and tortious interference with business relations. Plaintiffs in all of these actions seek treble damages, fees, costs and injunctive relief. Additional information concerning these actions is publicly available in court filings under the docket numbers 16-MD-2704 (S.D.N.Y.) (Engelmayer, J.), 15-cv-09319 (S.D.N.Y.) (Engelmayer, J.), 16-cv-02858 (S.D.N.Y.) (Engelmayer, J.), 16-cv-03542 (S.D.N.Y.) (Engelmayer, J.), 16-cv-04005 (S.D.N.Y.) (Engelmayer, J.), 16-cv-04089 (S.D.N.Y.) (Engelmayer, J.), 16-cv-04239 (S.D.N.Y.) (Engelmayer, J.), 16-cv-02382 (Lefkow, J.) (N.D. Ill.), 16-cv-04561 (S.D.N.Y.) (Engelmayer, J.), 16-cv-04950 (N.D. Ill.) (Dow, J.); 16-cv-04566 (S.D.N.Y.) (Engelmayer, J.), 16-cv-05409 (N.D. Ill.) (Ellis, J.) and 16-cv-04563 (S.D.N.Y.) (Engelmayer, J.).

#### Foreign Exchange Matters

**Antitrust and Other Litigation:** On June 8, 2016, in *NYPL v. JPMORGAN CHASE & CO., ET AL.*, the court denied defendants' motion to stay and granted defendants' motion to consolidate the case for discovery purposes with the consolidated proceeding captioned *IN RE FOREIGN EXCHANGE BENCHMARK RATES ANTITRUST LITIGATION*. Additional information concerning this action is publicly available in court filings under the docket numbers 13 Civ. 7789 (S.D.N.Y.) (Schofield, J.) and 15 Civ. 9300 (S.D.N.Y.) (Schofield, J.).

On April 15, 2016, in *ALLEN v. BANK OF AMERICA CORPORATION, ET AL.*, the settling defendants in *IN RE FOREIGN EXCHANGE BENCHMARK RATES ANTITRUST LITIGATION* moved to enjoin the *ALLEN* action pending final settlement approval in *IN RE FOREIGN EXCHANGE BENCHMARK RATES ANTITRUST LITIGATION*. On June 1, 2016, the court granted the motion in part as to claims based on collusive conduct and directed plaintiffs to file a separate pleading for claims based exclusively on non-collusive conduct. The plaintiffs filed a third amended complaint on July 15, 2016. Additional information concerning this action is publicly available in court filings under the docket numbers 13 Civ. 7789 (S.D.N.Y.) (Schofield, J.) and 15 Civ. 4285 (S.D.N.Y.) (Schofield, J.).

On May 19, 2016, in *NEGRETE v. CITIBANK, N.A.*, the court granted Citibank's motion to dismiss and denied plaintiffs' cross-motion for summary judgment, while granting leave for plaintiffs to replead. On June 20, 2016, plaintiffs filed an amended complaint, and, on July 27, 2016, Citibank filed a motion to dismiss the amended complaint. Additional information concerning this action is publicly available in court filings under the docket number 15 Civ. 7250 (S.D.N.Y.) (Sweet, J.).

On March 10, 2016, Citibank, Citigroup and various other banks were joined as defendants in a pro se action captioned *WAH ET AL. v. HSBC NORTH AMERICA HOLDINGS INC. ET AL.* pending in the United States District Court for the Southern District of New York. The complaint asserts claims based on alleged FX market collusion in violation of the Sherman Act and Commodity Exchange Act. On March 31, 2016, plaintiffs filed an amended complaint. On April 29, 2016, Citi and the other newly-joined defendants joined a

previously filed motion to dismiss or stay the action. Additional information concerning this action is publicly available in court filings under the docket number 15 Civ. 08974 (S.D.N.Y.) (Schofield, J.).

**Derivative Actions and Related Proceedings:** On April 19, 2016, plaintiffs in *OKLAHOMA FIREFIGHTERS PENSION & RETIREMENT SYSTEM, ET AL. v. CORBAT, ET AL.* filed a supplemental complaint. On June 30, 2016, defendants moved to dismiss the supplemental complaint. Additional information concerning this action is publicly available in court filings under the docket number C.A. No. 12151-VCG (Del. Ch.) (Glasscock, Ch.).

#### Interbank Offered Rates-Related Litigation and Other Matters

**Regulatory Actions:** On May 25, 2016, Citibank, Citigroup Global Markets Japan Inc. and Citibank Japan Limited entered into a civil settlement with the CFTC, concluding the CFTC's investigation into U.S. Dollar LIBOR, yen LIBOR and Euroyen TIBOR. As part of the settlement, Citigroup agreed to pay a civil monetary penalty in the amount of \$175 million and to enhance further the control framework governing its rate submissions.

