

**Citigroup Inc.**

**Pillar 3**

**Basel III Advanced Approaches Disclosures**

**For the Quarterly Period Ended March 31, 2016**



## TABLE OF CONTENTS

---

OVERVIEW	2
SCOPE OF APPLICATION	3
CAPITAL STRUCTURE	4
CAPITAL ADEQUACY	6
CAPITAL CONSERVATION AND COUNTERCYCLICAL CAPITAL BUFFERS	9
RISK MANAGEMENT	10
CREDIT RISK: GENERAL DISCLOSURES	11
CREDIT RISK: PORTFOLIO DISCLOSURES – INTERNAL RATINGS-BASED APPROACH	15
COUNTERPARTY CREDIT RISK: OTC DERIVATIVE CONTRACTS, REPO-STYLE TRANSACTIONS AND ELIGIBLE MARGIN LOANS	22
CREDIT RISK MITIGATION	25
SECURITIZATIONS	26
EQUITY EXPOSURES NOT SUBJECT TO THE MARKET RISK CAPITAL RULES	32
MARKET RISK	34
OPERATIONAL RISK	43
INTEREST RATE RISK: NON-TRADING ACTIVITIES	44
SUPPLEMENTARY LEVERAGE RATIO	45
APPENDIX A: GLOSSARY	47
APPENDIX B: DISCLOSURE INDEX	49

### Organization

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

Citigroup currently operates, for management reporting purposes, via two primary business segments: Citicorp, consisting of Citi's *Global Consumer Banking (GCB)* businesses and *Institutional Clients Group (ICG)*; and Citi Holdings, consisting of businesses and portfolios of assets that Citigroup has determined are not central to its core Citicorp businesses.

Citi's principal banking (depository institution) subsidiary is Citibank, N.A. (Citibank), a national banking association, with offerings encompassing consumer finance, credit cards, mortgage lending and retail banking products and services; investment banking, commercial banking, cash management, trade finance and e-commerce products and services; and private banking products and services. Significant Citigroup legal entities other than Citibank include Banco Nacional de Mexico, S.A. (Banamex), Mexico's second largest bank, as well as Citigroup Global Markets Inc. and Citigroup Global Markets Limited, the primary U.S. and U.K. broker-dealer (nonbanking) subsidiaries, respectively.

### Regulatory Capital Standards and Disclosures

Citi is subject to regulatory capital standards issued by the Federal Reserve Board (FRB) 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.

The U.S. Basel III rules set forth the composition of regulatory capital (including the application of regulatory capital adjustments and deductions), as well as two comprehensive methodologies (a Standardized Approach and Advanced Approaches) for measuring total risk-weighted assets. Total risk-weighted assets under the Advanced Approaches, which are primarily models-based, include credit, market, and operational risk-weighted assets.

In addition, Citi, as an Advanced Approaches banking organization under the U.S. Basel III rules, is also required to publicly disclose certain qualitative and quantitative information regarding Citi's capital structure and adequacy, credit risk and related mitigation policies, securitizations, equity exposures, market risk, operational risk, Supplementary Leverage ratio, and other matters (the Basel III Advanced Approaches Disclosures). These Basel III Advanced Approaches Disclosures constitute the often referred to "Pillar 3 Disclosures." Further, where applicable, quantitative disclosures are presented in accordance with the current regulatory capital standards (Basel III Transition Arrangements) under the U.S. Basel III rules.

Moreover, these Citigroup Basel III Advanced Approaches Disclosures were reviewed and approved in accordance with

Citi's Basel Public Disclosures Policy, the latter of which has been approved by Citi's Board of Directors.

For additional information regarding the implementation of the U.S. Basel III rules, see "*Capital Resources*" in Citi's 2015 Annual Report on Form 10-K (2015 Form 10-K). Further, see Citi's FFIEC 101 Report, "*Regulatory Capital Reporting for Institutions Subject to the Advanced Capital Adequacy Framework*," as of March 31, 2016 (First Quarter 2016 FFIEC 101 Report), available on the National Information Center's website.

### Pillar 3 Disclosure Requirements - Consolidated and Enhanced Framework

In March 2016, the Basel Committee issued a consultative document which proposes to revise the "Pillar 3" disclosure requirements finalized in January 2015 by consolidating all existing and prospective Pillar 3 disclosure requirements, including disclosure requirements regarding the composition of capital, leverage ratio, Liquidity Coverage Ratio, Net Stable Funding Ratio, GSIB indicators, Countercyclical Capital Buffer, and remuneration. Moreover, the proposal provides enhancements to the revised Pillar 3 framework, in part, by incorporating a "dashboard" of a banking organizations key regulatory metrics, as well as requiring disclosure of a banking organization's hypothetical risk-weighted assets calculated according to the standardized approaches for credit risk, market risk, counterparty credit risk, and securitization framework.

Additionally, the consultative document proposes revisions and additions to the Pillar 3 framework arising from the Basel Committee's ongoing reforms to the regulatory capital framework, including incorporating disclosure requirements arising from the Basel Committee's total loss-absorbing capacity (TLAC) proposal, proposed revisions to the operational risk capital framework, and the revised minimum capital requirements for market risk.

The Advanced Approaches disclosure requirements under the U.S. Basel III rules will likely be revised by the U.S. banking agencies in the future, as a result of the Basel Committee's revised Pillar 3 disclosure requirements.

## SCOPE OF APPLICATION

---

### **Basis of Consolidation**

Citi's basis of consolidation for both financial and regulatory accounting purposes is in accordance with U.S. GAAP. The U.S. Basel III rules are applied to these consolidated financial statements and off-balance sheet exposures.

Certain of Citi's equity investments in entities carried under either the cost or equity method of accounting for U.S. GAAP purposes are neither consolidated nor deducted from regulatory capital under the U.S. Basel III rules, but rather are appropriately risk-weighted. However, so-called "significant investments" (greater than 10% ownership or exposure) in the common stock of unconsolidated financial institutions are subject, under the U.S. Basel III rules, to potential deduction in arriving at Common Equity Tier 1 Capital. To the extent not deducted, these significant investments are risk-weighted.

In addition, under the U.S. Basel III rules, Citi must deduct 50% of the minimum regulatory capital requirements of insurance underwriting subsidiaries from each of Tier 1 Capital and Tier 2 Capital.

For further information regarding Citi's more significant subsidiaries and basis of consolidation, see Note 1, "*Basis of Presentation*" and Note 20, "*Securitizations and Variable Interest Entities*" in the Notes to Consolidated Financial Statements in Citi's Quarterly Report on Form 10-Q for the period ended March 31, 2016 (First Quarter 2016 Form 10-Q).

### **Funds and Capital Transfer Restrictions**

For information regarding restrictions or other major impediments on the transfer of funds and capital distributions between Citi entities, see Note 19, "*Regulatory Capital*" in the Notes to Consolidated Financial Statements in Citi's 2015 Form 10-K.

### **Regulated Subsidiaries' Capital**

Total Capital for each of Citi's regulated banking subsidiaries was in excess of their respective minimum total capital requirements as of March 31, 2016. Likewise, all of Citi's regulated broker-dealer subsidiaries were also in compliance with their net capital requirements at that date.

Further, the aggregate amount of surplus capital in Citi's insurance subsidiaries included in consolidated Total Capital as of March 31, 2016 was \$2.3 billion. Separately, no Citi insurance subsidiary had a capital shortfall relative to its minimum regulatory capital requirement as of such date.

### Regulatory Capital Instruments

Aside from common stock, Citi's other currently qualifying regulatory capital instruments consist of outstanding noncumulative perpetual preferred stock, trust preferred securities and subordinated debt.

Citigroup common stock entitles each holder to one vote per share for the election of directors and for all other matters to be voted on by Citigroup's common shareholders. Except as otherwise provided by Delaware law, the holders of common stock vote as one class. Upon a liquidation, dissolution or winding up of Citigroup, the holders of common stock share ratably in the assets remaining and available for distribution after payments to creditors and provision for any preference of any preferred stock. There are no preemptive or other subscription rights, conversion rights or redemption or scheduled installment payment provisions relating to the common stock. For additional information on the terms and conditions of Citi's common stock, see Citi's Consolidated Balance Sheet and "*Unregistered Sales of Equity, Purchases of Equity Securities, Dividends—Equity Security Repurchases*" in Citi's First Quarter 2016 Form 10-Q.

Each series of Citigroup preferred stock is noncumulative and perpetual and ranks senior to the common stock but ranks equally with each other series of outstanding preferred stock as to dividends and distributions upon a liquidation, dissolution or winding up of Citigroup. Unless full noncumulative dividends for the dividend period then ending have been paid, Citigroup cannot pay any cash dividends on any common stock or other capital stock ranking junior to the preferred stock during the subsequent dividend period. Holders of preferred stock generally do not have voting rights other than those described in the corresponding certificate of designation and as specifically required by Delaware law. For additional information on the terms and conditions of the outstanding preferred stock, see Citi's Consolidated Balance Sheet and Note 19, "*Preferred Stock*" in the Notes to Consolidated Financial Statements in Citi's First Quarter 2016 Form 10-Q.

Under the U.S. Basel III rules however, trust preferred securities largely phase out as qualifying regulatory capital instruments. For additional information regarding the structure and terms of Citi's currently outstanding trust preferred securities, see Note 17, "*Debt*" in the Notes to Consolidated Financial Statements in Citi's First Quarter 2016 Form 10-Q, and with respect to the phase out of trust preferred securities see "*Capital Resources—Current Regulatory Capital Standards—Transition Provisions*" in Citi's 2015 Form 10-K.

Citi's subordinated debt contains customary provisions applicable to all debt securities, with the exception that subordinated debt contains no financial covenants and the only events of default are those related to bankruptcy, insolvency, receivership and other similar actions. The following table presents Citi's qualifying subordinated debt as of March 31, 2016.

**Table 1: Qualifying Subordinated Debt***In millions of dollars, except percentages***March 31, 2016**

<b>Issuance Date</b>	<b>Coupon</b>	<b>Redeemable by Issuer Beginning</b>	<b>Maturity</b>	<b>Carrying Amount<sup>(1)</sup></b>
June 6, 2002	6.63%		June 15, 2032	\$ 1,058
February 19, 2003	5.88%		February 22, 2033	762
August 1, 2003	5.13%		December 12, 2018	470
October 30, 2003	6.00%		October 31, 2033	859
February 10, 2004	1.23% <sup>2</sup>	February 10, 2014	February 10, 2019	587
July 1, 2004	5.88%		July 1, 2024	322
April 8, 2005	2.47% <sup>2</sup>	April 8, 2015	April 8, 2020	59
November 30, 2005	1.07% <sup>2</sup>	November 30, 2012	November 30, 2017	151
March 3, 2006	4.50%		March 3, 2031	449
March 6, 2006	5.37%		March 6, 2036	157
August 25, 2006	6.13%		August 25, 2036	1,026
August 25, 2006	1.18% <sup>3</sup>		August 25, 2036	521
May 31, 2007	0.48% <sup>2</sup>	May 31, 2012	May 31, 2017	243
February 8, 2013	4.05%		July 30, 2022	593
May 14, 2013	3.50%		May 15, 2023	1,328
September 13, 2013	5.50%		September 13, 2025	925
September 13, 2013	6.68%		September 13, 2043	878
May 6, 2014	5.30%		May 6, 2044	1,237
August 5, 2014	4.00%		August 5, 2024	818
November 20, 2014	4.30%		November 20, 2026	1,048
March 26, 2015	3.88%		March 26, 2025	1,001
June 9, 2015	4.09%		June 9, 2025	486
June 10, 2015	4.40%		June 10, 2025	2,592
September 29, 2015	4.45%		September 29, 2027	3,599
March 9, 2016	4.60%		March 9, 2026	1,495
<b>Total Qualifying Subordinated Debt</b>				<b>\$ 22,664</b>

- (1) At the beginning of each of the last five years of the life of each qualifying subordinated debt instrument, the carrying amount that is eligible to be included in Tier 2 Capital is reduced by 20% of the original amount of the instrument (net of redemptions), in accordance with the U.S. Basel III rules.
- (2) Subordinated debt issuances containing a fixed-to-floating rate step-up feature where the call/step-up date has passed, and which carried the indicated floating rate as of March 31, 2016.
- (3) Subordinated debt issuance with floating rate based on three month LIBOR plus a fixed spread.

**Regulatory Capital Tiers**

For Citi's Common Equity Tier 1 Capital, Tier 1 Capital and Total Capital, and related components, as of March 31, 2016, see "Capital Resources—Current Regulatory Capital Standards" in Citi's First Quarter 2016 Form 10-Q, and Schedule A in Citi's First Quarter 2016 FFIEC 101 Report.

### 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 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 Form 10-K.

### Economic Capital

Citi calculates and allocates economic capital (risk capital) across the company in order to consistently measure risk taking amongst business activities and to assess risk-reward relationships.

Citi measures risk capital as the amount of capital required to absorb potential unexpected economic losses resulting from extremely severe events over a one year time period, assuming Citi remains a going concern. Economic losses include any decline in the economic value of assets and any increase in the economic value of liabilities. The drivers of economic losses are risks which, for Citi, are broadly categorized as credit risk, market risk and operational risk. Citi's risk capital framework is reviewed and enhanced on a regular basis in light of market developments and evolving practices.

The calculation of economic losses depends on whether the risk is classified as "price risk" or "value risk." Price risk is the potential unexpected loss of market value over a one year horizon. Value risk is the potential unexpected loss based on realizable value to maturity. If any of the following criteria are met, the risk is "price risk;" otherwise it is "value risk:"

- intent to sell or hedge exposures at market price;
- funding with short-term liabilities (sufficient long-term financing, even under stress situations, should be available to support all exposures whose risk capital is determined based on value risk); or
- mark-to-market accounting or equivalent (e.g., fair value).

Citi's methodology does not include any offset for expected income. For accrual instruments such as loans, this means that risk capital is calculated as the difference between expected loss on the loan and potential total loss (no offset for interest revenue or fee revenue). For mark-to-market instruments, such as those carried in the trading book, this means that the unexpected loss is based on price volatility and assumes an expected total return of zero. Citi's risk capital framework covers both systematic risk and idiosyncratic risk, where material. It is designed to avoid procyclicality, meaning that changes in risk capital are primarily driven by changes in position, not by changes in shocks or assumptions. Citi's methodology covers all risk types, legal entities, and Citi's reportable segments. To account for tail risks, Citi's methodology includes fat-tailed distributions (non-normal price behavior) for individual market factors and high correlation assumptions during stress periods.

## Advanced Approaches Risk-Weighted Assets

The following table presents the components of Citi's Basel III Advanced Approaches risk-weighted assets as of March 31, 2016 and December 31, 2015.

**Table 2: Advanced Approaches Risk-Weighted Assets**

<i>In millions of dollars</i>	<b>March 31, 2016</b>	<b>December 31, 2015</b>
<b>Credit Risk-Weighted Assets:</b>		
<b>Wholesale Exposures</b>	<b>\$ 392,614</b>	<b>\$ 377,078</b>
<b>Retail Exposures:</b>		
Residential Mortgage Exposures	70,666	71,219
Qualifying Revolving Exposures	111,429	120,226
Other Retail Exposures	28,295	26,859
<b>Total Retail Exposures</b>	<b>\$ 210,390</b>	<b>\$ 218,304</b>
<b>Securitization Exposures</b>	<b>\$ 37,862</b>	<b>\$ 36,176</b>
<b>Central Counterparty Exposures</b>	<b>3,863</b>	<b>3,570</b>
<b>Equity Exposures:</b>		
Equity Exposures Subject to the Simple Risk Weight Approach	14,724	14,267
Equity Exposures to Investment Funds	4,166	4,032
<b>Total Equity Exposures</b>	<b>\$ 18,890</b>	<b>\$ 18,299</b>
<b>Other Exposures<sup>(1)</sup></b>	<b>\$ 58,235</b>	<b>\$ 62,953</b>
<b>Total Credit Risk-Weighted Assets Subject to Supervisory 6% Multiplier<sup>(2)</sup></b>	<b>\$ 721,854</b>	<b>\$ 716,380</b>
<b>Supervisory 6% Multiplier</b>	<b>\$ 43,311</b>	<b>\$ 42,983</b>
<b>Credit Valuation Adjustments (CVA)</b>	<b>42,593</b>	<b>31,673</b>
<b>Total Credit Risk-Weighted Assets<sup>(3)</sup></b>	<b>\$ 807,758</b>	<b>\$ 791,036</b>
<b>Market Risk-Weighted Assets:</b>		
Regulatory Value-at-Risk (VaR) <sup>(4)</sup>	\$ 10,371	\$ 10,250
Regulatory Stressed Value-at-Risk (SVaR) <sup>(5)</sup>	28,193	23,431
Incremental Risk Charge (IRC) <sup>(6)</sup>	1,266	1,617
Comprehensive Risk Measure (CRM) <sup>(7)</sup>	9,510	8,872
Standard Specific Risk Charge (SSRC)	19,106	18,140
Securitization Charges <sup>(8)</sup>	6,626	10,791
Other <sup>(9)</sup>	2,277	1,716
<b>Total Market Risk-Weighted Assets</b>	<b>\$ 77,349</b>	<b>\$ 74,817</b>
<b>Operational Risk-Weighted Assets</b>	<b>\$ 325,000</b>	<b>\$ 325,000</b>
<b>Total Risk-Weighted Assets</b>	<b>\$ 1,210,107</b>	<b>\$ 1,190,853</b>

- (1) Primarily consists of net deferred tax assets, net premises and equipment, receivables, intangible assets and other assets not subject to the application of internal models in deriving credit risk-weighted assets under the U.S. Basel III rules.
- (2) Under the U.S. Basel III rules, a supervisory 6% multiplier is applied to all components of credit risk-weighted assets other than derivatives CVA.
- (3) Under the U.S. Basel III rules, credit risk-weighted assets during the transition period reflect the effects of transitional arrangements related to regulatory capital adjustments and deductions. For additional information regarding the Basel III transition arrangements for regulatory capital adjustments and deductions, see "Capital Resources—Current Regulatory Capital Standards—Transition Provisions" in Citi's 2015 Form 10-K.
- (4) Includes \$4,856 million and \$4,440 million add-on for Risk Not In the Model (RNIM) as of March 31, 2016 and December 31, 2015, respectively.
- (5) Includes \$8,964 million and \$7,259 million add-on for RNIM as of March 31, 2016 and December 31, 2015, respectively.
- (6) Includes \$198 million and \$71 million add-on for RNIM as of March 31, 2016 and December 31, 2015, respectively.
- (7) Includes \$77 million and \$69 million add-on for RNIM as of March 31, 2016 and December 31, 2015, respectively.
- (8) Includes standard specific risk charges attributable to securitization positions, as well as non-modeled correlation trading securitization positions.
- (9) As of March 31, 2016 and December 31, 2015, primarily includes \$1,500 million and \$1,388 million of risk-weighted assets arising from de minimis exposures, respectively. Additionally, as of March 31, 2016 and December 31, 2015, includes \$253 million incremental VaR and \$487 million incremental SVaR, and \$98 million of incremental VaR and \$188 million incremental SVaR, respectively, resulting from the inclusion of structural non-trading book foreign exchange and commodity exposures.