**Antitrust and Other Litigation:** On May 23, 2016, United States Court of Appeals for the Second Circuit reversed the district court's dismissal of antitrust claims in the action captioned *IN RE LIBOR-BASED FINANCIAL INSTRUMENTS ANTITRUST LITIGATION* and remanded "efficient enforcer" issues to the district court. Additional information concerning these actions is publicly available in court filings under the docket number 11 MD 2262

(S.D.N.Y.) (Buchwald, J.).

On July 1, 2016, a putative class action captioned FRONTPOINT ASIAN EVENT DRIVEN FUND, LTD. ET AL v. CITIBANK, N.A. ET AL. was filed in the United States District Court for the Southern District of New York against Citibank, Citigroup and various other banks. Plaintiffs assert claims for violation of the Sherman Act, Clayton Act and RICO Act, as well as state law claims for alleged manipulation of the Singapore Interbank Offered Rate and Singapore Swap Offer Rate. Additional information concerning this action is publicly available in court filings under the docket number 16 Civ. 05263 (S.D.N.Y.) (Hellerstein, J.).

#### Interchange Fees Litigation

On June 30, 2016, the United States Court of Appeals for the Second Circuit reversed the district court's approval of the class settlement and remanded for further proceedings. Additional information concerning these consolidated actions is publicly available in court filings under the docket number MDL 05-1720 (E.D.N.Y.) (Brodie, J.) and 12-4671 (2d Cir.).

#### ISDAFIX-Related Litigation and Other Matters

Regulatory Actions: On May 25, 2016, Citibank entered into a civil settlement with the CFTC, concluding the CFTC's ISDAFIX investigation. As part of the settlement, Citibank agreed to pay a civil monetary penalty in the amount of \$250 million and to enhance further the control framework governing interest-rate swap benchmarks.

**Antitrust and Other Litigation:** On May 11, 2016, the court granted plaintiffs' motion for preliminary approval of settlement with Citigroup and six other banks. Additional information concerning these actions is publicly available in court filings under the consolidated lead docket number 14 Civ. 7126 (S.D.N.Y.) (Furman, J.).

**Money Laundering Inquiries**

**Derivative Actions and Related Proceedings:** As described above in Foreign Exchange Matters, on April 19, 2016, plaintiffs in OKLAHOMA FIREFIGHTERS PENSION & RETIREMENT SYSTEM, ET AL. v. CORBAT, ET AL. filed a supplemental complaint. On June 30, 2016, defendants moved to dismiss the supplemental complaint. Additional information concerning this action is publicly available in court filings under the docket number C.A. No. 12151-VCG (Del. Ch.) (Glasscock, Ch.).

**Oceanografia Fraud and Related Matters**

On May 9, 2016, Citigroup filed a motion to dismiss the complaint brought by 39 plaintiffs alleging that Citigroup conspired with Oceanografia, S.A. de C.V. (OSA) and others with respect to receivable financings and other financing arrangements related to OSA in a manner that injured bondholders and other creditors of OSA. Additional information concerning this action is publicly available in court filings under the docket number 16-20725 (S.D. Fla.) (Gayles, J.).

**Settlement Payments**

Payments required in settlement agreements described above have been made or are covered by existing litigation accruals.

## 26. CONDENSED CONSOLIDATING FINANCIAL STATEMENTS

Citigroup amended its Registration Statement on Form S-3 on file with the SEC (File No. 33-192302) to add its wholly owned subsidiary, Citigroup Global Markets Holdings Inc. (CGMHI), as a co-registrant. Any securities issued by CGMHI under the Form S-3 will be fully and unconditionally guaranteed by Citigroup.

The following are the Condensed Consolidating Statements of Income and Comprehensive Income for the three and six months ended June 30, 2016 and 2015, Condensed Consolidating Balance Sheet as of June 30, 2016 and December 31, 2015 and Condensed Consolidating Statement of Cash Flows for the six months ended June 30, 2016 and 2015 for Citigroup Inc., the parent holding company (Citigroup parent company), CGMHI, other Citigroup subsidiaries and eliminations and total consolidating adjustments. "Other Citigroup subsidiaries and eliminations" includes all other subsidiaries of Citigroup, intercompany eliminations and income (loss) from discontinued operations. "Consolidating adjustments" includes Citigroup parent company elimination of distributed and undistributed income of subsidiaries and investment in subsidiaries.

These Condensed Consolidating Financial Statements have been prepared and presented in accordance with SEC Regulation S-X Rule 3-10, "Financial Statements of Guarantors and Issuers of Guaranteed Securities Registered or Being Registered."

These Condensed Consolidating Financial Statements schedules are presented for purposes of additional analysis, but should be considered in relation to the Consolidated Financial Statements of Citigroup taken as a whole.