Total risk-weighted assets increased from December 31, 2015 due to increases in credit and market risk-weighted assets. The overall increase in credit risk-weighted assets was primarily attributable to an increase in derivative positions impacting wholesale exposures and CVA, offset in part by a decline in qualifying revolving exposures due to seasonal repayments within the cards portfolio. Market risk-weighted assets increased due to an increase in SVaR modeled exposures and increases in RNIM, as well as an increase in assets subject to standard specific risk charges, partially offset by reductions as a result of the ongoing assessment regarding the applicability of the market risk capital rules to certain securitization positions as well as inventory reductions in securitization positions.

Citi's credit, market and operational risk-weighted assets under the Basel III Advanced Approaches rules are derived, in part, from various internal models. These internal models remain subject to ongoing review and approval by the FRB and the Office of the Comptroller of the Currency (OCC). Any modifications or requirements resulting from these ongoing reviews could result in changes in Citi's risk-weighted assets as calculated under the Basel III Advanced Approaches rules.

#### **Risk-Based Capital Ratios**

For Citigroup's and Citibank's Common Equity Tier 1 Capital, Tier 1 Capital and Total Capital ratios as of March 31, 2016, as calculated under the Basel III Advanced Approaches framework, see "*Capital Resources—Current Regulatory Capital Standards*" in Citi's First Quarter 2016 Form 10-Q.

## CAPITAL CONSERVATION AND COUNTERCYCLICAL CAPITAL BUFFERS

---

Under the U.S. Basel III rules, the Capital Conservation Buffer (as well as any Countercyclical Capital Buffer and GSIB surcharge, both of which augment the Capital Conservation Buffer) phase-in at 25% increments over four years commencing January 1, 2016.

As of March 31, 2016, Citi's Capital Conservation Buffer was 8.66%, which was in excess of the 2016 phase-in requirement applicable to Citi of 1.50% (comprised of a 0.625% requirement related to the mandatory 2.5% Capital Conservation Buffer plus an 0.875% requirement related to a 3.5% global systemically important bank holding company (GSIB) surcharge). Furthermore, the Federal Reserve Board has previously affirmed that the current Countercyclical Capital Buffer amount is 0%. For additional information regarding the Capital Conservation Buffer, Countercyclical Capital Buffer, and GSIB surcharge, see “*Capital Resources—Current Regulatory Capital Standards*” in Citigroup’s 2015 Form 10-K.

In addition, Citi's eligible retained income was \$10.5 billion, comprised of \$17.2 billion of net income (i.e., aggregate net income for the four calendar quarters of 2015 as reported in Citi’s FR Y-9C, “Consolidated Financial Statements for Holding Companies”), net of applicable distributions of \$6.7 billion in the form of common share repurchases as well as common and preferred stock dividends. As Citi’s Capital Conservation Buffer exceeded 1.50% as of March 31, 2016, Citi is not subject to any limitation regarding the amount of eligible retained income which may be paid out in the form of distributions and discretionary bonus payments during the second quarter of 2016.

### Overview

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

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

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

Citi manages its risks through each of its three lines of defense: (i) business management, (ii) independent control functions and (iii) Internal Audit. The three lines of defense collaborate with each other in structured forums and processes to bring various perspectives together and to steer the organization toward outcomes that are in clients' interests, create economic value, and are systemically responsible. For further information on Citi's risk management process and organization, see "Managing Global Risk" in Citi's 2015 Form 10-K.

### *First Line of Defense: Business Management*

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

### *Second Line of Defense: Independent Control Functions*

Citi's independent control functions, including Risk, Compliance, Human Resources, Legal and Finance, set standards by which Citi and its businesses are expected to manage and oversee risks, including compliance with applicable laws, regulatory

requirements, policies and standards of ethical conduct. Additionally, among other responsibilities, the independent control functions provide advice and training to Citi's businesses and establish tools, methodologies, processes and oversight for controls used by the businesses to foster a culture of compliance and control.

### *Third Line of Defense: Internal Audit*

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

### **Scope and Nature of Credit Risk Reporting and Measurement Systems**

Citi uses a global risk reporting system to manage credit exposure to its wholesale obligors and counterparties. Retail exposures are booked in local systems specific to local credit risk regulations, however all retail exposures are monitored and managed centrally at the portfolio level. The counterparty exposure profile for derivative counterparty credit risk is calculated using Monte Carlo simulation.

## CREDIT RISK: GENERAL DISCLOSURES

---

### Credit Risk Management

Credit risk is the potential financial loss resulting from the failure of a borrower or counterparty to honor its financial or contractual obligations. Credit risk arises in many of Citi's business activities, including: wholesale and retail lending; capital markets derivative transactions; structured finance; reverse repurchase agreements and repurchase agreements; and settlement and clearing activities.

policies for charging-off accounts deemed uncollectible, see “*Significant Accounting Policies and Significant Estimates—Allowance for Credit Losses*” and Note 1, “*Summary of Significant Accounting Policies*” in the Notes to Consolidated Financial Statements in Citi's 2015 Form 10-K.

### Corporate Credit Risk

For corporate clients and investment banking activities across Citi, the credit process is grounded in a series of fundamental policies, including:

- joint business and independent risk management responsibility for managing credit risks;
- a single center of control for each credit relationship, which coordinates credit activities with each client;
- portfolio limits to ensure diversification and maintain risk/capital alignment;
- a minimum of two authorized credit officer signatures required on most extensions of credit, one of which must be from a credit officer in credit risk management;
- risk rating standards, applicable to every obligor and facility; and
- consistent standards for credit origination documentation and remedial management.

### Consumer Credit Risk

Within *GCB*, credit risk management is responsible for establishing the Global Consumer Credit and Fraud Risk Policies, approving business-specific policies and procedures, monitoring business risk management performance, providing ongoing assessment of portfolio credit risk, ensuring the appropriate level of loan loss reserves and approving new products and new risks.

### Past Due and Impaired Exposures

For Citi's significant accounting policies regarding past due and impaired loans, see Note 1, “*Summary of Significant Accounting Policies*,” in the Notes to Consolidated Financial Statements in Citi's 2015 Form 10-K and Note 14, “*Loans*” in the Notes to Consolidated Financial Statements in Citi's First Quarter 2016 Form 10-Q.

For information on Citi's significant accounting policies and estimates regarding impaired securities, including the determination of other-than-temporary impairment, see “*Significant Accounting Policies and Significant Estimates—Valuations of Financial Instruments*” in Citi's 2015 Form 10-K and Note 13, “*Investments*” in the Notes to Consolidated Financial Statements in Citi's First Quarter 2016 Form 10-Q.

### Allowance for Credit Losses

For a description of Citi's significant accounting policies and estimates regarding the allowance for credit losses, including

## Credit Risk Exposures

The following table sets forth the geographic distribution of Citi's major credit risk exposures as of March 31, 2016.

**Table 3: Principal Credit Risk Exposures by Geographic Region**<sup>(1)(2)(3)</sup>

<i>In millions of dollars</i>	March 31, 2016				
	North America	EMEA	Latin America	Asia	Total
<b>On-Balance Sheet Exposures</b>					
Cash and Due From Banks (Including Segregated Cash and Other Deposits)	\$ 4,289	\$ 4,720	\$ 4,338	\$ 8,893	\$ 22,240
Deposits With Banks	83,854	13,110	8,459	30,626	136,049
Federal Funds Sold and Securities Borrowed or Purchased Under Agreements to Resell	143,667	62,114	4,039	15,273	225,093
Brokerage Receivables	21,534	9,744	912	3,071	35,261
<b>Debt Securities:</b>					
Available-for-Sale	213,964	28,875	19,599	45,487	307,925
Held-to-Maturity	32,446	387	4,057	—	36,890
<b>Total Debt Securities</b>	<b>\$ 246,410</b>	<b>\$ 29,262</b>	<b>\$ 23,656</b>	<b>\$ 45,487</b>	<b>\$ 344,815</b>
<b>Loans Held-for-Investment<sup>(4)</sup>:</b>					
Consumer	\$ 199,564	\$ 216	\$ 31,463	\$ 86,657	\$ 317,900
Corporate	132,033	64,714	42,527	61,650	300,924
<b>Loans Held-for-Investment, Net of Unearned Income</b>	<b>\$ 331,597</b>	<b>\$ 64,930</b>	<b>\$ 73,990</b>	<b>\$ 148,307</b>	<b>\$ 618,824</b>
Allowance for Loan Losses	\$ (7,981)	\$ (736)	\$ (2,546)	\$ (1,449)	\$ (12,712)
<b>Total Loans Held-for-Investment, Net</b>	<b>\$ 323,616</b>	<b>\$ 64,194</b>	<b>\$ 71,444</b>	<b>\$ 146,858</b>	<b>\$ 606,112</b>
Receivables	\$ 4,930	\$ 2,598	\$ 1,909	\$ 2,157	\$ 11,594
Loans Held-for-Sale	8,238	1,738	118	306	10,400
<b>Off-Balance Sheet Exposures</b>					
<b>Guarantees<sup>(5)</sup></b>					
Financial Standby Letters of Credit	\$ 65,954	\$ 18,091	\$ 1,332	\$ 8,517	\$ 93,894
Performance Guarantees	2,632	3,628	2,241	3,091	11,592
Securities Lending Indemnifications	67,688	19,730	—	567	87,985
<b>Credit Commitments and Lines of Credit</b>					
Commercial and Similar Letters of Credit	1,128	1,782	252	1,785	4,947
One- to Four-Family Residential Mortgages	1,790	—	—	1,842	3,632
Revolving Open-End Loans Secured by One-to Four-Family Residential Properties	12,600	—	465	1,687	14,752
Commercial Real Estate, Construction and Land Development	7,809	302	12	943	9,066
Credit Card Lines	487,546	2,531	17,936	67,408	575,421
Commercial and Other Consumer Loan Commitments	180,644	63,681	7,376	16,556	268,257

(1) Credit risk exposures are presented on a U.S. GAAP basis and in the geographic region in which each exposure is managed, rather than the geographic region in which the obligor is domiciled.

(2) *North America* includes the U.S., Canada and Puerto Rico; *EMEA* represents Europe, Middle East and Africa; *Latin America* includes Mexico; and *Asia* includes Japan.

(3) Excludes net derivative receivables for which the geographic distribution is not readily available. As of March 31, 2016 Citi's net derivative receivables included on Citi's consolidated balance sheet amounted to \$63,044 million.

(4) As of March 31, 2016 loans held-for-investment were net of \$136 million of unearned income.

(5) Represents the maximum potential amount of future payments.

The following table sets forth Citi's major credit risk exposures by counterparty for wholesale exposures and subcategories for retail exposures as of March 31, 2016.

**Table 4: Principal Credit Risk Exposures by Wholesale Exposure Counterparty and Retail Exposure Subcategory<sup>(1)(2)</sup>**

	March 31, 2016								
	Wholesale Exposures					Retail Exposures			
<i>In millions of dollars</i>	Bank	Corporate <sup>(3)</sup>	Sovereign	Other	Netting <sup>(4)</sup>	Residential Mortgages	Qualifying Revolving	Other Retail	Total
<b>On-Balance Sheet Exposures</b>									
Cash and Due From Banks (Including Segregated Cash and Other Deposits) <sup>(5)</sup>	\$ 1,924	\$ 599	\$ 12,822	\$ 6,895	\$ —	\$ —	\$ —	\$ —	\$ 22,240
Deposits With Banks	12,873	3,096	120,080	—	—	—	—	—	136,049
Federal Funds Sold and Securities Borrowed or Purchased Under Agreements to Resell	41,390	213,821	25,626	204	(55,948)	—	—	—	225,093
Brokerage Receivables	—	—	—	35,261	—	—	—	—	35,261
Derivatives Receivables <sup>(6)</sup>	398,066	144,188	30,030	202,020	(711,260)	—	—	—	63,044
<b>Debt Securities:</b>									
Available-for-Sale	6,132	75,964	216,796	3,551	—	4,758	724	—	307,925
Held-to-Maturity	—	29,912	5,109	815	—	1,054	—	—	36,890
<b>Total Debt Securities</b>	<b>\$ 6,132</b>	<b>\$ 105,876</b>	<b>\$ 221,905</b>	<b>\$ 4,366</b>	<b>\$ —</b>	<b>\$ 5,812</b>	<b>\$ 724</b>	<b>\$ —</b>	<b>\$ 344,815</b>
<b>Loans Held-for-Investment<sup>(7)</sup>:</b>									
Consumer <sup>(8)</sup>	\$ 216	\$ 35,289	\$ 1,104	\$ 247	\$ —	\$ 119,131	\$ 131,910	\$ 30,003	\$ 317,900
Corporate <sup>(9)</sup>	17,269	218,030	5,594	22,618	—	26,516	1,623	9,274	300,924
<b>Loans Held-for-Investment, Net of Unearned Income</b>	<b>\$ 17,485</b>	<b>\$ 253,319</b>	<b>\$ 6,698</b>	<b>\$ 22,865</b>	<b>\$ —</b>	<b>\$ 145,647</b>	<b>\$ 133,533</b>	<b>\$ 39,277</b>	<b>\$ 618,824</b>
Receivables	\$ 683	\$ 4,883	\$ 1,280	\$ 1,795	\$ —	\$ 853	\$ 37	\$ 2,063	\$ 11,594
Loans Held-for-Sale	294	3,118	48	152	—	6,654	134	—	10,400
<b>Off-Balance Sheet Exposures</b>									
<b>Guarantees<sup>(10)</sup></b>									
Financial Standby Letters of Credit	\$ 2,236	\$ 91,142	\$ 217	\$ 256	\$ —	\$ 43	\$ —	\$ —	\$ 93,894
Performance Guarantees	651	10,851	5	—	—	—	—	85	11,592
Securities Lending Indemnifications	72,919	14,864	202	—	—	—	—	—	87,985
<b>Credit Commitments and Lines of Credit</b>									
Commercial and Similar Letters of Credit	1,420	3,437	90	—	—	—	—	—	4,947
One- to Four-Family Residential Mortgages	—	—	—	—	—	3,632	—	—	3,632
Revolving Open-End Loans Secured by One-to Four-Family Residential Properties	—	—	—	—	—	14,142	508	102	14,752
Commercial Real Estate, Construction and Land Development	—	8,812	—	—	—	254	—	—	9,066
Credit Card Lines <sup>(11)</sup>	72	20,368	1,209	—	—	—	543,456	10,316	575,421
Commercial and Other Consumer Loan Commitments	1,078	237,154	592	12,748	—	765	12,559	3,361	268,257

- (1) Credit risk exposures are presented on a U.S. GAAP basis.
- (2) Securitization exposures are reflected within wholesale exposure counterparties and retail exposure subcategories, as appropriate, based upon the nature of the underlying securitized assets or party on which credit risk is assumed.
- (3) Corporate credit risk exposures include non-depository financial institutions, bank holding companies, insurance companies and non-central government public sector entities, consistent with FFIEC 101 reporting requirements.
- (4) Represents the netting of receivable and payable balances with the same counterparty under enforceable netting agreements and, with respect to derivatives receivables, also the netting of cash collateral paid and received by counterparty under enforceable credit support agreements. For additional information regarding enforceable netting agreements and credit support agreements, see Note 10, “Federal Funds, Securities Borrowed, Loaned and Subject to Repurchase Agreements” and Note 21, “Derivatives Activities” in the Notes to Consolidated Financial Statements in Citi's First Quarter 2016 Form 10-Q.
- (5) Other represents \$6,895 million of currency and coin, as well as cash items in process of collection.
- (6) Other includes exchange traded and cleared derivatives receivables. 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.
- (7) As of March 31, 2016 loans held-for-investment were net of \$136 million of unearned income.
- (8) Classifiably-managed (individually risk rated) consumer loans are considered wholesale exposures in accordance with the U.S. Basel III rules.
- (9) Certain wholesale or commercial credit risk exposures less than or equal to \$1 million are considered retail exposures in accordance with the U.S. Basel III rules.
- (10) Represents the maximum potential amount of future payments.
- (11) Credit card lines extended to wholesale counterparties for use by employees are considered wholesale exposures in accordance with the U.S. Basel III rules.

See the following references to Citi's First Quarter 2016 Form 10-Q for additional quantitative information regarding credit risk exposures, all of which are presented in accordance with U.S. GAAP.

#### *Corporate and Consumer Loans*

- See Note 14, “Loans” for information on loans outstanding by counterparty type, additional detail by geographic region, non-accrual and delinquent loans and certain impaired loans.
- See “Managing Global Risk—Credit Risk” for additional information on loans outstanding by counterparty type, geographic region, remaining contractual maturity, non-accrual and delinquent loans and impaired loans.

#### *Investment Securities*

- See Note 13, “Investments” for information on investment securities by issuer type, remaining contractual maturity and investment securities determined to be other-than-temporarily impaired.

#### *Repo-Style Transactions, Eligible Margin Loans and OTC Derivative Contracts*

- See Note 10, “Federal Funds, Securities Borrowed, Loaned and Subject to Repurchase Agreements” for respective carrying values.
- See Note 21, “Derivatives Activities” for derivative notional amounts, gross mark-to-market receivables/payables, collateral netting benefits and net mark-to-market receivables/payables, as well as credit derivative notional amounts and gross mark-to-market receivables/payables by counterparty type and remaining contractual maturity.

#### *Off-Balance Sheet Exposures*

- See Note 24, “Guarantees and Commitments” for information on lease commitments, the maximum potential amount of future payments under guarantees, and credit commitments by type of product.

#### *Allowance for Credit Losses*

- See “Managing Global Risk—Credit Risk—Details of Credit Loss Experience” for a reconciliation of changes in the allowance for credit losses.
- See Note 15, “Allowance for Credit Losses” for a disaggregation of the allowance for credit losses by impairment method.

#### *Average Credit Risk Exposures*

- See “Managing Global Risk—Market Risk—Market Risk of Non-Trading Portfolios—Additional Interest Rate Details—Average Balances and Interest Rates—Assets” for consolidated average total assets for the three months ended March 31, 2016.

Additionally, see Citi's 2015 Form 10-K for the following information regarding corporate and consumer loans, as well as off-balance sheet exposures.

- See “Managing Global Risk—Credit Risk” for information on consumer and corporate loans by remaining contractual maturity.
- See Note 15 “Loans” for information on purchased distressed loans.
- See Note 27 “Pledged Assets, Collateral, Commitments and Guarantees” for additional information on lease commitments.

### Overview

Under the U.S. Basel III rules Citi is required to categorize its credit risk, in part, into wholesale, retail, securitization, central counterparty, and equity exposures. Each category may cross multiple business segments as presented in Citi's other publicly disseminated reports, such as its Forms 10-K and 10-Q.

Wholesale exposures are classifiably-managed (individually risk rated) and retail exposures are delinquency-managed (portfolio based). Wholesale exposures are primarily resident in the *ICG* businesses (including Citi Private Bank), as well as Corporate Treasury. Additionally, classifiably-managed exposures are resident in certain commercial business lines within the *GCB* and Citi Holdings. Typical financial reporting categories that include wholesale exposures are deposits with banks, debt securities available-for-sale or held-to-maturity, loans, and off-balance sheet exposures such as unused commitments to lend and letters of credit.

Wholesale exposures, which include counterparty credit risk exposures arising from OTC derivative contracts, repo-style transactions and eligible margin loans, consist of exposures such as those to corporates, banks, securities firms, financial institutions, central governments, government agencies, local governments, other public sector entities, income producing real estate, high volatility commercial real estate, high net worth individuals not eligible for retail exposure treatment, and other obligor/counterparty types not included in retail exposures.

Retail exposures are primarily resident in consumer business lines within the *GCB* and Citi Holdings. Additionally, certain delinquency-managed exposures less than or equal to \$1 million that are resident in the *ICG* and Citi Private Bank are treated as retail exposures in accordance with the U.S. Basel III rules. Typical financial reporting categories that include retail exposures are loans and off-balance sheet commitments to lend. Retail exposures consist of three subcategories: residential mortgage exposures, qualifying revolving exposures, and other retail exposures. Residential mortgage exposures include one-to-four family residential mortgages, both first lien and second lien, as well as home equity lines of credit. Qualifying revolving exposures include credit card and charge card products where the overall credit limit is less than or equal to \$100,000, and overdraft lines on individual checking accounts. Other retail exposures include credit card products above the \$100,000 threshold, personal loans, auto loans, student loans, and commercial delinquency-managed exposures less than or equal to \$1 million.

### Wholesale Credit Risk Management

#### *Wholesale Credit Risk Exposures*

As previously noted, Citi's wholesale credit risk exposures are to corporate, institutional, public sector and high-net worth clients around the world with a range of wholesale banking products and services. Citi's wholesale businesses that incur credit, market, operational and franchise risk are covered by risk management policies which set forth core risk principles, policy framework, limits, definitions, rules and standards for identifying, measuring,

approving and reporting risk, including business conducted in majority-owned, management-controlled entities.

Obligors are assigned a risk rating through a risk rating process governed by the Citi Risk Rating Policy. Total facilities to an obligor are approved in accordance with Citi level and business level risk policies. The risk policies require an annual comprehensive analysis of each obligor and all proposed credit exposures to that obligor.

Independent risk management periodically reviews exposures across the banking book and trading book portfolios to ensure compliance with various limit and concentration constructs. Quarterly reviews are conducted of certain high risk exposures in the *ICG*.

#### *Use of Risk Parameter Estimates Other Than for Regulatory Capital Purposes*

For Citi's wholesale exposures, internal credit ratings are used in determining approval levels, concentration limits, economic risk capital, and reserves, in addition to regulatory capital and capital adequacy. Each wholesale obligor is assigned an obligor risk rating (ORR) that reflects the one-year probability of default (PD) of the obligor. Each wholesale facility is assigned a facility risk rating (FRR) that reflects the expected loss rate of the facility, the product of the one-year PD and the expected loss given default (LGD) associated with the facility characteristics.

ORRs are established through an integrated framework that combines quantitative and qualitative tools, calibrated and tested across economic cycles, with risk manager expertise on customers, markets and industries. ORRs are generally expected to change in line with material changes in the PD of the obligor. Rating categories are defined consistently across wholesale credit by ranges of PDs and are used to calibrate and objectively test rating models and the final ratings assigned to individual obligors.

Independently validated models and, in limited cases, external agency ratings, establish the starting point in the internal obligor rating process. The use of external agency ratings in establishing an internal rating occurs when external agency ratings have been reviewed against internal rating performance and definitions, and is generally limited to ratings of BBB+/Baa1 or higher.

Internal rating models include statistically derived models and expert judgment risk rating models. The statistical models are developed by an independent analytical team in conjunction with independent risk management. The analytical team resides in Credit & Operational Risk Analytics (CORA) which is part of the corporate-level independent group within Citi's overall risk management organization. The statistical rating models cover Citi's corporate and commercial bank segment and certain commercial activity within the consumer business lines, and are based on statistically-significant financial variables. Expert judgment rating models, developed by independent risk management for the segment, cover industry or obligor segments where there are limited defaults or data histories, or highly specialized or heterogeneous populations.

To the extent that risk management believes the applicable model does not capture all the relevant factors affecting the credit



risk of an obligor, discretionary adjustments may be applied to derive the final ORR, within limits defined by policy. For larger obligors, the final ORRs are derived through the use of a scorecard that is designed to capture the key risks for the segment. For larger credit relationships, the final ORRs are the starting point for deriving a longer term view on the credit rating that is used as the basis for obligor limits and approval levels.

#### ***Use of Credit Risk Mitigation***

Risk mitigation may depend on the type of product. For counterparty credit risk, counterparties may be required to post cash or securities margin as part of the credit service agreement with that counterparty. Margin posted by a counterparty is reflected as a reduction of exposure at the netting set level, subject to obtaining an enforceable legal opinion regarding the certainty of the netting and margin agreement. For lending based transactions, the primary risk mitigants are guarantees or other types of support from third parties or related entities, as well as collateral such as cash, securities, real estate, or other asset types. Additionally, exposure can be mitigated through the purchase of credit default swaps. The risk policies define specific documentation requirements for all product contracts, and specific requirements for a guarantee to qualify as “full support” which align with the guarantee eligibility requirements under the U.S. Basel III rules.

#### ***Recognizing Credit Risk Mitigation***

For purposes of calculating regulatory capital for counterparty credit risk, margin posted by a counterparty is reflected as a reduction of exposure at default (EAD) in accordance with the U.S. Basel III rules, subject to obtaining an enforceable legal opinion regarding the certainty of the netting and margin agreement. For purposes of calculating Basel III regulatory capital for lending products, collateral is recognized in the LGD calculation based on the specific LGD for the related collateral as defined annually by CORA. The benefit of eligible guarantees is captured through PD substitution in the regulatory capital calculation and in the internal assignment of FRRs. In certain cases, collateral may be recognized as an improvement in the rating of the facility based on constraints outlined in the Citi Collateral Policy and Citi Risk Rating Policy.

### **Retail Credit Risk Management**

#### ***Policies and Processes for Retail Credit Risk Management***

Citi extends retail credit on the basis of the customer’s willingness and ability to repay, rather than placing primary reliance on credit risk mitigation. Depending on a customer’s standing and the type of product, facilities may be provided on an unsecured basis.

Citi’s retail banking operations use credit models in assessing and managing risk in their businesses and, as a result, models play an integral role in customer approval and management processes. Models used include PD models, primarily in the form of custom application scorecards, custom behavioral scorecards, and generic bureau scores, for example a Fair Isaacs Corporation (FICO) score.

Application scorecards are derived from the historically observed performance of new customers. They are derived using

customer demographic and financial information, including data available through credit bureaus. Through statistical techniques, the relationship between these variables and the credit performance is quantified to produce output scores reflecting a PD. These scores are used primarily for decision-making regarding new customers and may reflect different default definitions than those required by the U.S. Basel III rules. These scores are in general not used as segmentation variables in the Basel model.

Behavioral scorecards are derived from the historically observed performance of existing customers (including bureau data). They can be based upon internal information, credit bureau information, or both. The techniques used to derive the output scores reflecting certain PDs are very similar to those used for application scoring. The output scores are used for existing customer management activities. These scores may be used as a segmentation variable in the Basel model.

Citi’s retail credit risk custom models are primarily internally derived, although occasionally external consultants may be contracted to build models on behalf of the businesses. All such external models (including generic scores) are subject to internal model validation policies and processes.

#### ***Collateral Valuation and Management***

In Citi’s residential mortgage businesses, Citi’s credit policy requires annual assessment of portfolio loan to value, with individual loans valued more frequently as necessary. A variety of methods, ranging from the use of market indices to individual professional inspection, may be used. For margin and security backed loans, Citi’s credit policy generally requires that collateral valuations be performed daily.

#### ***Types of Collateral***

In Citi’s residential real estate businesses, a mortgage of the property is obtained to secure claims. Physical collateral is also typically obtained in vehicle financing in most jurisdictions. Loans to private banking or investment management clients may be made against the pledge of eligible marketable securities, cash or real estate.

### **Calculation of Risk-Weighted Assets Using Internal Parameters**

In accordance with the requirements of the U.S. Basel III rules, Citi applies the Advanced Internal Ratings Based (A-IRB) approach for credit risk. Under the A-IRB approach, Citi uses its own estimates of PD, LGD and credit conversion factors (CCF) as risk parameter inputs to Basel III supervisory formulas for the different types of wholesale, counterparty, and retail credit risk exposures when calculating risk-weighted assets.

#### ***Wholesale Credit Risk***

For wholesale credit risk exposures, the estimates for PD, LGD and EAD are updated on an annual basis by an analytics team in CORA. PD is an estimate of the long-run average one-year default rate for each rating category, adjusted to ensure increasing default rates along the rating scale. PDs and EADs are based on internal data as of 2000 onward.

LGD represents the economic loss associated with defaults occurring in a downturn period (or the long-run average,

whichever is higher). The economic loss is measured as the present value of the cash flows, post default, and includes costs associated with the work out, such as legal costs. Adjustments are also made for accrued interest and fees and unresolved defaults. Downturn periods are determined in accordance with the U.S. Basel III rules and reflect periods of significantly higher internal default rates by jurisdiction. LGD is segmented by key drivers of losses, such as product type, collateral type and coverage, seniority, jurisdiction, and/or obligor segment (such as large corporates, financial institutions, sovereigns, SMEs or private banking clients). With some exceptions, such as bonds and sovereign LGDs, where external information is sourced to supplement internal data, LGDs are based on Citi's internal data for defaults resolving as of 2000 onward.

The EAD for each facility is equal to 100% of the on-balance sheet (direct) exposure, plus the expected percentage drawdown from any off-balance sheet (unused commitment or contingent) exposure multiplied by the unused or contingent amount of a facility. The percentage of the drawdown amount is referred to as the CCF. CCFs for unused commitments are calculated using regression models on internal data. The key drivers for the models include factors such as product type, current usage, obligor segment, credit quality and/or jurisdiction. The average CCF based on internal data is used for contingent trade letters of credit, while fixed CCFs are applied to performance letters of credit (50%) and for financial/standby letters of credit (100%) due to limited default data for these products. CCFs include adjustments for downturn periods, consistent with those used for LGD, and accrued but unpaid interest and fees at the time of default.

Maturity for loans and leases is based on remaining contractual maturity. Maturity is capped at five years and with a floor of one year, except as permitted by the U.S. Basel III rules.

#### ***Retail Credit Risk***

The estimates for PD, LGD and CCFs for retail credit exposures are generally updated on a monthly basis using internal data covering a range of economic conditions and are defined similarly to those for wholesale credit. As required by the U.S. Basel III rules, PD is an estimate of the one-year default rate based on the long-term averages. The LGD is an estimate of the economic loss that is associated with the defaulted exposures and any risk mitigants, such as insurance and/or collateral, if applicable. CCF is an estimate of the percentage of an undrawn credit line that will be drawn down within a one-year period. The EAD is estimated as a sum of 100% of the drawn exposure at the beginning of this year and the expected portion of undrawn exposure (as of the beginning of the year) corresponding to CCF.

The long-run average CCFs and LGDs are subject to certain adjustments, including an adjustment to reflect the averages associated with downturn periods. The downturn periods are identified based on internal default rates by major product category and country (similar to the approach used for wholesale credit risk exposures) in accordance with the U.S. Basel III rules.

All Basel III retail parameters are calculated for homogeneous segments of credit exposures delineated by risk drivers, such as consumer credit score band, loan to value ratio, credit line utilization, months-on-book or delinquency aging. Segments are defined by specific product characteristics within a portfolio. The credit scores used are generic bureau scores (for

example, a FICO score) or internally developed scoring models, which are subject to Citi's model risk management policy, as discussed further below.

Generally, the approach to estimating PD, LGD, and CCF is consistent across all retail exposure subcategories—residential mortgage exposures, qualifying revolving exposures, and other retail exposures.

#### **Credit Rating and Basel Parameter Governance**

The Citi Risk Rating Policy requires that all wholesale businesses have an approved risk rating process for deriving risk ratings for all obligors and facilities. Establishing the risk rating process is the responsibility of the independent risk manager aligned with each business. The processes must be approved by the head of CORA, based on review of default rates, LGD, and alternative practices. The process must also be approved by a risk manager who has the highest senior credit officer designation. It is the responsibility of the risk manager to ensure that the process remains appropriate for the business' activities. The risk rating process must be re-approved at least once every three years, unless more frequent review is specified as a condition of the approval or an extension is approved per the risk rating process approval and control standards. All ratings must be reviewed annually, at a minimum.

Risk and the business share responsibility for the accuracy of risk ratings. Fundamental Credit Review (FCR) reviews the appropriateness of the risk ratings. FCR may change an existing risk rating during a review or during ongoing business monitoring, and has final authority. Recognition of loss mitigation in the FRRs for collateral or support requires that the mitigant and the reporting comply with the collateral and support policies. In addition, the accuracy of ratings is tested on an annual basis and at various levels. The annual ORR validation, as well as the rating model testing, is reviewed by senior credit risk managers. Various levels of backtesting, benchmarking and validation cover all models and methodologies used in the assignment of ratings, as well as the models used to calculate Basel parameters.

The estimation of Basel parameters is governed under parameter control standards for wholesale and retail credit exposures. All models used to estimate Basel parameters must comply with Citi's model risk management policy, including the requirement to be validated by an independent model validation unit and approved by senior risk management.

#### **Model Risk Management Policy**

Model risk refers to the potential adverse impact to Citi from using a model arising from model limitations, model errors or from incorrect or inappropriate use of the model output.

Citi's model risk management policy is designed to comply with supervisory guidance on model risk management and is approved by each of Citigroup's and Citibank's Chief Risk Officer and Citi's Board of Directors. This policy establishes a model risk management framework designed to ensure consistent standards across Citi for identifying model risk, assessing its magnitude, and managing the risks that arise when using certain quantitative models.

Citi's Chief Risk Officer is responsible for and must approve this policy. The Citi Model Risk Management Committee oversees model risk levels within Citi and reports directly to the Chief Risk Officer.

### Independent Validation of Models

Models for wholesale credit risk and retail credit risk are subject to periodic reviews of assumptions and performance as required under the Model Risk Management Policy. Wholesale credit rating models and Basel parameter models (for both wholesale and retail) are integrated into internal risk systems by business, Risk and information technology. An independent validation unit conducts initial model validation for the assessment of model risk, including independent review of model documentation and implementation, conceptual soundness and the intended use of a model. The unit also performs independent statistical testing with effective challenges for sensitivity analysis, benchmarking and backtesting of the model methodology. Independent control functions (including risk and validation units) jointly conduct ongoing model performance review and backtesting of a model using internal performance data that meets the regulatory requirements, which includes the assessment of modeling assumptions and data inputs, model output, modeling

methodology, and model limitations and compensating controls. This testing is performed on an annual basis for statistical rating models and Basel parameters for wholesale credit risk and on a quarterly basis for Basel parameters for retail credit risk. The definition of default for wholesale and retail credit risk conforms with the applicable definitions in the U.S. Basel III rules.

Internal audit is responsible for independently assessing the adequacy and effectiveness of the overall model risk management framework and implementation (including risk rating processes).

### Basel Parameters by Exposure Type

Tables 5 through 9 below set forth the key Basel parameters (PD, LGD, CCF) that are based on internal models as they are reflected in Citi's wholesale, counterparty credit risk, and retail portfolios of exposures. These key parameters are used as inputs to the Basel III supervisory formulas to calculate credit risk-weighted assets. These tables do not include securitization, central counterparty or equity exposures, which are primarily based on supervisory formulas and risk weights. The presentation is consistent as to categories, exposure types, PD range bands, and definitions with U.S. regulatory reporting for Basel III in Citi's First Quarter 2016 FFIEC 101 Report.

**Table 5: Wholesale Credit Risk Exposures by Probability of Default<sup>(1)</sup>**

<i>In millions of dollars, except percentages</i>						
<b>March 31, 2016</b>						
<b>PD Range Bands</b>	<b>Undrawn Exposures<sup>(2)</sup></b>	<b>Total EAD<sup>(3)</sup></b>	<b>CCF<sup>(4)</sup></b>	<b>PD<sup>(4)</sup></b>	<b>LGD<sup>(4)</sup></b>	<b>Risk Weight<sup>(4)</sup></b>
0.00% to < 0.15%	\$ 118,772	\$ 531,914	56.13 %	0.03 %	36.50 %	10.86 %
0.15% to < 0.25%	39,047	59,292	54.07	0.16	37.74	31.05
0.25% to < 0.35%	50,551	56,007	48.05	0.26	37.54	37.82
0.35% to < 0.50%	51,328	68,259	48.33	0.43	36.72	48.33
0.50% to < 0.75%	32,089	80,790	48.01	0.71	36.29	59.68
0.75% to < 1.35%	26,830	56,750	52.88	1.12	34.40	68.50
1.35% to < 2.50%	18,985	40,607	51.37	1.88	34.96	78.22
2.50% to < 5.50%	14,530	23,086	49.85	3.65	34.06	91.12
5.50% to < 10.00%	2,811	5,171	57.11	7.80	33.25	101.02
10.00% to < 20.00%	2,977	4,939	51.71	14.96	35.22	143.54
20.00% to < 100%	5,014	10,310	44.48	30.71	34.95	129.66
100% (Default) <sup>(5)</sup>	2,997	6,995	70.47	100.00	35.03	98.58
<b>Total</b>	<b>\$ 365,931</b>	<b>\$ 944,120</b>	<b>52.97%</b>	<b>1.57%</b>	<b>36.34%</b>	<b>32.07%</b>

(1) Excludes repo-style transactions, eligible margin loans and OTC derivative exposures.