## Condensed Consolidating Statements of Income and Comprehensive Income

Three Months Ended June 30, 2016

In millions of dollars	Citigroup parent company	CGMHI	Other Citigroup subsidiaries and eliminations	Consolidating adjustments	Citigroup consolidated
<b>Revenues</b>					
Dividends from subsidiaries	\$2,900	\$—	\$—	\$ (2,900 )	\$—
Interest revenue	1	1,251	13,104	—	14,356
Interest revenue—intercompany	668	139	(807 )	—	—
Interest expense	1,094	401	1,625	—	3,120
Interest expense—intercompany	38	416	(454 )	—	—
Net interest revenue	\$(463 )	\$573	\$ 11,126	\$—	\$ 11,236
Commissions and fees	\$—	\$1,119	\$ 1,606	\$—	\$ 2,725
Commissions and fees—intercompany	(17 )	(24 )	41	—	—
Principal transactions	(186 )	2,394	(392 )	—	1,816
Principal transactions—intercompany	(217 )	(1,791 )	2,008	—	—
Other income	(585 )	51	2,305	—	1,771
Other income—intercompany	736	339	(1,075 )	—	—
Total non-interest revenues	\$(269 )	\$2,088	\$ 4,493	\$—	\$ 6,312
Total revenues, net of interest expense	\$2,168	\$2,661	\$ 15,619	\$ (2,900 )	\$ 17,548
Provisions for credit losses and for benefits and claims	\$—	\$—	\$ 1,409	\$—	\$ 1,409
<b>Operating expenses</b>					
Compensation and benefits	\$(16 )	\$1,202	\$ 4,043	\$—	\$ 5,229
Compensation and benefits—intercompany	23	—	(23 )	—	—
Other operating	213	412	4,515	—	5,140
Other operating—intercompany	79	322	(401 )	—	—
Total operating expenses	\$299	\$1,936	\$ 8,134	\$—	\$ 10,369
Income (loss) before income taxes and equity in undistributed income of subsidiaries	\$1,869	\$725	\$ 6,076	\$ (2,900 )	\$ 5,770
Provision (benefit) for income taxes	(420 )	157	1,986	—	1,723
Equity in undistributed income of subsidiaries	1,709	—	—	(1,709 )	—
Income (loss) from continuing operations	\$3,998	\$568	\$ 4,090	\$ (4,609 )	\$ 4,047
Loss from discontinued operations, net of taxes	—	—	(23 )	—	(23 )
Net income (loss) before attribution of noncontrolling interests	\$3,998	\$568	\$ 4,067	\$ (4,609 )	\$ 4,024
Net income (loss) attributable to noncontrolling interests	—	(3 )	29	—	26
Net income (loss) after attribution of noncontrolling interests	\$3,998	\$571	\$ 4,038	\$ (4,609 )	\$ 3,998
<b>Comprehensive income</b>					
Other comprehensive income (loss)	\$511	\$58	\$ 569	\$ (627 )	\$ 511
Comprehensive income	\$4,509	\$629	\$ 4,607	\$ (5,236 )	\$ 4,509



## Condensed Consolidating Statements of Income and Comprehensive Income

Three Months Ended June 30, 2015

In millions of dollars	Citigroup parent company	CGMHI	Other Citigroup subsidiaries and eliminations	Consolidating adjustments	Citigroup consolidated
Revenues					
Dividends from subsidiaries	\$3,500	\$—	\$—	\$ (3,500 )	\$—
Interest revenue	2	1,240	13,631	—	14,873
Interest revenue—intercompany	711	67	(778 )	—	—
Interest expense	1,154	277	1,620	—	3,051
Interest expense—intercompany	(155 )	304	(149 )	—	—
Net interest revenue	\$(286 )	\$726	\$ 11,382	\$—	\$ 11,822
Commissions and fees	\$—	\$1,319	\$ 1,875	\$—	\$ 3,194
Commissions and fees—intercompany	—	44	(44 )	—	—
Principal transactions	790	873	510	—	2,173
Principal transactions—intercompany	(340 )	(575 )	915	—	—
Other income	1,161	(71 )	1,191	—	2,281
Other income—intercompany	(1,194 )	47	1,147	—	—
Total non-interest revenues	\$417	\$1,637	\$ 5,594	\$—	\$ 7,648
Total revenues, net of interest expense	\$3,631	\$2,363	\$ 16,976	\$ (3,500 )	\$ 19,470
Provisions for credit losses and for benefits and claims	\$—	\$—	\$ 1,648	\$—	\$ 1,648
Operating expenses					
Compensation and benefits	\$13	\$1,243	\$ 4,227	\$—	\$ 5,483
Compensation and benefits—intercompany	23	—	(23 )	—	—
Other operating	(189 )	491	5,143	—	5,445
Other operating—intercompany	73	200	(273 )	—	—
Total operating expenses	\$(80 )	\$1,934	\$ 9,074	\$—	\$ 10,928
Income (loss) before income taxes and equity in undistributed income of subsidiaries	\$3,711	\$429	\$ 6,254	\$ (3,500 )	\$ 6,894
Provision (benefit) for income taxes	(97 )	(255 )	2,388	—	2,036
Equity in undistributed income of subsidiaries	1,038	—	—	(1,038 )	—
Income (loss) from continuing operations	\$4,846	\$684	\$ 3,866	\$ (4,538 )	\$ 4,858
Income from discontinued operations, net of taxes	—	—	6	—	6
Net income (loss) before attribution of noncontrolling interests	\$4,846	\$684	\$ 3,872	\$ (4,538 )	\$ 4,864
Net income (loss) attributable to noncontrolling interests	—	(1 )	19	—	18
Net income (loss) after attribution of noncontrolling interests	\$4,846	\$685	\$ 3,853	\$ (4,538 )	\$ 4,846
Comprehensive income					
Other comprehensive income (loss)	\$(413 )	\$(48 )	\$ (711 )	\$ 759	\$(413 )
Comprehensive income	\$4,433	\$637	\$ 3,142	\$ (3,779 )	\$ 4,433