(2) Amounts represent the face value of undrawn commitments and letters of credit.

(3) Represents total EAD for on-balance sheet and undrawn exposures.

(4) Exposure-weighted average by PD range bands and in total.

(5) The portion of EAD for defaulted wholesale exposures covered by an eligible guarantee from the U.S. government or its agencies, is assigned a 20% risk weight in accordance with the U.S. Basel III rules.

**Table 6: Counterparty Credit Risk Exposures by Probability of Default<sup>(1)</sup>***In millions of dollars, except percentages*

PD Range Bands	March 31, 2016			
	Total EAD <sup>(2)</sup>	PD <sup>(3)</sup>	LGD <sup>(3)</sup>	Risk Weight <sup>(3)</sup>
0.00% to < 0.03%	\$ 27,709	0.02 %	50.30 %	9.74 %
0.03% to < 0.10%	42,189	0.07	45.44	20.00
0.10% to < 0.15%	—	—	—	—
0.15% to < 0.25%	18,578	0.16	43.63	33.79
0.25% to < 0.50%	23,577	0.35	42.95	52.23
0.50% to < 0.75%	26,036	0.71	53.11	104.01
0.75% to < 1.35%	13,061	1.15	43.53	83.11
1.35% to < 2.50%	7,184	1.89	43.71	101.07
2.50% to < 5.50%	5,191	3.52	40.67	116.91
5.50% to < 10.00%	878	7.80	41.30	168.30
10.00% to < 100.00%	2,972	22.96	49.49	239.36
100% (Default)	202	100.00	41.01	100.00
<b>Total</b>	<b>\$ 167,577</b>	<b>1.05%</b>	<b>46.56%</b>	<b>53.58%</b>

(1) Consists of repo-style transactions, eligible margin loans and OTC derivative exposures.

(2) Represents total EAD for on- and off-balance sheet exposures.

(3) Exposure-weighted average by PD range bands and in total.

**Table 7: Residential Mortgage Exposures by Probability of Default***In millions of dollars, except percentages*

PD Range Bands	March 31, 2016					
	Undrawn Exposures <sup>(1)</sup>	Total EAD <sup>(2)</sup>	CCF <sup>(3)</sup>	PD <sup>(3)</sup>	LGD <sup>(3)</sup>	Risk Weight <sup>(3)</sup>
0.00% to < 0.05%	\$ 14,791	\$ 60,832	50.99 %	0.03 %	39.29 %	4.46 %
0.05% to < 0.10%	360	15,078	37.61	0.08	49.04	9.96
0.10% to < 0.15%	312	16,360	91.48	0.12	42.88	12.49
0.15% to < 0.20%	81	3,018	32.98	0.18	57.66	21.35
0.20% to < 0.25%	108	4,550	91.20	0.22	49.78	22.74
0.25% to < 0.35%	892	7,497	58.03	0.29	41.76	45.24
0.35% to < 0.50%	118	3,543	34.61	0.44	60.39	44.28
0.50% to < 0.75%	111	6,207	95.08	0.58	44.80	43.57
0.75% to < 1.35%	144	10,341	25.27	0.99	55.02	71.33
1.35% to < 2.50%	17	8,223	88.34	1.87	58.49	111.99
2.50% to < 5.50%	8	7,068	39.46	3.68	61.34	176.01
5.50% to < 10.00%	2	3,529	65.45	7.99	56.64	240.05
10.00% to < 20.00%	1	3,060	43.47	14.03	48.45	262.08
20.00% to < 100%	1,284	3,009	97.49	62.32	40.95	158.47
100% (Default) <sup>(4)</sup>	3	6,450	100.00	100.00	44.41	74.10
<b>Total</b>	<b>\$ 18,232</b>	<b>\$ 158,765</b>	<b>58.57%</b>	<b>6.11%</b>	<b>45.84%</b>	<b>44.51%</b>

(1) Amounts represent the face value of undrawn commitments.

(2) Represents total EAD for on-balance sheet and undrawn exposures.

(3) Exposure-weighted average by PD range bands and in total.

(4) The portion of EAD for defaulted residential mortgage exposures covered by an eligible guarantee from the U.S. government or its agencies, is assigned a 20% risk weight in accordance with the U.S. Basel III rules.

**Table 8: Qualifying Revolving Exposures by Probability of Default***In millions of dollars, except percentages***March 31, 2016**

<b>PD Range Bands</b>	<b>Undrawn Exposures<sup>(1)</sup></b>	<b>Total EAD<sup>(2)</sup></b>	<b>CCF<sup>(3)</sup></b>	<b>PD<sup>(3)</sup></b>	<b>LGD<sup>(3)</sup></b>	<b>Risk Weight<sup>(3)</sup></b>
0.00% to < 0.50%	\$ 468,824	\$ 138,843	23.36 %	0.15 %	88.32 %	7.25 %
0.50% to < 1.00%	41,827	33,301	30.92	0.72	88.83	27.04
1.00% to < 1.50%	17,344	18,152	32.87	1.28	89.47	41.94
1.50% to < 2.00%	10,283	17,233	36.13	1.74	89.89	52.58
2.00% to < 2.50%	5,761	11,139	40.96	2.31	90.37	65.36
2.50% to < 3.00%	2,906	10,939	66.29	2.81	90.03	74.81
3.00% to < 3.50%	2,792	9,844	57.72	3.28	89.91	84.46
3.50% to < 4.00%	1,257	3,412	53.12	3.73	90.37	90.74
4.00% to < 5.00%	1,759	11,259	92.07	4.44	90.52	102.50
5.00% to < 6.00%	1,004	4,158	63.08	5.57	89.69	118.29
6.00% to < 7.00%	309	3,037	79.17	6.32	90.80	129.12
7.00% to < 8.00%	501	2,118	51.21	7.49	90.57	142.86
8.00% to < 10.00%	603	3,200	67.65	9.08	89.82	160.65
10.00% to < 100%	932	10,230	57.67	34.82	89.33	198.05
100% (Default) <sup>(4)</sup>	2	3	100.00	100.00	84.93	100.00
<b>Total</b>	<b>\$ 556,104</b>	<b>\$ 276,868</b>	<b>25.56%</b>	<b>2.51%</b>	<b>89.00%</b>	<b>40.25%</b>

(1) Amounts represent the face value of undrawn commitments.

(2) Represents total EAD for on-balance sheet and undrawn exposures.

(3) Exposure-weighted average by PD range bands and in total.

(4) Unsecured qualifying revolving loans and credit cards are generally charged off at 180 days contractually past due.

**Table 9: Other Retail Exposures by Probability of Default***In millions of dollars, except percentages***March 31, 2016**

<b>PD Range Bands</b>	<b>Undrawn Exposures<sup>(1)</sup></b>	<b>Total EAD<sup>(2)</sup></b>	<b>CCF<sup>(3)</sup></b>	<b>PD<sup>(3)</sup></b>	<b>LGD<sup>(3)</sup></b>	<b>Risk Weight<sup>(3)</sup></b>
0.00% to < 0.50%	\$ 24,365	\$ 29,504	21.44 %	0.14 %	49.38 %	18.67 %
0.50% to < 1.00%	1,342	6,565	31.21	0.68	76.69	65.60
1.00% to < 1.50%	955	3,060	24.92	1.23	71.29	78.49
1.50% to < 2.00%	224	1,841	48.59	1.78	76.62	106.74
2.00% to < 2.50%	117	1,779	25.21	2.30	65.96	88.00
2.50% to < 3.00%	145	906	46.03	2.70	83.29	113.95
3.00% to < 3.50%	90	1,166	64.95	3.27	78.63	112.62
3.50% to < 4.00%	57	510	37.61	3.72	78.97	111.69
4.00% to < 5.00%	52	1,263	41.55	4.44	75.30	116.22
5.00% to < 6.00%	42	726	57.61	5.44	77.00	127.94
6.00% to < 7.00%	44	2,583	110.08	6.67	89.78	137.42
7.00% to < 8.00%	23	358	25.21	7.56	79.76	125.79
8.00% to < 10.00%	17	346	57.40	8.98	81.15	134.73
10.00% to < 100%	58	1,700	32.51	34.48	78.26	158.84
100% (Default)	2	67	100.00	100.00	65.48	100.00
<b>Total</b>	<b>\$ 27,533</b>	<b>\$ 52,374</b>	<b>22.87%</b>	<b>2.40%</b>	<b>61.50%</b>	<b>54.03%</b>

(1) Amounts represent the face value of undrawn commitments and lines of credit.

(2) Represents total EAD for on-balance sheet and undrawn exposures.

(3) Exposure-weighted average by PD range bands and in total.

## Credit Losses

The table below presents actual credit losses for wholesale exposures and each subcategory of retail exposures during the three months ended March 31, 2016.

**Table 10: Credit Losses for Wholesale Exposures and Each Retail Exposure Subcategory<sup>(1)</sup>**

<i>In millions of dollars</i>	<b>Three Months Ended March 31, 2016</b>
<b>Credit Losses</b>	
Wholesale Exposures	\$ 243
<b>Retail Exposures:</b>	
Residential Mortgage Exposures	81
Qualifying Revolving Exposures	1,557
Other Retail Exposures	262
<b>Total Retail Exposures</b>	<b>\$ 1,900</b>
<b>Total Credit Losses</b>	<b>\$ 2,143</b>
<b>Credit Recoveries</b>	
Wholesale Exposures	\$ 27
<b>Retail Exposures:</b>	
Residential Mortgage Exposures	28
Qualifying Revolving Exposures	284
Other Retail Exposures	80
<b>Total Retail Exposures</b>	<b>\$ 392</b>
<b>Total Credit Recoveries</b>	<b>\$ 419</b>
<b>Net Credit Losses</b>	<b>\$ 1,724</b>

(1) Credit losses are presented on a U.S. GAAP basis.

Retail net credit losses declined by approximately \$66 million during the three months ended March 31, 2016, as compared to the three months ended December 31, 2015, primarily due to a reduction in net credit losses attributable to the North America residential first mortgage loan portfolio as a result of the transfer of CitiFinancial residential first mortgage loans to held-for-sale at year-end 2015. Additionally, net credit losses associated with other retail exposures declined quarter-over-quarter primarily due to the sale of One Main Financial which closed in November 2015.

For additional information regarding Citi's net credit losses see “Managing Global Risk—Credit Risk” in Citi's First Quarter 2016 Form 10-Q.

## COUNTERPARTY CREDIT RISK: OTC DERIVATIVE CONTRACTS, REPO-STYLE TRANSACTIONS AND ELIGIBLE MARGIN LOANS

---

### Counterparty Credit Risk Exposures

Counterparty credit risk is the risk that the counterparty to a transaction could default before the final settlement of the transaction's cash flows. For derivatives, counterparty credit risk also arises from unsettled security, commodity and foreign exchange transactions with a contractual settlement or delivery lag that is longer than the lesser of the market standard for the particular instrument or five business days (long settlement transactions). Repo-style transactions consist of repurchase or reverse repurchase transactions, or securities borrowing or securities lending transactions, including transactions in which Citi acts as agent for a customer and indemnifies the customer against loss, and are based on securities taken or given as collateral, which are marked-to-market, generally daily. Eligible margin loans are extensions of credit collateralized by liquid and readily marketable debt or equity securities, or gold, and that satisfy other conditions under the U.S. Basel III rules.

### Methodology Used to Assign Economic Capital

Citi calculates economic capital for the counterparty credit risk of OTC derivative contracts by simulating the potential economic loss resulting from counterparty defaults and the potential market rate driven changes in each counterparty's CVA. The latter simulation uses a process that integrates stress scenarios and Monte Carlo simulation. Citi does not currently calculate economic capital for the credit risk of either repo-style transactions or eligible margin loans, as these products have been evaluated to have de minimis risk because of the frequency of margin calls, the quality of the collateral, and the extent of overcollateralization.

### Methodology Used to Assign Credit Limits

The process for approving a counterparty's credit risk exposure limit is guided by: core credit policies, procedures and standards; experience and judgment of credit risk professionals; and the amount of exposure at risk. The process applies to all counterparty credit risk products - OTC derivative contracts, repo-style transactions and eligible margin loans. The process includes the determination of maximum potential exposure after recognition of netting agreements and collateral as appropriate.

While internal ratings are the starting point in establishing credit assessments, a range of factors, such as quality of management and strategy, nature of industry, and regulatory environment, among others, are also taken into consideration for obligor limits and approval levels. Exposure to credit risk on derivatives is also impacted by market volatility, which may impair the ability of clients to satisfy their obligations to Citi. Credit risk analysts conduct daily monitoring versus limits and any resulting issues are escalated to credit officers and business management as appropriate. Usage against the credit limits may reflect netting agreements and collateral.

### Counterparty Credit Risk Capital Calculations

In accordance with the requirements of the U.S. Basel III rules, Citi calculates counterparty credit risk-weighted assets using the PD and LGD estimates described in the "*Credit Risk: Portfolio Disclosures—Internal Ratings Based Approach*" section above. The methods used to determine EAD are described below.

For purposes of calculating regulatory capital for counterparty credit risk for derivatives, in accordance with the U.S. Basel III rules, Citi uses a Monte Carlo simulation of potential future exposure to determine an expected positive exposure (EPE) measure as input to Citi's EAD calculation. The model is calibrated with historical volatilities and correlations subject to a set of independent internal validation and statistical backtesting standards. The model utilizes a standard supervisory alpha multiplication factor of 1.4. Citi also uses the mark-to-market method (also known as the current exposure method) for certain counterparty credit risk exposures. This method assigns to each transaction a regulatory stipulated exposure based on the mark-to-market value and a measure of potential future exposure. To calculate EAD for repo-style transactions across all portfolios and for eligible margin loans within Citi's prime lending portfolios, Citi uses the simple VaR methodology. For positions that do not use simple VaR, Citi uses the (supervisory) collateral haircut approach as prescribed in the U.S. Basel III rules. Counterparty credit risk treatment also includes an explicit capital calculation (CVA RWA) to address potential fair value losses from CVA. Citi primarily utilizes the advanced CVA RWA approach for its OTC derivatives. However, the simple CVA RWA approach is used for exchange traded derivatives, other exposures that are cleared through central counterparties for which the current exposure method is applied and for immaterial OTC derivative exposures from counterparties that were deemed to not have specific risk model approval; this approach is also used for certain exposures in non-U.S. jurisdictions.

Netting agreements and margin collateral may be recognized as credit risk mitigants provided they meet certain eligibility criteria outlined in the U.S. Basel III rules, as described below.

### Derivative Master Netting Agreements

Credit risk from derivatives is mitigated where possible through netting agreements whereby derivative assets and liabilities with the same counterparty can be offset. Citi policy requires all netting arrangements to be legally documented. ISDA master agreements are Citi's preferred manner for documenting OTC derivatives. The agreements provide the contractual framework within which dealing activities across a full range of OTC products are conducted and contractually binds both parties to apply close-out netting across all outstanding transactions covered by an agreement if either party defaults or other predetermined events occur.

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. For example, Citi generally transacts lower volumes of derivatives under master netting

agreements where Citi does not have the requisite level of legal certainty regarding enforceability. For further information on Citi's policies regarding master netting agreements see Note 21, "Derivatives Activities" in the Notes to Consolidated Financial Statements of Citi's First Quarter 2016 Form 10-Q.

### **Policies for Securing, Valuing and Managing Collateral, and Establishing Credit Reserves**

Citi's policies and procedures cover management and governance of financial assets (including securing and valuing collateral) utilized for the purpose of mitigating the credit risk of OTC derivatives, repo-style transactions and eligible margin loans. Specifically, businesses are required to establish standard eligibility criteria for collateral usage and review processes for approving non-standard collateral. Industry standard legal agreements combined with internal reviews for legal enforceability are used to achieve a perfected security interest in the collateral. Additionally, risk management establishes guidelines on appropriate collateral haircuts related to repo-style transactions and eligible margin loans. Potential correlations between the exposure and the underlying collateral are reflected through appropriate haircuts. A haircut is the percentage of reduction in current market value applicable to each type of collateral and is largely based on liquidity and price volatility of the underlying security.

The current market value of collateral is monitored on a regular basis. Margin procedures are established for managing margin calls for which daily margining is considered best practice in order to maintain an appropriate level of collateral coverage reflecting market value fluctuations. Trades are reconciled on a regular basis that is consistent with regulatory or industry best practice guidelines and margin dispute processes are in place. Procedures are established surrounding collateral substitution and collateral reuse/rehypothecation. Limits and concentration monitoring are utilized to control Citi's collateral concentrations to different types of asset classes.

Additionally, for eligible margin loans, procedures are established to ensure an appropriate level of allowance for credit losses, and the counterparty credit risk arising on derivative transactions is managed through CVA to the fair value of derivative contracts.

### **Primary Types of Collateral**

Cash collateral and security collateral in the form of G10 government debt securities generally is posted to secure the net open exposure of OTC derivative transactions, at a counterparty level, whereby the receiving party is free to commingle/rehypothecate such collateral in the ordinary course of business. Nonstandard collateral, such as corporate bonds, municipal bonds, U.S. agency securities and/or mortgage-backed securities, may also be pledged as collateral for OTC derivative transactions. Security collateral posted to open and maintain a master netting agreement with a counterparty, in the form of cash and securities, may from time to time be segregated in an account at a third-party custodian pursuant to a tri-party Account Control Agreement.

With respect to repo-style transactions and eligible margin loans, the majority of the collateral is in the form of cash, government debt securities (mostly investment grade), and public equity securities. Non-standard collateral, such as corporate and

municipal bonds, U.S. agency securities and/or mortgage-backed securities may also be accepted, though to a lesser degree, and with appropriate agreement.

### **Policies With Respect to Wrong-Way Risk Exposures**

Wrong-way risk (WWR) occurs when a movement in a market factor causes Citi's exposure to a counterparty to increase at the same time as the counterparty's capacity to meet its obligations is decreasing. Stated differently, WWR occurs when exposure to a counterparty is adversely correlated with the credit quality of the counterparty.