## Condensed Consolidating Statements of Income and Comprehensive Income

Six Months Ended June 30, 2016

In millions of dollars	Citigroup parent company	CGMHI	Other Citigroup subsidiaries and eliminations	Consolidating adjustments	Citigroup consolidated
<b>Revenues</b>					
Dividends from subsidiaries	\$5,700	\$—	\$—	\$ (5,700 )	\$—
Interest revenue	3	2,397	26,123	—	28,523
Interest revenue—intercompany	1,540	275	(1,815 )	—	—
Interest expense	2,164	765	3,131	—	6,060
Interest expense—intercompany	79	845	(924 )	—	—
Net interest revenue	\$(700 )	\$1,062	\$ 22,101	\$—	\$ 22,463
Commissions and fees	\$—	\$2,079	\$ 3,109	\$—	\$ 5,188
Commissions and fees—intercompany	(19 )	(30 )	49	—	—
Principal transactions	(395 )	2,257	1,794	—	3,656
Principal transactions—intercompany	41	(1,043 )	1,002	—	—
Other income	(3,679 )	127	7,348	—	3,796
Other income—intercompany	3,996	199	(4,195 )	—	—
Total non-interest revenues	\$(56 )	\$3,589	\$ 9,107	\$—	\$ 12,640
Total revenues, net of interest expense	\$4,944	\$4,651	\$ 31,208	\$ (5,700 )	\$ 35,103
Provisions for credit losses and for benefits and claims	\$—	\$—	\$ 3,454	\$—	\$ 3,454
<b>Operating expenses</b>					
Compensation and benefits	\$(8 )	\$2,491	\$ 8,302	\$—	\$ 10,785
Compensation and benefits—intercompany	26	—	(26 )	—	—
Other operating	480	798	8,829	—	10,107
Other operating—intercompany	80	629	(709 )	—	—
Total operating expenses	\$578	\$3,918	\$ 16,396	\$—	\$ 20,892
Income (loss) before income taxes and equity in undistributed income of subsidiaries	\$4,366	\$733	\$ 11,358	\$ (5,700 )	\$ 10,757
Provision (benefit) for income taxes	(480 )	194	3,488	—	3,202
Equity in undistributed income of subsidiaries	2,653	—	—	(2,653 )	—
Income (loss) from continuing operations	\$7,499	\$539	\$ 7,870	\$ (8,353 )	\$ 7,555
Loss from discontinued operations, net of taxes	—	—	(25 )	—	(25 )
Net income (loss) before attribution of noncontrolling interests	\$7,499	\$539	\$ 7,845	\$ (8,353 )	\$ 7,530
Net income (loss) attributable to noncontrolling interests	—	(1 )	32	—	31
Net income (loss) after attribution of noncontrolling interests	\$7,499	\$540	\$ 7,813	\$ (8,353 )	\$ 7,499
<b>Comprehensive income</b>					
Other comprehensive income (loss)	\$3,244	\$105	\$ 3,608	\$ (3,713 )	\$ 3,244
Comprehensive income	\$10,743	\$645	\$ 11,421	\$ (12,066 )	\$ 10,743

## Condensed Consolidating Statements of Income and Comprehensive Income

Six Months Ended June 30, 2015

In millions of dollars	Citigroup parent company	CGMHI	Other Citigroup subsidiaries and eliminations	Consolidating adjustments	Citigroup consolidated
Revenues					
Dividends from subsidiaries	\$4,600	\$—	\$—	\$ (4,600 )	\$—
Interest revenue	5	2,247	27,221	—	29,473
Interest revenue—intercompany	1,383	120	(1,503 )	—	—
Interest expense	2,309	505	3,265	—	6,079
Interest expense—intercompany	(331 )	601	(270 )	—	—
Net interest revenue	\$(590 )	\$1,261	\$22,723	\$—	\$23,394
Commissions and fees	\$—	\$2,664	\$3,700	\$—	\$6,364
Commissions and fees—intercompany	—	103	(103 )	—	—
Principal transactions	457	2,189	1,498	—	4,144
Principal transactions—intercompany	(669 )	(834 )	1,503	—	—
Other income	3,176	27	2,101	—	5,304
Other income—intercompany	(2,614 )	540	2,074	—	—
Total non-interest revenues	\$350	\$4,689	\$10,773	\$—	\$15,812
Total revenues, net of interest expense	\$4,360	\$5,950	\$33,496	\$ (4,600 )	\$39,206
Provisions for credit losses and for benefits and claims	\$—	\$—	\$3,563	\$—	\$3,563
Operating expenses					
Compensation and benefits	\$48	\$2,511	\$8,444	\$—	\$11,003
Compensation and benefits—intercompany	30	—	(30 )	—	—
Other operating	(40 )	948	9,901	—	10,809
Other operating—intercompany	130	605	(735 )	—	—
Total operating expenses	\$168	\$4,064	\$17,580	\$—	\$21,812
Income (loss) before income taxes and equity in undistributed income of subsidiaries	\$4,192	\$1,886	\$12,353	\$ (4,600 )	\$13,831
Provision (benefit) for income taxes	(726 )	269	4,613	—	4,156
Equity in undistributed income of subsidiaries	4,698	—	—	(4,698 )	—
Income (loss) from continuing operations	\$9,616	\$1,617	\$7,740	\$ (9,298 )	\$9,675
Income from discontinued operations, net of taxes	—	—	1	—	1
Net income (loss) before attribution of noncontrolling interests	\$9,616	\$1,617	\$7,741	\$ (9,298 )	\$9,676
Net income (loss) attributable to noncontrolling interests	—	(3 )	63	—	60
Net income (loss) after attribution of noncontrolling interests	\$9,616	\$1,620	\$7,678	\$ (9,298 )	\$9,616
Comprehensive income					
Other comprehensive income (loss)	\$(1,888)	\$(86 )	\$(2,297 )	\$2,383	\$(1,888 )
Comprehensive income	\$7,728	\$1,534	\$5,381	\$ (6,915 )	\$7,728

## Condensed Consolidating Balance Sheet

In millions of dollars	June 30, 2016				
	Citigroup parent company	CGMHI	Other Citigroup subsidiaries and eliminations	Consolidating adjustments	Citigroup consolidated
<b>Assets</b>					
Cash and due from banks	\$—	\$348	\$21,792	\$—	\$22,140
Cash and due from banks—intercompany	133	2,644	(2,777 )	—	—
Federal funds sold and resale agreements	—	188,567	40,116	—	228,683
Federal funds sold and resale agreements—intercompany	—	8,901	(8,901 )	—	—
Trading account assets	20	136,124	135,620	—	271,764
Trading account assets—intercompany	801	3,676	(4,477 )	—	—
Investments	438	357	355,498	—	356,293
Loans, net of unearned income	—	845	632,670	—	633,515
Loans, net of unearned income—intercompany	—	—	—	—	—
Allowance for loan losses	—	—	(12,304 )	—	(12,304 )
Total loans, net	\$—	\$845	\$620,366	\$—	\$621,211
Advances to subsidiaries	\$117,175	\$—	\$(117,175 )	\$—	\$—
Investments in subsidiaries	232,490	—	—	(232,490 )	—
Other assets <sup>(1)</sup>	27,200	42,046	249,434	—	318,680
Other assets—intercompany	55,579	40,706	(96,285 )	—	—
Total assets	\$433,836	\$424,214	\$1,193,211	\$(232,490 )	\$1,818,771
<b>Liabilities and equity</b>					
Deposits	\$—	\$—	\$937,852	\$—	\$937,852
Deposits—intercompany	—	—	—	—	—
Federal funds purchased and securities loaned or sold	—	137,985	20,016	—	158,001
Federal funds purchased and securities loaned or sold—intercompany	185	20,066	(20,251 )	—	—
Trading account liabilities	—	78,093	58,214	—	136,307
Trading account liabilities—intercompany	612	2,973	(3,585 )	—	—
Short-term borrowings	4	771	17,633	—	18,408
Short-term borrowings—intercompany	—	36,771	(36,771 )	—	—
Long-term debt	148,431	5,094	53,923	—	207,448
Long-term debt—intercompany	—	40,990	(40,990 )	—	—
Advances from subsidiaries	39,579	—	(39,579 )	—	—
Other liabilities	3,766	59,368	64,600	—	127,734
Other liabilities—intercompany	9,371	9,974	(19,345 )	—	—
Stockholders' equity	231,888	32,129	201,494	(232,490 )	233,021
Total liabilities and equity	\$433,836	\$424,214	\$1,193,211	\$(232,490 )	\$1,818,771

(1) Other assets for Citigroup parent company at June 30, 2016 included \$17.4 billion of placements to Citibank and its branches, of which \$9.5 billion had a remaining term of less than 30 days.