Specific WWR arises when the exposure to a particular counterparty is positively correlated with the probability of default of the counterparty due to the nature of the transactions with the counterparty. General WWR is less definite than specific WWR and occurs where the credit quality of the counterparty is subject to impairment due to changes in macroeconomic factors.

WWR in a trading exposure arises when there is significant correlation between the underlying asset and the counterparty which, in the event of default, would lead to a significant mark-to-market loss. The interdependence between the counterparty credit exposure and underlying reference asset or collateral for each transaction can exacerbate and magnify the speed in which a portfolio deteriorates. Thus, the goal of Citi's WWR policy is to provide best practices and guidelines for the identification, approval, reporting and mitigation of specific and general WWR.

Citi requires that transactions involving specific WWR, as well as highly correlated WWR, are approved by independent risk management prior to commitment, along with post-trade ongoing risk reporting and reviews by senior management to determine appropriate management and risk mitigation. Risk mitigants for specific WWR transactions include increased margin requirements and offsetting or terminating transactions, among other mitigants.

Citi's WWR policy further uses ongoing product stress testing to identify potential general WWR using simulated macroeconomic scenarios. General WWR reports are reviewed on an ongoing basis by senior management to determine appropriate management and mitigation.

### **Impact of Citi Credit Rating Downgrade on Collateral Pledged**

Certain OTC derivative instruments contain provisions that require Citi 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 Citi. These events, which are defined by the existing derivative contracts, are primarily downgrades in the credit ratings of Citi and its affiliates. In the event that Citigroup and Citibank were downgraded a single notch across all three major rating agencies as of March 31, 2016, Citi would be required to post an additional \$2.0 billion as either collateral or settlement of the OTC derivative transactions. Additionally, Citi would be required to segregate with third-party custodians collateral previously received from existing OTC derivative counterparties in the amount of \$0.1 billion upon the single notch downgrade, resulting in aggregate cash obligations and collateral requirements of approximately \$2.1 billion.

For repo-style transactions in which Citi acts as a principal, in the event that Citi were to receive a credit rating downgrade as



of March 31, 2016, the net impact to Citi resulting from the potential posting of collateral and early termination resulting in an unwinding of transactions would not be material. For repo-style transactions in which Citi acts as agent on behalf of customers and indemnifies customers against loss (i.e., agent customer securities lending and repurchase agreement transactions), Citi would not be required to provide any collateral to the borrower of the securities nor to the lender, if Citi were to receive a credit rating downgrade. Nevertheless, certain repo-style transaction agreements may provide that a Citi credit rating downgrade, default, or insolvency, could result in an early termination of such repo-style transactions, with Citi responsible for administering the resulting returns solely in its capacity as agent.

No eligible margin loan made by Citi requires the posting of additional collateral if it were to receive a credit rating downgrade.

For additional information on the impact of Citi credit rating downgrades refer to “*Managing Global Risk—Liquidity Risk—Credit Ratings*” and Note 21, “*Derivatives Activities—Credit-Risk-Related Contingent Features in Derivatives*” in the Notes to Consolidated Financial Statements in Citi’s First Quarter 2016 Form 10-Q.

#### OTC Derivative Counterparty Credit Risk Disclosures

For information regarding counterparty credit risk related to OTC derivative exposures, including the impact of netting contracts and the offsetting of collateral held, see Note 21, “*Derivatives Activities*” in the Notes to Consolidated Financial Statements in Citi’s First Quarter 2016 Form 10-Q.

The following table presents counterparty credit risk for OTC derivatives, as well as repo-style transactions and eligible margin loans, under both the internal models and supervisory methods as of March 31, 2016.

**Table 11: Counterparty Credit Risk Exposures by Product**

In millions of dollars	March 31, 2016					
	Internal Models Method <sup>(1)</sup>		Supervisory Method <sup>(2)</sup>		Total Counterparty Credit Risk	
	EAD	RWA	EAD	RWA	EAD	RWA <sup>(3)</sup>
OTC Derivatives	\$ 81,459	\$ 47,111	\$ 33,241	\$ 22,700	\$ 114,700	\$ 69,811
Repo-Style Transactions and Eligible Margin Loans	31,972	8,536	20,905	11,441	52,877	19,977
<b>Total Exposure</b>	<b>\$ 113,431</b>	<b>\$ 55,647</b>	<b>\$ 54,146</b>	<b>\$ 34,141</b>	<b>\$ 167,577</b>	<b>\$ 89,788</b>

- (1) Internal Models Method (IMM) calculates EAD based on Citi’s internal models and includes estimates for potential future exposure for OTC derivatives. Repo-style transactions and eligible margin loans calculated using the simple VaR methodology are included above.
- (2) The Supervisory Method used for OTC derivatives is called the current exposure method (CEM) and includes an add-on for potential future exposure. The Supervisory Method used for repo-style transactions and eligible margin loans is called the (supervisory) collateral haircut approach.
- (3) Risk-weighted assets for counterparty credit risk are included within wholesale exposures in Table 2 above.

#### Credit Derivative Notional Amounts

In addition to netting and margining arrangements, Citi uses credit derivatives to mitigate counterparty credit risk arising from OTC derivative contracts and, infrequently, repo-style transactions. As of March 31, 2016, the net notional amount of outstanding credit protection bought and sold was approximately \$10.9 billion for OTC derivative contracts. Purchased credit protection for repo-style transactions was not significant as of March 31, 2016.

Citi does not currently use credit derivatives to mitigate counterparty credit risk arising from eligible margin loans. However, eligible margin loans may be included within the aggregate population of banking book transactions for which Citi buys or sells protection as part of its credit risk mitigation activities.

For information on the notional amounts of purchased and sold credit derivatives by product type, see Schedule HC-L, “*Derivatives and Off-Balance Sheet Items*” in Citi’s FR Y-9C, “Consolidated Financial Statements for Holding Companies” for the period ended March 31, 2016.

## Overview

As part of its risk management activities, Citi uses various risk mitigants to hedge portions of the credit risk in its portfolios, in addition to outright asset sales. Credit risk mitigation, including netting, collateral and other techniques, is important to Citi in the effective management of its credit risk exposures.

Generally, in consultation with legal counsel, Citi determines whether collateral documentation is legally enforceable and gives Citi the right to liquidate or take possession of collateral in a timely manner in the event of the default, insolvency, bankruptcy or other defined credit event of the obligor. Also in consultation with legal counsel, Citi approves relevant jurisdictions and counterparty types for netting purposes. Off-balance sheet netting and netting of the collateral against the exposure is permitted if Citi determines that it has these rights.

## Credit Risk Mitigation by Exposure Type

### OTC Derivative Contracts, Repo-Style Transactions and Eligible Margin Loans

Netting is generally permitted for OTC derivative contracts and repo-style transactions. In some cases, netting is also permitted for certain margin lending transactions.

For information on policies and processes for collateral valuation and management, as well as the notional amount of credit derivatives used for counterparty credit risk mitigation, see the “Counterparty Credit Risk: OTC Derivative Contracts, Repo-Style Transactions and Eligible Margin Loans” section above.

### Retail Exposures

For information on policies and processes for collateral valuation and management for Citi’s retail businesses, see the “Retail Credit Risk Management” section above.

### Wholesale Banking Book Exposures

The main type of credit risk mitigants utilized for the wholesale banking book exposures are guarantees or other types of full support from parents or third parties, as well as collateral such as real estate or various asset types (securities, receivables, inventories, machinery, etc.).

## Collateral Concentrations

The collateral obtained for Citi’s banking book portfolios is generally well diversified across a wide range of assets such as financial assets (securities, accounts receivable, cash, etc.), real estate and physical assets (plant and equipment, ships, planes, etc.), with no or limited concentration within any one asset type.

## Guarantors and Credit Derivative Counterparties and their Creditworthiness

The general purpose for hedging is compliance with various risk limits with the largest driver being hedging single name concentrations in the banking book at the relationship level. A dedicated group within Citi’s risk management coordinates risk mitigation for credit risk in the banking book, including monitoring effectiveness and compliance with managing the exposures to be within risk limits on a regular basis. Actions for mitigating accrual credit risk in the banking book are generally limited to purchasing single-name credit default swaps from third parties, and direct asset sales to third parties.

Eligible credit default swap counterparties serving as guarantors of credit risks in the banking book include commercial banks, investment banks or insurance companies that are rated BBB- or better by S&P and Moody’s with established ISDA agreements and trading limits in place.

Additionally, Citi Private Bank typically obtains personal guarantees from individuals and/or other guarantors.

## Recognizing Credit Risk Mitigation

The table below presents the amount of wholesale exposures in the banking book that are covered by eligible guarantees, including eligible credit derivatives.

**Table 12: Wholesale Banking Book Exposures Covered by Eligible Guarantees or Credit Derivatives<sup>(1) (2)</sup>**

<i>In millions of dollars</i>	<b>March 31, 2016</b>
<b>Exposure Type:</b>	
Debt Securities	\$ 3,314
Loans	25,350
Unused Commitments and Guarantees	18,821
Other <sup>(3)</sup>	308
<b>Total Exposures</b>	<b>\$ 47,793</b>

(1) Wholesale banking book exposures are presented on an EAD basis.

(2) For Basel III regulatory capital calculations, the benefit of eligible guarantees and credit derivatives for wholesale banking book exposures is captured through PD substitution in the calculation of risk-weighted assets. For retail exposures, see footnote (4) to Table 7 above.

(3) Includes deposits with banks and other assets.

### Overview

The regulatory capital framework for securitization exposures is a risk sensitive framework that focuses on credit risks that have been transferred and repackaged. A securitized transaction is a transaction where all or a portion of the credit risk of one or more financial assets is transferred to one or more third parties. In addition, the related credit risk of the underlying transferred financial assets is tranching. That is, the credit risk is separated into at least two levels of seniority of claims with each class having a different priority on the cash flows from the underlying pool of exposures.

Securitizations can either be traditional securitizations or synthetic securitizations, depending on how the credit risk associated with the underlying assets is transferred. If the credit risk is transferred to third parties through the use of credit derivatives or guarantees, the securitization is considered synthetic. Otherwise, the securitization is considered traditional. Furthermore, any securitization which has more than one underlying exposure and in which one or more of the underlying exposures are securitization exposures is a re-securitization exposure. Asset-backed securities (ABS) and collateralized debt obligations (CDOs) and collateralized loan obligations (CLOs) in which any of the underlying exposures in these structures are themselves securitization exposures (such as an ABS, CDO or CLO tranche(s)) are examples of re-securitizations.

### Objectives

Citi plays a variety of roles in asset securitization transactions, including originator, sponsor and investor. More specifically, Citi acts as underwriter of asset-backed securities, depositor of the underlying assets into securitization vehicles, trustee to securitization vehicles and counterparty to securitization vehicles under derivative contracts. Citi serves as investor in securitization exposures through holdings of such exposures in the banking book. In addition, Citi serves as market maker in securitized products primarily through trading book activity by assisting clients in securitizing their financial assets. Citi may also provide administrative, asset management, underwriting, liquidity facilities and/or other services to the resulting securitization.

Citi provides financing through warehouse facilities for corporate loans for CLO issues; consumer assets for ABS issues; and whole mortgage loans for new residential mortgage backed securities (RMBS) and commercial mortgage backed securities (CMBS) issues. Citi also provides backstop liquidity facilities to asset-backed commercial paper conduits (ABCP Conduits) and Municipal Tender Option Bond programs. Citi, in its role as servicer, may create a securitization exposure(s) by providing servicer cash advances on residential mortgage loan securitizations.

Citi holds various securitization exposures in the banking book and the trading book. Citi invests in highly rated CMBS and RMBS in the investment portfolio. Citi also holds ABS owned by ABCP Conduits that are consolidated onto Citi's balance sheet. Citi holds securitization positions in the trading book through secondary market trading, including certain asset

backed commercial paper issued by third party bank conduits. In some cases, these positions may be re-securitizations.

Citi is involved in synthetic securitizations which includes purchasing credit protection through credit default swaps with the CDO/CLO, owning a portion of the capital structure of the CDO/CLO in the form of both unfunded derivative positions and funded notes, entering into interest-rate swap and total return swap transactions with the CDO/CLO, lending to the CDO/CLO, and making a market in the funded notes. Citi has retained significant portions of the "super-senior" positions issued by certain CDOs. In a synthetic securitization of assets held on the balance sheet, there is no change in the financial accounting treatment for the assets securitized.

Citi engages in re-securitization transactions in which debt securities are transferred to a variable interest entity (VIE) in exchange for new beneficial interests. Private-label re-securitizations are backed by either residential or commercial mortgages and are often structured on behalf of clients. Citi retains senior and subordinated beneficial interests in private-label re-securitization transactions. All re-securitizations of private label residential mortgage securities are subject to an enhanced approval process, including review by the New Product Approval Committee. Citi also re-securitizes U.S. government-agency guaranteed mortgage-backed securities.

Citi enters into these securitization arrangements for a variety of business purposes. In addition to providing a source of liquidity and less expensive funding, securitizing assets reduces credit exposure to the borrowers. Securitization arrangements offer investors access to specific cash flows and risks created through the securitization process. Securitization arrangements assist Citi and Citi's customers in monetizing their financial assets at more favorable rates than Citi or the customers could otherwise obtain. Citi uses securitization transactions to segregate the seller's credit risk from the securitized assets and the cash flows generated from those assets, which are to be used for the benefit of purchasers or lenders in the transaction. The segregation is achieved through the transfer of the securitized assets in a 'true sale' from the seller to a bankruptcy-remote special purpose entity (SPE), thereby providing legal isolation of the pool of assets from the default risk of the seller.

## Risks

Securitization transactions can involve a number of risks including portfolio risk, seller's risk, and liquidity risk. Portfolio risk arises from the performance of the underlying asset pool (i.e., payment rates, dilution, write-offs/losses). Seller risk represents the portion of unsecured credit exposure in a transaction with the seller. This exposure principally arises from recourse for losses, dilution or yield, lack of cash control or a first priority perfected security interest, potential declines in amount of securitized asset collateral between settlement periods or other non-standard features. Certain securitization structures give rise to contingent liquidity risk, that is, the likelihood that liquidity must be provided unexpectedly, potentially at a time when it is already under stress. Liquidity risk can occur in asset-backed commercial paper conduits or in cases where liquidity backstop arrangements have been provided.

Citi's risk management organization plays an active role in the review and oversight of securitization exposure identification. The nature of identifying a securitization is primarily an economic substance test where Citi seeks to identify evidence of tranching of credit risks in a variety of ways. Securitization identification is subject to a robust review process with controls and oversight. Securitizations can arise in various forms, including but not limited to the following:

- asset- and mortgage-backed securities;
- loans, lines of credit, guarantees and financial standby letters of credit with embedded credit tranching or facing securitization SPEs;
- credit derivatives referencing a securitization tranche (including nth-defaulting credit default swaps);
- credit enhancing interest only strips;
- assets sold with retained tranching recourse;
- single assets with tranching risk;
- OTC derivatives with securitization SPEs;
- implicit support to a securitization vehicle; and
- credit enhancing representation and warranties.

Citi manages its securitization and re-securitization positions within an established risk management policy framework whereby each business and Citi's risk management monitors changes in positions and changes in the portfolio structure of securitization and re-securitization positions. Credit risk management is responsible for determining the overall risk appetite for securitization transactions, approving extension of credit and ensuring data capture associated with those extensions of credit are accurate and are within Citi's risk appetite and limits, and ensuring that the transactions meet Citi's standards for Basel III compliance. Market risk management is responsible for ensuring that securitization transactions that are booked in the trading book are consistent with business mandate and risk management policies. Securitization and re-securitization positions are subject to an established limit monitoring framework to ensure diversification in Citi's portfolio.

Citi employs several risk mitigation approaches to manage risk appetite for its securitization and re-securitization positions. Under the U.S. Basel III rules, a bank must demonstrate that it has truly transferred credit risk of the underlying exposures to one or more third parties to be able to recognize for risk-based capital

purposes the use of a credit risk mitigant. The mitigant must meet the requirements of an eligible guarantee or eligible credit derivative. Failure to meet the operating requirements for a synthetic securitization prevents a bank from using the securitization framework and requires a bank to hold capital against the underlying exposures as if they have not been securitized.

## Risk-Based Capital Approaches

Citi utilizes the "hierarchy of approaches" to compute regulatory capital on securitization transactions as required by the U.S. Basel III rules. If a securitization exposure is not required to be deducted from regulatory capital, Citi first calculates the risk-based capital requirement using the Supervisory Formula Approach (SFA). The SFA calculation is a models-driven approach based on complex mathematical formulas that considers the attributes of both the securitization structure and the underlying exposures. SFA requires inputs such as PD and LGD on the underlying collateral. Citi utilizes approved SFA models for a variety of asset classes including credit card receivables, trade receivables, student loans, auto loans, commercial loans and other consumer asset classes within traditional and synthetic securitizations.

Where data is not sufficient to build an SFA model, Citi uses the Standardized Supervisory Formula Approach (SSFA). SSFA requires inputs including the following to calculate regulatory capital:

- Attachment Point: the point at which the collateral losses from underlying assets backing a tranche will have reached an amount that those losses will be applied to the tranche in the form of principal write-downs;
- Detachment Point: the point at which the tranche will be completely wiped out or written-down by losses from the collateral backing the tranche;
- Weighted Average Capital: the weighted average capital charge of the assets in the deal;
- Seriously Delinquent: the percentage of the collateral that are seriously delinquent in the deal (e.g., 90+ days past due, in foreclosure, in bankruptcy); and
- Calibration Parameter: a parameter that increases the riskiness of a tranche for re-securitizations.

A risk weight of 1,250% must be applied to a securitization exposure that does not qualify for the SFA and where Citi does not apply the SSFA, or which is not otherwise required to be deducted from regulatory capital.

## Securizations and VIEs

See the following references for certain information regarding securizations and VIEs:

### Consolidation Policy and Securitization Exposures

- See Note 20, “*Securizations and Variable Interest Entities*” in the Notes to Consolidated Financial Statements of Citi’s First Quarter 2016 Form 10-Q.

### Transfers of Financial Assets and Gain on Sale

- See Note 1, “*Summary of Significant Accounting Policies*” in the Notes to Consolidated Financial Statements of Citi’s 2015 Form 10-K.

### Valuation of Retained or Purchased Interests

- See Note 22, “*Fair Value Measurement*” in the Notes to Consolidated Financial Statements of Citi’s First Quarter 2016 Form 10-Q.

## Recognizing Liabilities to Provide Support to Securitizations

- See Note 24, “*Guarantees and Commitments*” in the Notes to Consolidated Financial Statements in Citi’s First Quarter 2016 Form 10-Q.
- See Note 25, “*Contingencies*” in the Notes to Consolidated Financial Statements in Citi’s First Quarter 2016 Form 10-Q.

The table below presents the total outstanding principal amount of assets securitized by Citi (excluding assets in consolidated securitization variable interest entities) for which Citi retains an exposure that is not subject to the market risk capital rules. Third-party assets held in Citi-sponsored vehicles are shown separately from securitized assets that were originated or purchased by Citi. This table also presents the total principal amount of outstanding assets intended to be securitized by Citi.

**Table 13: Outstanding Securitization Exposures by Underlying Exposure Type**

<i>In millions of dollars</i>	As of March 31, 2016			
	Originator		Sponsor	Assets Pending Securitization
	Traditional Securitizations	Synthetic Securitizations	Traditional Securitizations	
Commercial Real Estate Loans	\$ 7,270	\$ —	\$ —	\$ 914
Corporate Loans	—	11,712	—	479
Credit Card Receivables	116	—	—	—
Residential Mortgages	7,882	—	—	—
Other	12,124	—	4,039	—
<b>Total</b>	<b>\$ 27,392</b>	<b>\$ 11,712</b>	<b>\$ 4,039</b>	<b>\$ 1,393</b>

The total outstanding principal amount of commercial real estate loans securitized in traditional securitizations with Citi acting as originator decreased from \$12.2 billion as of December 31, 2015 to \$7.3 billion as of March 31, 2016. Similarly, the total outstanding principal amount of residential mortgages securitized in traditional securitizations with Citi acting as originator decreased from \$9.0 billion as of December 31, 2015 to \$7.9 billion as of March 31, 2016. Both decreases were primarily due to efforts to reduce CMBS and RMBS inventory held by the ICG during the first quarter of 2016.

The table below sets forth the total principal amount of assets securitized by Citi during the three months ended March 31, 2016, excluding assets in consolidated securitization variable interest entities. Third-party assets securitized in Citi-sponsored vehicles are shown separately from securitized assets that were originated or purchased by Citi. Additionally, securitizations for which Citi retains an exposure that is not subject to the market risk capital rules are shown separately from securitizations for which Citi did not retain an exposure. This table also presents any gains (losses) on sale recognized during the three months ended March 31, 2016 related to Citi's securitization activity.

**Table 14: Securitization Activity by Underlying Exposure Type**

For the Three Months Ended March 31, 2016								
In millions of dollars	Originator				Sponsor		Recognized Gain (Loss) on Sale	
	Traditional Securitizations		Synthetic Securitizations		Traditional Securitizations			
	Exposure Retained	Exposure Not Retained	Exposure Retained	Exposure Not Retained	Exposure Retained	Exposure Not Retained		
Commercial Real Estate Loans	\$ —	\$ 1,635	\$ —	\$ —	\$ —	\$ 2,098	\$ 9	
Corporate Loans	—	—	—	—	—	—	—	
Credit Card Receivables	—	—	—	—	—	—	—	
Residential Mortgages	—	—	—	—	—	—	—	
Other	306	156	—	—	25	—	(4)	
<b>Total</b>	<b>\$ 306</b>	<b>\$ 1,791</b>	<b>\$ —</b>	<b>\$ —</b>	<b>\$ 25</b>	<b>\$ 2,098</b>	<b>\$ 5</b>	

The table below presents the amount of securitized assets that are past due as of March 31, 2016, and the amount of impairment losses recognized by Citi during the three months ended March 31, 2016.

**Table 15: Impairment by Underlying Exposure Type**

<i>In millions of dollars</i>	As of March 31, 2016	For the Three Months Ended March 31, 2016
	Past Due Securitized Assets <sup>(1)</sup>	Impairment Losses Recognized by Citi <sup>(2)</sup>
Commercial Real Estate Loans	\$ 576	\$ —
Corporate Loans	110	—
Credit Card Receivables	1	—
Residential Mortgages	1,111	—
Other	1,497	—
<b>Total</b>	<b>\$ 3,295</b>	<b>\$ —</b>

(1) Represents the outstanding principal balance of securitized assets that are 90 days or more past due.

(2) Represents impairment losses recognized by Citi related to retained securitization exposures that are not subject to the market risk capital rules, and excludes changes in fair value recognized in earnings for retained securitization exposures that are classified as trading securities for U.S. GAAP purposes.

Tables 16 and 17 present Citi's banking book exposures subject to securitization treatment, presented on an EAD basis, under the U.S. Basel III rules.

**Table 16: Securitization and Re-securitization Exposures by Risk Weight Band<sup>(1)</sup>**

<i>In millions of dollars</i>	March 31, 2016							
	SFA Approach		SSFA Approach		1,250% Approach		Total	
	Exposure	RWA	Exposure	RWA	Exposure	RWA	Exposure	RWA
<b>Securitization Exposures</b>								
<b>Risk Weight Band</b>								
0% ≤ 20%	\$ 33,013	\$ 6,038	\$ 21,269	\$ 4,254	\$ —	\$ —	\$ 54,282	\$ 10,292
> 20% ≤ 50%	14,645	3,120	4,622	1,440	—	—	19,267	4,560
> 50% ≤ 100%	2,057	2,009	1,773	1,030	—	—	3,830	3,039
> 100% ≤ 200%	17	19	556	793	—	—	573	812
> 200% ≤ 650%	8	18	787	2,097	—	—	795	2,115
> 650% < 1,250%	—	—	130	1,426	—	—	130	1,426
1,250%	95	1,192	379	4,735	166	2,073	640	8,000
<b>Total Securitization Exposures</b>	<b>\$ 49,835</b>	<b>\$ 12,396</b>	<b>\$ 29,516</b>	<b>\$ 15,775</b>	<b>\$ 166</b>	<b>\$ 2,073</b>	<b>\$ 79,517</b>	<b>\$ 30,244</b>
<b>Re-securitization Exposures</b>								
<b>Risk Weight Band</b>								
0% ≤ 20%	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
> 20% ≤ 50%	—	—	—	—	—	—	—	—
> 50% ≤ 100%	2	2	—	—	—	—	2	2
> 100% ≤ 200%	—	—	14	21	—	—	14	21
> 200% ≤ 650%	—	—	34	123	—	—	34	123
> 650% < 1,250%	—	—	329	2,850	—	—	329	2,850
1,250%	—	—	351	4,387	19	235	370	4,622
<b>Total Re-securitization Exposures<sup>(2)</sup></b>	<b>\$ 2</b>	<b>\$ 2</b>	<b>\$ 728</b>	<b>\$ 7,381</b>	<b>\$ 19</b>	<b>\$ 235</b>	<b>\$ 749</b>	<b>\$ 7,618</b>
<b>Total</b>	<b>\$ 49,837</b>	<b>\$ 12,398</b>	<b>\$ 30,244</b>	<b>\$ 23,156</b>	<b>\$ 185</b>	<b>\$ 2,308</b>	<b>\$ 80,266</b>	<b>\$ 37,862</b>

(1) Securitization exposures that have been deducted from Tier 1 Capital are not included within RWA. For additional information, see “Securitization Exposures Deducted from Regulatory Capital” below.

(2) During the three months ended March 31, 2016, there were no re-securitization exposures to which credit risk mitigation had been applied.

**Table 17: Securitization Exposures by Collateral Type<sup>(1)</sup>**

<i>In millions of dollars</i>	March 31, 2016			
	Exposure			Total RWA
	On-Balance Sheet	Off-Balance Sheet	Total Exposure	
Auto Loans	\$ 14,285	\$ 6,226	\$ 20,511	\$ 4,997
Commercial Real Estate Loans	3,870	225	4,095	4,259
Corporate Loans	21,514	3,374	24,888	11,823
Credit Card Receivables	2,564	2,506	5,070	1,047
Residential Mortgages	9,206	301	9,507	6,954
Student Loans	5,888	125	6,013	3,635
Other	5,241	4,941	10,182	5,147
<b>Total</b>	<b>\$ 62,568</b>	<b>\$ 17,698</b>	<b>\$ 80,266</b>	<b>\$ 37,862</b>

(1) Securitization exposures that have been deducted from Tier 1 Capital are not included within RWA. For additional information, see “Securitization Exposures Deducted from Regulatory Capital” below.

**Securitization Exposures Deducted from Regulatory Capital**

Banking entities are required to be in compliance with the so-called “Volcker Rule” that prohibits conducting certain proprietary investment activities and limits their ownership of, and relationships with, covered funds, including certain securitization exposures. 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. As of March 31, 2016, Citi deducted \$625 million of permitted ownership interests in covered funds that were acquired after December 31, 2013 from Tier 1 Capital, of which \$242 million related to securitization exposures that are not subject to the market risk capital rules, which was comprised of \$199 million related to ownership interests in CDOs, \$32 million related to ownership interests in CLOs, \$6 million related to ownership interests in ABS, \$2 million related to CMBS, and \$3 million related to domestic non-agency RMBS.

**Re-securitization Exposures Covered by Guarantees**

As of March 31, 2016 no re-securitization exposures were covered by guarantees.



### Overview

Citi holds equity positions to generate capital gains for its private equity subsidiaries. It can also hold positions as a result of debt to equity conversions, or to maintain strategic relationships. The equity positions are carried at fair value with certain non-marketable equity securities carried at cost, accounted for under the equity method, or, for Citi's investments in qualified affordable housing partnerships, recorded at cost plus legally binding unconditional equity commitments and subsequently amortized in proportion to the amount of tax credits and other tax benefits received.

The disclosures below are consistent with the definition of equity Citi has adopted for U.S. GAAP financial reporting purposes. For further information, see Note 1, "*Summary of Significant Accounting Policies*" in the Notes to Consolidated Financial Statements of Citi's 2015 Form 10-K, and Note 13, "*Investments*" in the Notes to Consolidated Financial Statements of Citi's First Quarter 2016 Form 10-Q.

### Risk-Weighting Approaches

As required under the U.S. Basel III rules, Citi applies different approaches in calculating risk-weighted assets for equity exposures not subject to the market risk capital rules, depending upon whether or not the exposure is to an investment fund. Furthermore, three alternative approaches may be utilized in deriving risk-weighted assets for equity exposures to an investment fund, with the approach applied largely a function of the information available.

Under the Simple Risk Weight Approach the adjusted carrying value for each type of equity exposure is multiplied by a prescribed risk weight. The adjusted carrying value for an on-balance sheet equity exposure is the carrying value of the exposure. For an off-balance sheet commitment to acquire an equity exposure (an equity commitment) the effective notional amount of the exposure is multiplied by an applicable CCF based upon whether the commitment is conditional or unconditional, and for conditional equity commitments the original maturity thereof. The U.S. Basel III rules also permit Citi, subject to prior written approval from regulators, to calculate risk-weighted assets for equity exposures that are not equity exposures to investment funds by utilizing the Internal Models Approach. However, Citi does not currently utilize the Internal Models Approach for any of its equity exposures.

For equity exposures to investment funds, Citi applies the Full Look-Through Approach, the Simple Modified Look-Through Approach, or the Alternative Modified Look-Through Approach. In accordance with the Full Look-Through Approach, risk weights are applied on a proportional ownership share basis to each equity exposure held by the fund, as if Citi held the exposure directly. Under the Simple Modified Look-Through Approach, the highest risk weight applicable to any equity exposure the investment fund is permitted to hold under its prospectus, partnership agreement, or similar agreement is applied to the adjusted carrying value of Citi's equity exposure to the fund in deriving the amount of risk-weighted assets. With regard to the Alternative Modified Look-Through Approach, the

adjusted carrying value of an equity exposure to an investment fund is assigned on a pro-rata basis to the different risk weight categories based on the investment limits in the fund's prospectus, partnership agreement, or similar contract that defines the fund's permissible investments. Under this approach it is assumed that the fund invests to the maximum extent permitted under its investment limits in the exposure type with the highest applicable risk weight and continues to make investments in order of the exposure type with the next highest applicable risk weight, until the maximum total investment is reached. The assignment of the pro-rata investment limits risk weights for all exposure types within the fund will not exceed 100 percent.

The following table presents Citi's equity exposures not subject to the Basel III market risk capital rule, using the Simple Risk Weight, the Full Look-Through, the Simple Modified Look-Through, and the Alternative Modified Look-Through Approaches in deriving risk-weighted assets as of March 31, 2016.

**Table 18: Equity Exposures Not Subject to the Market Risk Capital Rules**

March 31, 2016					
<i>In millions of dollars, except percentages</i>	<b>Risk Weight Category</b>	<b>Carrying Value<sup>(1)</sup></b>	<b>Fair Value</b>	<b>Effective Risk Weight<sup>(2)</sup></b>	<b>RWA<sup>(3)</sup></b>
<b>Simple Risk Weight Approach:</b>					
Equity Exposures Subject to a 0% Risk Weight	0%	\$ 4,256	\$ 4,256	0 %	\$ —
Equity Exposures Subject to a 20% Risk Weight	20	967	967	20	193
Community Development Equity Exposures	100	2,801	2,801	100	3,040
Publicly Traded Equity Exposures <sup>(4)</sup>	300	173	185	111	193
Non-publicly Traded Equity Exposures <sup>(4)</sup>	400	10,670	10,809	100	10,673
Equity Exposures in Leveraged Investments Funds	600	97	98	600	625
<b>Total Simple Risk Weight Approach</b>		<b>\$ 18,964</b>	<b>\$ 19,116</b>	<b>77%</b>	<b>\$ 14,724</b>
<b>Equity Exposures to Investment Funds:</b>					
Full Look-Through Approach	N/A	\$ 9,190	\$ 9,300	21 %	\$ 1,964
Simple Modified Look-Through Approach	N/A	1,609	1,609	58	1,522
Alternative Modified Look-Through Approach	N/A	240	240	283	680
<b>Total Equity Exposures to Investment Funds</b>		<b>\$ 11,039</b>	<b>\$ 11,149</b>	<b>35%</b>	<b>\$ 4,166</b>
<b>Total Equity Exposures</b>		<b>\$ 30,003</b>	<b>\$ 30,265</b>	<b>60%</b>	<b>\$ 18,890</b>

(1) Total carrying value of approximately \$30.0 billion consists of approximately \$0.2 billion of publicly traded and approximately \$29.8 billion of non-publicly traded equity exposures. Total carrying value excludes approximately \$1.3 billion of unfunded equity commitments.

(2) Equity exposures are presented based on exposure type, which in some cases will yield a blended effective risk weight.

(3) Unfunded equity commitments are included in the derivation of risk-weighted assets.

(4) Equity exposures within the 300% and 400% risk weight categories were, with the exception of ineffective hedge pairs, risk-weighted at 100% due to the aggregate amount of such exposures not exceeding the threshold for higher risk weighting treatment.

### **Realized Gains (Losses)**

Total net realized gains arising from sales and liquidations of equity investments were \$30 million for the three months ended March 31, 2016.

### **Cumulative Unrealized Gains (Losses)**

Total net unrealized gains on available-for-sale equity investments recognized in *Accumulated other comprehensive income* were \$19 million as of March 31, 2016, of which \$11 million was included in Tier 1 Capital and \$3 million was included in Tier 2 Capital.

### **Latent Revaluation Gains (Losses)**

Total net unrealized gains on non-marketable equity investments, which are not recognized either in the balance sheet or through earnings, were \$262 million as of March 31, 2016, none of which was included in Tier 1 or Tier 2 Capital.

## MARKET RISK

### Overview

Market risk is the risk of loss on a position that could result from movements in market prices. Although present in both Citi's primary business segments, Citicorp and Citi Holdings, Citi's market risk arises principally from trading and market making activities by ICG's equity markets and fixed income markets businesses within *Markets and Securities Services*.

The market risk disclosures discussed in this section provide quantitative information regarding Citi's market risk capital components, as well as qualitative information, such as that related to Citi's risk management policies, practices and internal models. For additional information on Citi's market risk management and policies, see "*Managing Global Risk—Market Risk*" in Citi's 2015 Form 10-K.

### Basel III Covered Positions

As defined under the U.S. Basel III rules, covered positions include:

- (1) Trading assets or trading liabilities (whether on- or off-balance sheet), as reported for regulatory purposes, that meet the following conditions:
  - (a) The position is a "trading position" or hedges another covered position, other than trading positions that are hedges of Citi's banking book exposures. Within this context, a trading position means a position that is held for the purpose of short-term resale or with the intent of benefiting from actual or expected short-term price movements, or to lock in profits.

AND

- (b) The position is free of any restrictive covenants on its tradability, or the banking organization, such as Citi, is able to hedge the material risk elements of the position in a two-way market.

OR

- (2) A foreign exchange or commodity position (other than any structural foreign currency positions chosen to be excluded and for which prior supervisory approval has been received), regardless of whether the position is a trading asset or trading liability.

Among the various types of exposures not considered to be a covered position are: (1) intangible assets, including any servicing asset such as mortgage servicing rights; (2) any hedge of a trading position that is deemed to be outside the scope of Citi's hedging strategy; (3) any position that, in form or substance, acts as a liquidity facility that provides support to asset-backed commercial paper; (4) any position that Citi holds with the intent to securitize; or (5) any direct real estate holding.

Accordingly, the characterization of an asset or liability as a "trading asset" or "trading liability" under U.S. GAAP does not determine whether such assets and liabilities are trading positions for Basel III purposes. The scope of positions or exposures recognized as trading assets or trading liabilities for U.S. GAAP

purposes is generally broader than permissible trading positions under the U.S. Basel III rules. Positions or exposures excluded from market risk capital treatment are subject to the credit risk capital rules applicable to non-covered positions.

Citi has established policies and procedures for determining which of its U.S. GAAP trading assets, trading liabilities, and foreign exchange and commodity positions are covered positions under the U.S. Basel III rules, including the establishment of a firm-wide Basel III Boundary Governance Committee that meets quarterly and serves as a decision-making body on key trading book boundary strategies and reporting approaches. Specifically, the Basel III Boundary Governance Committee reviews the intent and ability to trade positions using a number of key metrics, including a review of the actual holding period of these positions.

### Valuation and Accounting Policies and Methodologies

ASC 820-10, *Fair Value Measurement*, defines fair value, establishes a consistent framework for measuring fair value and requires disclosures in Citi's consolidated financial statements 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. Material covered positions under the U.S. Basel III rules are carried at fair value on Citi's consolidated balance sheet.