## Condensed Consolidating Balance Sheet

In millions of dollars	December 31, 2015		Other Citigroup subsidiaries and eliminations	Consolidating adjustments	Citigroup consolidated
	Citigroup parent company	CGMHI			
<b>Assets</b>					
Cash and due from banks	\$—	\$592	\$20,308	\$—	\$20,900
Cash and due from banks—intercompany	124	1,403	(1,527 )	—	—
Federal funds sold and resale agreements	—	178,178	41,497	—	219,675
Federal funds sold and resale agreements—intercompany	—	15,035	(15,035 )	—	—
Trading account assets	(8 )	124,731	125,233	—	249,956
Trading account assets—intercompany	1,032	1,765	(2,797 )	—	—
Investments	484	402	342,069	—	342,955
Loans, net of unearned income	—	1,068	616,549	—	617,617
Loans, net of unearned income—intercompany	—	—	—	—	—
Allowance for loan losses	—	(3 )	(12,623 )	—	(12,626 )
Total loans, net	\$—	\$1,065	\$603,926	\$—	\$604,991
Advances to subsidiaries	\$104,405	\$—	\$(104,405 )	\$—	\$—
Investments in subsidiaries	221,362	—	—	(221,362 )	—
Other assets <sup>(1)</sup>	25,819	36,860	230,054	—	292,733
Other assets—intercompany	58,207	30,737	(88,944 )	—	—
Total assets	\$411,425	\$390,768	\$1,150,379	\$(221,362 )	\$1,731,210
<b>Liabilities and equity</b>					
Deposits	\$—	\$—	\$907,887	\$—	\$907,887
Deposits—intercompany	—	—	—	—	—
Federal funds purchased and securities loaned or sold	—	122,459	24,037	—	146,496
Federal funds purchased and securities loaned or sold—intercompany	185	22,042	(22,227 )	—	—
Trading account liabilities	—	62,386	55,126	—	117,512
Trading account liabilities—intercompany	1,036	2,045	(3,081 )	—	—
Short-term borrowings	146	188	20,745	—	21,079
Short-term borrowings—intercompany	—	34,916	(34,916 )	—	—
Long-term debt	141,914	2,530	56,831	—	201,275
Long-term debt—intercompany	—	51,171	(51,171 )	—	—
Advances from subsidiaries	36,453	—	(36,453 )	—	—
Other liabilities	3,560	55,482	54,827	—	113,869
Other liabilities—intercompany	6,274	10,967	(17,241 )	—	—
Stockholders' equity	221,857	26,582	196,015	(221,362 )	223,092
Total liabilities and equity	\$411,425	\$390,768	\$1,150,379	\$(221,362 )	\$1,731,210

(1) Other assets for Citigroup parent company at December 31, 2015 included \$21.8 billion of placements to Citibank and its branches, of which \$13.9 billion had a remaining term of less than 30 days.



## Condensed Consolidating Statement of Cash Flows

In millions of dollars	Six Months Ended June 30, 2016			
	Citigroup parent company	CGMHI	Other Citigroup subsidiaries and eliminations	Consolidating adjustments Citigroup consolidated
Net cash provided by operating activities of continuing operations	\$13,794	\$2,380	\$4,893	\$ —\$21,067
Cash flows from investing activities of continuing operations				
Purchases of investments	\$—	\$—	\$(108,359 )	\$ —\$(108,359 )
Proceeds from sales of investments	—	—	66,138	— 66,138
Proceeds from maturities of investments	46	—	33,337	— 33,383
Change in deposits with banks	—	(5,390 )	(10,406 )	— (15,796 )
Change in loans	—	—	(30,170 )	— (30,170 )
Proceeds from sales and securitizations of loans	—	—	7,021	— 7,021
Proceeds from significant disposals	—	—	265	— 265
Change in federal funds sold and resales	—	(4,256 )	(4,752 )	— (9,008 )
Changes in investments and advances—intercompany	(16,412 )	(5,125 )	21,537	— —
Other investing activities	—	—	(987 )	— (987 )
Net cash used in investing activities of continuing operations	\$(16,366)	\$(14,771)	\$(26,376 )	\$ —\$(57,513 )
Cash flows from financing activities of continuing operations				
Dividends paid	\$(828 )	\$—	\$—	\$ —\$(828 )
Issuance of preferred stock	2,498	—	—	— 2,498
Treasury stock acquired	(2,634 )	—	—	— (2,634 )
Proceeds (repayments) from issuance of long-term debt, net	890	2,512	(3,115 )	— 287
Proceeds (repayments) from issuance of long-term debt—intercompany, net	—	(10,112 )	10,112	— —
Change in deposits	—	—	29,965	— 29,965
Change in federal funds purchased and repos	—	13,550	(2,045 )	— 11,505
Change in short-term borrowings	(160 )	583	(3,094 )	— (2,671 )
Net change in short-term borrowings and other advances—intercompany	3,127	1,855	(4,982 )	— —
Capital contributions from parent	—	5,000	(5,000 )	— —
Other financing activities	(312 )	—	—	— (312 )
Net cash provided by financing activities of continuing operations	\$2,581	\$13,388	\$21,841	\$ —\$37,810
Effect of exchange rate changes on cash and due from banks	\$—	\$—	\$(124 )	\$ —\$(124 )
Change in cash and due from banks	\$9	\$997	\$234	\$ —\$1,240
Cash and due from banks at beginning of period	124	1,995	18,781	— 20,900
Cash and due from banks at end of period	\$133	\$2,992	\$19,015	\$ —\$22,140
Supplemental disclosure of cash flow information for continuing operations				
Cash paid (refund) during the year for income taxes	\$(323 )	\$40	\$2,328	\$ —\$2,045



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Cash paid during the year for interest	2,040	1,666	2,020	—	5,726
Non-cash investing activities					
Transfers to loans HFS from loans	—	—	6,000	—	6,000
Transfers to OREO and other repossessed assets	—	—	97	—	97

239

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## Condensed Consolidating Statement of Cash Flows

In millions of dollars	Six Months Ended June 30, 2015			
	Citigroup parent company	CGMHI	Other Citigroup subsidiaries and eliminations	Consolidating adjustments Citigroup consolidated
Net cash provided by (used in) operating activities of continuing operations	\$16,287	\$(9,008 )	\$11,067	\$ —\$18,346
Cash flows from investing activities of continuing operations				
Purchases of investments	\$—	\$(4 )	\$(140,941 )	\$ —\$(140,945 )
Proceeds from sales of investments	—	53	89,654	— 89,707
Proceeds from maturities of investments	181	—	44,551	— 44,732
Change in deposits with banks	—	(10,181 )	7,270	— (2,911 )
Change in loans	—	—	(9,945 )	— (9,945 )
Proceeds from sales and securitizations of loans	—	—	6,377	— 6,377
Change in federal funds sold and resales	—	2,883	2,633	— 5,516
Changes in investments and advances—intercompany	(20,724 )	2,602	18,122	— —
Other investing activities	1	(43 )	(1,101 )	— (1,143 )
Net cash provided by (used in) investing activities of continuing operations	\$(20,542)	\$(4,690 )	\$16,620	\$ —\$(8,612 )
Cash flows from financing activities of continuing operations				
Dividends paid	\$(514 )	\$—	\$—	\$ —\$(514 )
Issuance of preferred stock	3,486	—	—	— 3,486
Treasury stock acquired	(1,850 )	—	—	— (1,850 )
Proceeds (repayments) from issuance of long-term debt, net	7,046	12,514	(18,436 )	— 1,124
Proceeds (repayments) from issuance of long-term debt—intercompany, net	—	(232 )	232	— —
Change in deposits	—	—	8,705	— 8,705
Change in federal funds purchased and repos	—	4,511	(937 )	— 3,574
Change in short-term borrowings	(349 )	(1,212 )	(30,867 )	— (32,428 )
Net change in short-term borrowings and other advances—intercompany	(3,126 )	(1,144 )	4,270	— —
Other financing activities	(423 )	—	—	— (423 )
Net cash provided by (used in) financing activities of continuing operations	\$4,270	\$14,437	\$(37,033 )	\$ —\$(18,326 )
Effect of exchange rate changes on cash and due from banks	\$—	\$—	\$(103 )	\$ —\$(103 )
Change in cash and due from banks	\$15	\$739	\$(9,449 )	\$ —\$(8,695 )
Cash and due from banks at beginning of period	125	1,751	30,232	— 32,108
Cash and due from banks at end of period	\$140	\$2,490	\$20,783	\$ —\$23,413
Supplemental disclosure of cash flow information for continuing operations				
Cash paid (refund) during the year for income taxes	\$(248 )	\$348	\$2,763	\$ —\$2,863
Cash paid during the year for interest	2,332	1,101	2,045	— 5,478
Non-cash investing activities				

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Decrease in net loans associated with significant disposals reclassified to HFS	\$—	\$—	\$ (8,874 )	\$	—\$ (8,874 )
Decrease in investments associated with significant disposals reclassified to HFS	—	—	(1,444 )	—	(1,444 )
Transfers to loans HFS from loans	—	—	15,900	—	15,900
Transfers to OREO and other repossessed assets	—	—	158	—	158
Non-cash financing activities					
Decrease in long-term debt associated with significant disposals reclassified to HFS	\$—	\$—	\$ (5,923 )	\$	—\$ (5,923 )

240

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## UNREGISTERED SALES OF EQUITY SECURITIES, PURCHASES OF EQUITY SECURITIES, DIVIDENDS

## Unregistered Sales of Equity Securities

None.