### Determination of Fair Value

Citi generally uses quoted market prices, when available, to determine the fair value of trading securities, including material covered positions under the U.S. Basel III rules. In some cases where a market price is available, Citi nonetheless will make use of acceptable practical expedients (such as matrix pricing) to calculate fair value. Similarly, any exchange-traded derivatives entered into by Citi are generally measured at fair value using quoted market (i.e., exchange) prices.

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, option volatilities, etc. Citi 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.

For bonds and secondary market loans traded over the counter, including securitization and re-securitization positions, Citi 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 vendors.

OTC and cleared derivatives are valued using internal valuation techniques, as no quoted market prices exist for such instruments. The valuation techniques and inputs depend on the type of derivative and the nature of the underlying instrument. Citi generally determines the fair value of these instruments utilizing valuation techniques such as discounted cash flows and

internal models, including Black-Scholes and Monte Carlo simulation. The fair value of derivative contracts reflect cash Citi has paid or received (for example, option premiums paid and received).

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. Citi uses overnight indexed swap curves as fair value measurement inputs for the valuation of certain collateralized interest-rate related derivatives.

#### **Market Valuation Adjustments**

Liquidity adjustments are applied to ensure that the fair value reflects the liquidity, or illiquidity, of the market. The liquidity reserve may utilize the bid-offer spread for an instrument as one of the factors. Citi also applies market valuation adjustments to account for the size of the net open risk position on certain portfolios of financial instruments.

Counterparty credit-risk adjustments are applied to derivatives, such as over-the-counter uncollateralized derivatives, where the base valuation uses market parameters based on the relevant base interest rate curves. Not all counterparties have the same credit risk as that implied by the relevant base curve, so it is necessary to consider the market view of the credit risk of a counterparty in order to estimate the fair value of such an item.

#### **Valuation Process**

Individual business units are responsible for the fair value measurement of substantially all assets and liabilities held by Citi, including trading account assets and liabilities. Product Control within Citi Finance performs independent price verification procedures to evaluate those fair value measurements and has authority over the valuation of financial assets and liabilities.

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 under ASC 820-10. When a position involves one or more significant inputs that are not directly observable, additional price verification procedures are applied. These procedures may include reviewing relevant historical data, analyzing profit and loss, valuing each component of a structured trade individually, and benchmarking, among others.

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 Citi's Model Validation Group within Citi's independent risk management organization and reviewed by Citi 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. Valuation adjustments, if any, go through a similar independent review process as the valuation models. To ensure their continued applicability, models are independently reviewed annually. In addition, Citi's risk management organization approves and maintains a list of products permitted to be valued under each approved model for a given business.

For additional information on Citi's fair value accounting methodology and process, see Note 22, "*Fair Value*

*Measurement*," in the Notes to Consolidated Financial Statements in Citi's First Quarter 2016 Form 10-Q.

#### **Market Risk-Weighted Assets**

Under the U.S. Basel III rules, Citi's market risk-weighted assets (RWA) are measured as the sum of the risk-weighted assets attributable to the following:

- Regulatory Value-at-Risk (VaR)
- Regulatory Stressed Value-at-Risk (SVaR)
- Incremental Risk Charge (IRC)
- Comprehensive Risk Measure (CRM)
- Standard Specific Risk Charge (SSRC)
- Securitization Charges
- De minimis Exposures Charge (covered positions not included in the VaR model)

Citi's Basel III market risk capital requirements, and related risk-weighted assets, reflect the application of Citi's internal models as well as prescribed standardized approaches with respect to covered positions, as appropriate. Citi's internal models are designed to capture all material risk factors. Any material risk factors that are identified through model validation (see "*Model Review and Validation*" below), are included as a RNIM "add-on" in accordance with the U.S. Basel III rules.

Citi's market risk capital requirements and resulting risk-weighted assets will vary from reporting period to reporting period and may be materially impacted by changes in the treatment of certain positions or portfolios, due to updated regulatory guidance, regulatory reviews or further refinements and enhancements to Citi's internal models. Where material, such changes are disclosed in Citi's Basel III Advanced Approaches Disclosures and/or in Citi's Form 10-K or 10-Q, as appropriate, in the reporting period during which the changes were implemented.

#### **Regulatory Value-at-Risk (VaR)**

Regulatory VaR is the estimate of the potential decline in the value of a position or a portfolio under normal market conditions. Citi uses a three year look back period for correlations between risk factors and the greater of three years or, in most instances, effectively 30-day volatility. These market risk factors include material first and second-order risk sensitivities of various asset classes/ risk types (such as interest rate, credit spread, foreign exchange, equity, and commodity risks).

Citi uses a single, independently approved Monte Carlo simulation VaR model for both Regulatory VaR and Risk Management VaR. Such model incorporates the volatilities and correlations of 400,000 market factors, making use of 250,000 time series, with risk sensitivities updated daily and model parameters updated daily in some instances, and weekly for all others. The portfolio composition of Citi's Regulatory VaR is, however, materially different from Citi's Risk Management VaR. Certain positions that are included in Citi's Risk Management VaR are not covered positions and therefore are not eligible for market risk capital treatment under the U.S. Basel III rules. While Citi's confidence interval is 99% for both Risk Management VaR and Regulatory VaR, Citi uses a 1-day time horizon for Risk Management VaR and a 10-day time horizon for Regulatory VaR. For additional information on Citi's Risk

Management VaR model, see “*Managing Global Risk—Market Risk—Market Risk of Trading Portfolios—Value at Risk*” in Citi’s 2015 Form 10-K.

For covered positions that are not captured in Regulatory VaR, Citi calculates market risk-weighted assets based on a de minimis risk add-on in accordance with the Basel III requirements, or in accordance with an alternative methodology that has been approved by the FRB and OCC.

The following table sets forth Citi’s Regulatory VaR and related capital requirement, as well as risk-weighted assets as of March 31, 2016.

**Table 19: Regulatory VaR Risk-Weighted Assets**

<i>In millions of dollars</i>	<b>As of March 31, 2016</b>		
<b>Regulatory VaR<sup>(1)</sup></b>	<b>Regulatory VaR-Based Capital<sup>(2)</sup></b>	<b>Regulatory VaR RWA<sup>(3)</sup></b>	
\$ 147	\$ 441	\$ 10,371	

- (1) 60-day average, for which each daily VaR is based on a 10-day time horizon.
- (2) Regulatory VaR times a capital multiplier of 3.
- (3) Regulatory VaR-Based Capital times 12.5 plus \$4,856 million add-on for RNIM.

- Immaterial differences in calculations above may exist due to rounding.

Presented in the following table are Citi’s period end and high, low and mean Regulatory VaR, as well as associated primary risk factors, as of and for the three months ended March 31, 2016.

**Table 19.1: 10-Day Regulatory VaR by Risk Factors**

<i>In millions of dollars</i>	<b>As of March 31, 2016</b>	<b>Three Months Ended March 31, 2016</b>		
<b>Risk Factors</b>		<b>High</b>	<b>Low</b>	<b>Mean<sup>(1)</sup></b>
Interest Rate	\$ 134	\$ 179	\$ 88	\$ 123
Credit Spread	174	198	166	187
Equity Price	7	49	6	19
Foreign Exchange	68	89	56	72
Commodity Price	48	54	34	43
Diversification Benefit <sup>(2)</sup>	(350)	NM	NM	(297)
<b>Total VaR</b>	<b>\$ 81</b>	<b>\$ 206</b>	<b>\$ 68</b>	<b>\$ 147</b>

- NM: Not meaningful

- (1) Mean is based on a 60-day average used for VaR-based RWA.
- (2) Diversification benefit is the result of correlation between risk factors and, due to this benefit, the total VaR on a given day will be lower than the sum of the VaRs relating to each individual risk factor. No diversification benefit can be inferred for the high and low VaRs related to each of the respective risk factors as they may come from different close of business dates.

The following table sets forth the period end and high, low and mean Regulatory VaR for each of Citi’s material portfolios of covered positions, as of and for the three months ended March 31, 2016.

**Table 19.2: 10-Day Regulatory VaR by Material Portfolios**

<i>In millions of dollars</i>	<b>As of March 31, 2016</b>	<b>Three Months Ended March 31, 2016</b>		
<b>Material Portfolios</b>		<b>High</b>	<b>Low</b>	<b>Mean<sup>(1)</sup></b>
ICG	\$ 84	\$ 199	\$ 66	\$ 146
Other <sup>(2)</sup>	16	21	5	20
Diversification Benefit <sup>(3)</sup>	(19)	NM	NM	(19)
<b>Total VaR</b>	<b>\$ 81</b>	<b>\$ 206</b>	<b>\$ 68</b>	<b>\$ 147</b>

- NM: Not meaningful

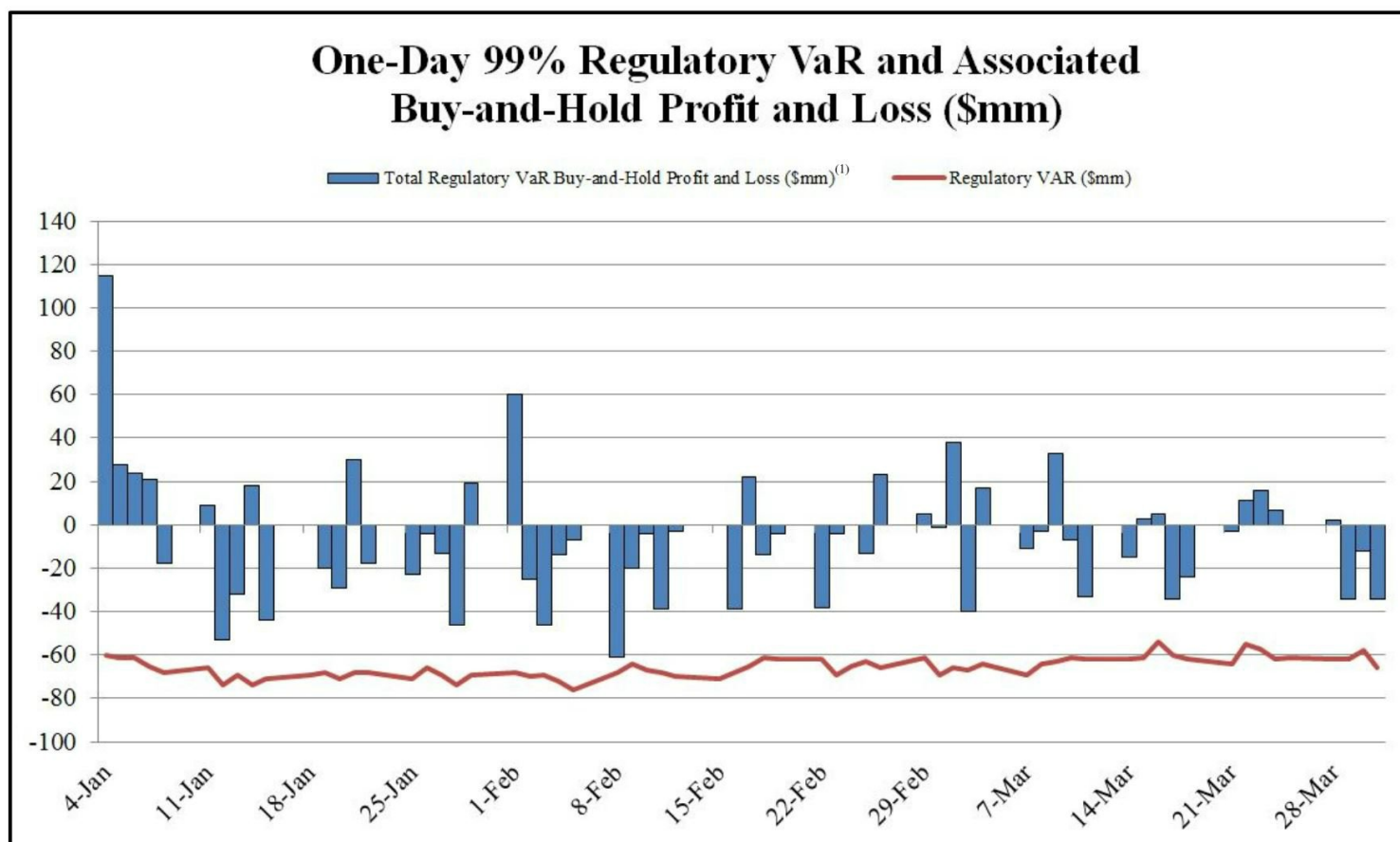
- (1) 60-day average, for which each daily VaR is based on a 10-day time horizon.
- (2) Primarily related to Corporate Treasury and Citi Holdings covered positions.
- (3) Diversification benefit is the result of correlation between portfolios and, due to this benefit, the total VaR on a given day will be lower than the sum of the VaRs relating to each individual portfolio. No diversification benefit can be inferred for the high and low of respective material portfolios as they may come from different close of business dates.

### **Regulatory VaR Backtesting**

In accordance with the U.S. Basel III rules, Citi is required to perform backtesting to evaluate the effectiveness of its VaR model and as a basis to determine its Regulatory VaR and Regulatory SVaR-based capital multiplier. For additional information on Regulatory SVaR, see “*Regulatory Stressed Value-at-Risk (SVaR)*” below. Regulatory VaR backtesting is the process in which the daily 1-day VaR, at a 99% confidence interval, is compared to the buy-and-hold profit and loss (e.g., the profit and loss impact if the portfolio is held constant at the end of the day and re-priced the following day). Citi’s Regulatory VaR and Regulatory SVaR capital multipliers, which can range between 3 and 4, are based upon the number of backtesting exceptions that occur on a rolling 12-month period, as well as the discretion of the FRB and OCC. 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 backtesting exceptions.

The graph below presents the daily buy-and-hold profit and loss associated with all of Citi’s covered positions compared to Citi’s 1-day Regulatory VaR from January 1, 2016 through March 31, 2016. As the graph indicates, potential losses observed on a single day did not exceed Citi’s 1-day 99% Regulatory VaR during the three month period ending March 31, 2016.

## Regulatory VaR Backtesting Results



- (1) 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 revenue excludes realized trading revenue, net interest, fees and commissions, intra-day trading profit and loss, and changes in reserves.

## Regulatory Stressed Value-at-Risk (SVaR)

Citi's Regulatory SVaR model methodology is the same as the Regulatory VaR methodology (99% confidence level and 10-day holding period), with the exception of the look back period. Specifically, the Regulatory SVaR uses model parameters such as volatilities and correlations calibrated to historical data from a continuous 12-month period that reflects significant financial stress appropriate to current portfolios. The Regulatory SVaR look back period is periodically calibrated using internal Citi methodologies and policies to determine the most severe stress period for Citi's current covered positions.

The following table sets forth Citi's Regulatory SVaR and related capital requirement, as well as risk-weighted assets as of March 31, 2016.

**Table 20: Regulatory SVaR Risk-Weighted Assets**

<i>In millions of dollars</i>	<b>As of March 31, 2016</b>		
<b>Regulatory SVaR<sup>(1)</sup></b>	<b>Regulatory SVaR-Based Capital<sup>(2)</sup></b>	<b>Regulatory SVaR RWA<sup>(3)</sup></b>	
\$ 513	\$ 1,538	\$ 28,193	

- (1) 60-day average, for which each daily VaR is based on a 10-day time horizon.
- (2) Regulatory SVaR times a capital multiplier of 3.
- (3) Regulatory SVaR-Based Capital times 12.5 plus \$8,964 million add-on for RNIM.

- Immaterial differences in calculations above may exist due to rounding.

The following table presents period end and high, low and mean Regulatory SVaR, for each of Citi's material portfolios of covered positions, as of and for the three months ended March 31, 2016.

**Table 20.1: 10-Day Regulatory SVaR by Material Portfolio**

<i>In millions of dollars</i>	<b>As of March 31, 2016</b>	<b>Three Months Ended March 31, 2016</b>		
<b>Material Portfolio</b>		<b>High</b>	<b>Low</b>	<b>Mean<sup>(1)</sup></b>
ICG	\$ 288	\$ 741	\$ 288	\$ 514
Other <sup>(2)</sup>	17	58	8	24
Diversification Benefit <sup>(3)</sup>	(27)	NM	NM	(25)
<b>Total SVaR</b>	<b>\$ 278</b>	<b>\$ 724</b>	<b>\$ 278</b>	<b>\$ 513</b>

- NM: Not meaningful

- (1) 60-day average, for which each daily VaR is based on a 10-day time horizon.
- (2) Primarily related to Corporate Treasury and Citi Holdings covered positions.
- (3) Diversification benefit is the result of correlation between portfolios and, due to this benefit, the total SVaR on a given day will be lower than the sum of the SVaRs relating to each individual portfolio. No diversification benefit can be inferred for the high and low of respective material portfolios as they may come from different close of business dates.

## Incremental Risk Charge (IRC)

IRC represents a charge to cover the default and credit migration risks of non-securitized credit products. IRC is measured over a 1-year time horizon at a 99.9% confidence level under the assumption of constant positions. A constant position assumption means that Citi maintains the same set of positions throughout the 1-year time horizon (regardless of the maturity date of the positions) in order to model profit and loss distributions. Liquidity horizons establish the effective holding period of the assets and are defined as the time that would be required to reduce exposure, or hedge all material risks, in a stressed market environment.

Citi's IRC model is designed to capture market and issuer-specific concentrations, credit quality and liquidity horizons and recognizes the impact of correlations between default and credit migration events among issuers.

Set forth in the following table is Citi's IRC and IRC risk-weighted assets as of March 31, 2016.

**Table 21: IRC Risk-Weighted Assets**

<i>In millions of dollars</i>	<b>As of March 31, 2016</b>	
<b>IRC<sup>(1)</sup></b>	<b>IRC RWA<sup>(2)(3)</sup></b>	
\$ 85	\$ 1,266	

- (1) IRC is calculated once per week.
- (2) IRC-based RWA is calculated using the greater of the mean and period end IRC charge (see table 21.1 below).
- (3) IRC RWA is the IRC times 12.5 plus \$198 million add-on for RNIM.

- Immaterial differences in calculation above may exist due to rounding.

Presented in the following table is the period end and high, low and mean IRC for each of Citi's material portfolios of covered positions as of and for the three months ended March 31, 2016.