## Equity Security Repurchases

The following table summarizes Citi's equity security repurchases, which consisted entirely of common stock repurchases:

In millions, except per share amounts	Total shares purchased	Approximate dollar	
		Average value of price paid per share	shares that may yet be purchased under the plan or programs
April 2016			
Open market repurchases <sup>(1)</sup>	14.3	\$ 43.82	\$ 695
Employee transactions <sup>(2)</sup>	—	—	N/A
May 2016			
Open market repurchases <sup>(1)</sup>	8.7	44.91	304
Employee transactions <sup>(2)</sup>	—	—	N/A
June 2016			
Open market repurchases <sup>(1)</sup>	6.7	45.50	—
Employee transactions <sup>(2)</sup>	—	—	N/A
Total	29.7	\$ 44.52	\$ —

Represents repurchases under the \$7.8 billion 2015 common stock repurchase program (2015 Repurchase Program) that was approved by Citigroup's Board of Directors and announced on March 11, 2015, which was part of the planned capital actions included by Citi in its 2015 Comprehensive Capital Analysis and Review (CCAR).

(1) Shares repurchased under the 2015 Repurchase Program were added to treasury stock. The 2015 Repurchase Program expired on June 30, 2016. On June 29, 2016, Citigroup announced an \$8.6 billion common stock repurchase program during the four quarters beginning in the third quarter of 2016 (2016 Repurchase Program), which was part of the planned capital actions included by Citi as part of its 2016 CCAR. The 2016 Repurchase Program expires on June 30, 2017. Shares repurchased under the 2016 Repurchase Program will be treasury stock.

(2) Consisted of shares added to treasury stock related to (i) certain activity on employee stock option program exercises where the employee delivers existing shares to cover the option exercise, or (ii) under Citi's employee restricted stock programs where shares are withheld to satisfy tax requirements.

N/A Not applicable

## Dividends

In addition to Board of Directors' approval, Citi's ability to pay common stock dividends substantially depends on regulatory approval, including an annual regulatory review of the results of the CCAR process required by the Federal Reserve Board and the supervisory stress tests required under the Dodd-Frank Act. For additional information regarding Citi's capital planning and stress testing, see "Capital Resources—Current Regulatory Capital Standards—Capital Planning and Stress Testing" and "Risk Factors—Regulatory Risks" in Citi's 2015 Annual Report on Form 10-K. On June 29, 2016, Citi announced the Federal Reserve Board did not object to its planned capital actions as part of the 2016 CCAR, which included an increase of Citi's quarterly common stock dividend to \$0.16 per share over the four

quarters beginning with the third quarter of 2016 (subject to quarterly approval by the Board of Directors). Any dividend on Citi's outstanding common stock would also need to be made in compliance with Citi's obligations to its outstanding preferred stock.

For information on the ability of Citigroup's subsidiary depository institutions to pay dividends, see Note 19 to the

Consolidated Financial Statements in Citi's 2015 Annual Report on Form 10-K.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on the 1st day of August, 2016.

CITIGROUP INC.  
(Registrant)

By /s/ John C. Gerspach  
John C. Gerspach  
Chief Financial Officer  
(Principal Financial Officer)

By /s/ Jeffrey R. Walsh  
Jeffrey R. Walsh  
Controller and Chief Accounting Officer  
(Principal Accounting Officer)

EXHIBIT INDEX

Exhibit

Number	Description of Exhibit
3.01	Restated Certificate of Incorporation of the Company, as in effect on the date hereof, incorporated by reference to Exhibit 3.01 to the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2016 (File No. 1-9924).
12.01+	Calculation of Ratio of Income to Fixed Charges.
12.02+	Calculation of Ratio of Income to Fixed Charges Including Preferred Stock Dividends.
31.01+	Certification of principal executive officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.02+	Certification of principal financial officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.01+	Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.01+	Financial statements from the Annual Report on Form 10-Q of the Company for the quarter ended June 30, 2016, filed August 1, 2016, formatted in XBRL: (i) the Consolidated Statement of Income, (ii) the Consolidated Balance Sheet, (iii) the Consolidated Statement of Changes in Equity, (iv) the Consolidated Statement of Cash Flows and (v) the Notes to Consolidated Financial Statements.

The total amount of securities authorized pursuant to any instrument defining rights of holders of long-term debt of the Company does not exceed 10% of the total assets of the Company and its consolidated subsidiaries. The Company will furnish copies of any such instrument to the SEC upon request.

+ Filed herewith.