**Table 21.1: IRC by Material Portfolio**

<i>In millions of dollars</i>	<b>As of March 31, 2016</b>	<b>Three Months Ended March 31, 2016</b>		
<b>Material Portfolio</b>		<b>High</b>	<b>Low</b>	<b>Mean</b>
ICG	\$ 84	\$ 173	\$ 71	\$ 88
Other <sup>(1)</sup>	18	19	10	17
Diversification Benefit <sup>(2)</sup>	(18)	NM	NM	(20)
<b>Total IRC</b>	<b>\$ 84</b>	<b>\$ 157</b>	<b>\$ 70</b>	<b>\$ 85</b>

- NM: Not meaningful

- (1) Primarily related to Citi Holdings covered positions.
- (2) Diversification benefit is the result of correlation between portfolios and, due to this benefit, the total IRC on a given day will be lower than the sum of the IRCs relating to each individual portfolio. No diversification benefit can be inferred for the high and low of respective material portfolios as they may come from different close of business dates.



## Comprehensive Risk Measure (CRM)

CRM is primarily comprised of correlation trading securitization positions within ICG's Markets and Securities Services.

Credit correlation products refer to portfolio-based tranche products and their hedges. The primary inputs to the valuation model used to price and risk manage these tranche products are credit default swap spreads and correlations between the individual credits within the portfolios. Correlation trading positions include both index and bespoke tranches, where index tranches mainly reference U.S. and European credit indices.

The calculation of the CRM under the U.S. Basel III rules has two components: (i) a model-based measure and (ii) a capital surcharge which is calculated as 8% of the greater of: (1) the sum of Citi's specific risk add-ons for each net long correlation trading position, or (2) the sum of Citi's specific risk add-ons for each net short correlation trading position (both of which are calculated after permitted matching and offsetting under the U.S. Basel III rules).

The model-based measure of the CRM is an extension of the IRC model discussed above. Citi's CRM price risk model is based on a full revaluation of the portfolio inclusive of all material risk factors. Citi's CRM model uses a Monte Carlo simulation (like the IRC model); however, the CRM model includes additional risk factors that are only relevant for Citi's correlation trading portfolio.

Citi's CRM model is intended to capture all material price risk including, but not limited to, the risks associated with the contractual structure of cash flows of the position, the issuer, and the underlying exposures. Through the use of these market risk factors the model simulates default risk and credit migration risk over a 1-year time horizon with a 99.9% confidence interval, under the assumption of constant positions.

The following tables present Citi's CRM risk-weighted assets and market risk factors as of March 31, 2016, as well as the period end, high, low and mean CRM Charge, as of and for the three months ended March 31, 2016.

**Table 22: CRM Risk-Weighted Assets**

<i>In millions of dollars</i>		<b>As of March 31, 2016</b>	
<b>CRM Charge<sup>(1)</sup></b>	<b>CRM RWA<sup>(2)</sup></b>	<b>8% CRM Surcharge<sup>(3)</sup></b>	<b>Total CRM RWA<sup>(4)</sup></b>
\$ 375	\$ 4,687	\$ 4,746	\$ 9,510

(1) CRM Charge is calculated once per week.

(2) CRM-based RWA is calculated using the greater of the mean and period end CRM Charge (see Table 22.1 below).

(3) A CRM floor is based on the fair value of net long positions (inclusive of netting).

(4) Total CRM RWA = CRM Charge times 12.5 plus the 8% surcharge plus \$77 million add-on for RNIM.

• Immaterial differences in calculations above may exist due to rounding.

**Table 22.1: CRM Charge**

<i>In millions of dollars</i>		<b>Three Months Ended</b>		
<b>As of</b>		<b>March 31, 2016</b>		
<b>CRM Charge</b>	<b>High</b>	<b>Low</b>	<b>Mean</b>	
\$ 375	\$ 379	\$ 297	\$ 333	

**Table 22.2: CRM Risk Factors**

<i>In millions of dollars</i>	<b>As of</b>
	<b>March 31, 2016</b>
Default Risk	\$ 296
Recovery Rate Risk	44
Credit Spread Risk <sup>(1)</sup>	30
Cross Gamma Risk	(5)
Correlation Risk	10
<b>Total CRM<sup>(2)</sup></b>	<b>\$ 375</b>

(1) Credit spread risk includes credit migration risk.

(2) CRM is inclusive of diversification benefits across risk factors and are additive.

The following table presents the net market value of all correlation trading securitization positions included in the CRM model, inclusive of all hedges, as of March 31, 2016. Correlation trading securitization positions that are not included in the CRM model are included in Table 23 "Covered Trading Securitization and Re-Securitization Positions (Non-CRM Modeled)" below.

**Table 22.3: Correlation Trading Securitization Positions (Included in CRM Model)**

<i>In millions of dollars</i>	<b>As of</b>
	<b>March 31, 2016</b>
Net Long Market Value	\$ 54,812
Net Short Market Value	(48,263)
<b>Total Net Market Value</b>	<b>\$ 6,549</b>

## Standard Specific Risk Charge (SSRC)

Specific risk is the risk of loss from changes in the market value of a position that could result from factors other than broad market movements and includes event risk, default risk and idiosyncratic risk.

Standard specific risk charges include any debt or equity position which has not received a modeled-specific risk charge (i.e., Regulatory VaR, CRM, or IRC) or a non-modeled securitization charge. Based on the U.S. Basel III rules, standard specific risk charges are derived by applying a percentage of the market value, based on product type, time to maturity, and Citi's internal credit rating. All modeled specific risk charges are discussed in the relevant sections of these disclosures.

## Securitization and Re-securitization Positions

For a description of Citi's involvement in securitization and re-securitization transactions, see “*Securitizations*” above.

The following table sets forth the net market value of Citi's non-modeled trading book securitization and re-securitization positions (i.e., excluding modeled credit correlation trading securitizations), by product type, as of March 31, 2016.

**Table 23: Covered Trading Securitization and Re-securitization Positions (Non-CRM Modeled)**

<i>In millions of dollars</i>		<b>As of March 31, 2016</b>		
<b>Exposure Type</b>	<b>On-Balance Sheet<sup>(1)</sup></b>	<b>Off-Balance Sheet<sup>(2)</sup></b>	<b>Total</b>	
CMBS	\$ 120	\$ 920	\$ 1,040	
RMBS	470	200	670	
CDOs/CLOs	400	40	440	
Other ABS	110	—	110	
<b>Total Market Value</b>	<b>\$ 1,100</b>	<b>\$ 1,160</b>	<b>\$ 2,260</b>	

(1) The net market value of cash securitization positions that received non-modeled securitization charges.

(2) The net market value of derivative positions that received non-modeled securitization charges.

## De minimis Exposures Charge

As previously noted, a de minimis exposures charge is applied to covered positions that are not captured in Citi's VaR model. The sum of the absolute value of these positions is multiplied by 12.5 to arrive at the applicable RWA under the U.S. Basel III rules.

## Market Risk Management

### Overview

Citi manages the market risk of covered positions in its trading and non-trading portfolios under established standards, policies, and governance frameworks that were created or enhanced to ensure that Basel III market risk capital charges are only applied to covered positions and that non-covered trading book positions receive the appropriate credit risk capital charges. Citi's policies have been reviewed by the FRB and OCC. For additional information regarding Citi's market risk management generally, see “*Managing Global Risk—Market Risk—Overview*” in Citi's 2015 Form 10-K.

The market risk of Citi's trading portfolio of covered positions encompasses, among other things, price risk losses. Price risk losses arise from fluctuations in the market value of covered positions due to changes in interest rates, credit spreads, foreign exchange rates, equity and commodity prices, as well as changes in the implied volatility for option products referencing these markets. Citi's non-trading portfolio of covered positions also experiences fluctuations in market value resulting from changes in foreign exchange and commodity prices.

Market risk is calculated in accordance with established standards to ensure consistency across Citi's businesses and enable market risk sensitivities to be aggregated. The measurement used for covered trading positions and non-covered trading positions include:

- VaR
- Stress Testing
- Factor Sensitivities
- Internal Model Review and Validation

Citi requires that each business segment (Citicorp and Citi Holdings) establish, with approval from Citi's market risk management, a market risk limit framework for identified risk factors that clearly defines approved risk profiles and is within the parameters of Citi's overall risk tolerance and internal capital adequacy standards. These limits are monitored by Citi's independent market risk management organization, Citi's country and business Asset and Liability Committees and Citigroup's Asset and Liability Committee. Included in this limit framework are additional controls which detail trading mandates, permitted product lists, and a new product approval process for complex products. Ultimately, Citi's businesses are responsible for the market risks taken and for remaining within their defined limits, as well as ensuring that covered positions are managed in accordance with Citi's internal policies.

Citi's independent market risk management and Product Control within Finance periodically review covered positions to confirm both the realization of intent and ability to trade. Positions failing to meet the criteria of intent and ability to trade are reclassified as non-trading book positions and will be subject to the credit risk capital rules.

### Securitization and Re-securitization Positions

Citi manages its securitization and re-securitization positions within an established risk management policy framework whereby each business and Citi's market risk management work collaboratively to monitor the covered trading book securitization positions, changes in positions, and changes in the portfolio structure. This includes, but is not limited to, the review of approved risk limits versus daily positions using risk measures such as market values, risk factor sensitivities and stress loss scenarios. Securitization due diligence analysis is completed in accordance with the requirements of the U.S. Basel III rules, including pre-trade analysis and supporting documentation within three days of the trade date. The analysis demonstrates a comprehensive understanding of the features of a securitization that would materially affect the performance of the position. On a quarterly basis, follow-up reviews are performed to evaluate and update the securitization risk characteristics as appropriate.

Citi manages the risk appetite for all covered securitization and re-securitization positions through a limit structure which is approved annually by market risk management. These limits measure market value of positions, risk factor sensitivities, VaR and SVaR on a daily basis. In addition, regulatory risk capital and risk-weighted assets for specific risk measures are calculated monthly and are subject to a defined set of controls and governance within market risk, regulatory risk and finance management. This includes, but is not limited to, a review of the exposure classification and application of treatment type hierarchy which is used to verify compliance for securitization transactions under the U.S. Basel III rules.

Clarifications to interpretive questions are issued through a formal capital interpretive forum and are reported to senior management. Citi's risk management framework includes a

weekly scenario analysis in which all underlying risk factors are stressed to determine portfolio sensitivity under stressed conditions.

Citi employs several risk mitigation approaches to manage risk appetite for its securitization and re-securitization positions. Counterparty credit risk positions are approved through credit risk management policies and procedures. Securitization and re-securitization positions are subject to product limits to ensure diversification in Citi's portfolio. These limits include mezzanine re-securitization position limits.

Citi also uses a variety of hedging strategies for its covered positions, including corporate index hedges, to mitigate systemic price and spread risks. Business trading desks make hedging decisions based on current market conditions in accordance with hedging strategies residing under Citi's market risk management policy framework. Citi's material hedging decisions are made in consultation with Citi's risk management organization and the Citigroup Executive Committee, as appropriate. Any hedging proposals outside the scope of previously approved products would require approval by Citi's New Product Approval Committee resident within *ICG*.

#### ***Model Review and Validation***

Citi's market risk models are subject to ongoing independent review and annual validation by Citi's Model Validation Group and the Model Validation Review Committee (composed of senior quantitative risk management officers) within Citi's risk management organization, who provide senior independent oversight of model validation and assessment processes.

Generally, Citi's model review and model validation process involves reviewing the model framework, major assumptions and implementation of algorithms. In addition, as part of the model validation process, product specific backtesting on hypothetical portfolios is periodically completed and reviewed with the FRB and OCC. Furthermore, Citi performs backtesting against the actual change in market value of transactions on a quarterly basis at multiple levels of the organization (trading desk, *ICG* and company-wide), and shares the results with the FRB and OCC.

In the event of significant model changes, Citi also undertakes parallel model runs prior to implementation. In addition, the FRB and OCC periodically review and approve significant model and assumption changes.

#### ***Stress Testing***

Citi performs stress testing on a regular basis to estimate the impact of extreme market movements. It is performed on individual positions, trading portfolios, as well as in aggregate inclusive of multiple trading portfolios. Citi's independent market risk management organization, after consultations with the businesses, develops both systemic and specific stress scenarios, reviews the output of periodic stress testing exercises, and uses the information to make judgments on the ongoing appropriateness of exposure levels and limits. Citi uses two complementary approaches to market risk stress testing across all major risk factors (i.e., equity, foreign exchange, commodity, interest rate and credit spreads): top-down systemic stresses and bottom-up business specific stresses. Systemic stresses are designed to quantify the potential impact of extreme market movements on a firm-wide basis, and are constructed using both historical periods of market stress and projections of adverse economic scenarios. Business specific stresses are designed to probe the risks of particular portfolios and market segments, especially those risks that are not fully captured in VaR and systemic stresses.

## OPERATIONAL RISK

---

### Overview

Operational risk is the risk of loss resulting from inadequate or failed internal processes, systems or human factors, or from external events, and includes reputation and franchise risk associated with business practices or market conduct in which Citi is involved.

Operational risk is inherent in Citigroup's global business activities, as well as the internal processes that support those business activities, and can result in losses arising from events related to the following, among others:

- fraud, theft and unauthorized activities;
- employment practices and workplace environment;
- clients, products and business practices;
- physical assets and infrastructure; and
- execution, delivery and process management.

### Operational Risk Measurement and Stress Testing

Under the U.S. Basel III rules, Citi is required to apply the Advanced Measurement Approach (AMA) in deriving its operational risk capital.

Pursuant to the AMA, Citi employs units of measure which are defined by lines of business and event types (e.g., Trading and Sales—internal fraud, and Retail Banking—clients, products and business practices). Separately, loss severity and frequency are modeled independently. The loss severity is based on Citi's historical internal operational risk loss data, as well as industry loss data. Citi employs an industry event selection process, involving risk managers in the business and operational risk management to identify industry losses that are relevant to Citi based on line of business and operational risk exposure by event type. The mean frequency of losses is estimated from Citi's internal experience. The modeled losses across the units of measure are aggregated considering some correlation in losses across business and event types. The results are subsequently modified each quarter by applying a "qualitative adjustment factor" to reflect the current business environment and internal control factors. Citi uses insurance for the purposes of partially mitigating operational risk; however, such insurance does not have a material impact on Citi's operational risk capital.

Further, scenario analysis is used as a management tool to provide a forward-looking view of specified, identified operational risks. Scenario analysis is conducted by major global business as a systematic process of obtaining opinions from business managers and risk management experts to derive reasoned assessments of the likelihood and loss impact of plausible, high-severity operational risk losses. Scenario analysis results, however, are not used as a direct input into the AMA calculation.

For additional information on operational risk, including Citi's operational risk management, measurement and stress testing, see "*Managing Global Risk—Operational Risk*" in Citi's 2015 Form 10-K.

## INTEREST RATE RISK: NON-TRADING ACTIVITIES

---

For information on Citi's interest rate risk related to non-trading activities, see "*Managing Global Risk—Market Risk—Market Risk of Non-Trading Portfolios*" in Citi's First Quarter 2016 Form 10-Q.

## SUPPLEMENTARY LEVERAGE RATIO

### Summary Comparison of Accounting Assets and Total Leverage Exposure

The following table presents a reconciliation of Citigroup's total consolidated U.S. GAAP assets as reported in published financial statements to Total Leverage Exposure.

**Table 24: Summary Comparison of Accounting Assets and Total Leverage Exposure**

<i>In millions of dollars</i>		<b>March 31, 2016</b>
1	Total consolidated assets as reported in published financial statements <sup>(a)</sup>	\$ 1,777,571
2	Adjustment for investments in banking, financial, insurance or commercial entities that are consolidated for accounting purposes but outside the scope of regulatory consolidation	—
3	Adjustment for fiduciary assets recognized on balance sheet but excluded from total leverage exposure	—
4	Adjustment for derivative exposures	280,690
5	Adjustment for repo-style transactions	26,381
6	Adjustment for off-balance sheet exposures (that is, conversion to credit equivalent amounts of off-balance sheet exposures)	273,443
7	Other adjustments <sup>(b)</sup>	(52,631)
8	<b>Total leverage exposure</b>	<b>\$ 2,305,454</b>

(a) Represents the daily average of on-balance sheet assets for the three months ended March 31, 2016. Citi's total consolidated assets as of March 31, 2016 were \$1,800,967 million.

(b) Represents amounts deducted from Tier 1 Capital.

### Supplementary Leverage Ratio

The following table sets forth Citi's Supplementary Leverage ratio and related components, as based on the U.S. Basel III rules, for the three months ended March 31, 2016.

**Table 25: Supplementary Leverage Ratio and Related Components***In millions of dollars, except ratio***March 31, 2016**

<b>On-balance sheet exposures</b>	
1 On-balance sheet assets (excluding on-balance sheet assets for repo-style transactions and derivative exposures, but including cash collateral received in derivative transactions)	\$ 1,482,084
2 LESS: Amounts deducted from tier 1 capital	(52,631)
3 Total on-balance sheet exposures (excluding on-balance sheet assets for repo-style transactions and derivative exposures, but including cash collateral received in derivative transactions) (sum of lines 1 and 2)	1,429,453
<b>Derivative exposures</b>	
4 Replacement cost for derivative exposures (that is, net of cash variation margin)	\$ 70,362
5 Add-on amounts for potential future exposure (PFE) for derivative exposures	203,694
6 Gross-up for cash collateral posted if deducted from the on-balance sheet assets, except for cash variation margin	2,533
7 LESS: Deductions of receivable assets for cash variation margin posted in derivative transactions, if included in on-balance sheet assets	—
8 LESS: Exempted CCP leg of client-cleared transactions	—
9 Effective notional principal amount of sold credit protection	969,447
10 LESS: Effective notional principal amount offsets and PFE adjustments for sold credit protection	(898,474)
11 Total derivative exposures (sum of lines 4 to 10)	347,562
<b>Repo-style transactions</b>	
12 On-balance sheet assets for repo-style transactions, except include the gross value of receivables for reverse repurchase transactions. Exclude from this item the value of securities received in a security-for-security repo-style transaction where the securities lender has not sold or re-hypothecated the securities received. Include in this item the value of securities that qualified for sales treatment that must be reversed.	\$ 285,347
13 LESS: Reduction of the gross value of receivables in reverse repurchase transactions by cash payables in repurchase transactions under netting agreements	(56,732)
14 Counterparty credit risk for all repo-style transactions	26,381
15 Exposure for repo-style transactions where a banking organization acts as an agent	—
16 Total exposures for repo-style transactions (sum of lines 12 to 15)	254,996
<b>Other off-balance sheet exposures</b>	
17 Off-balance sheet exposures at gross notional amounts	\$ 989,454
18 LESS: Adjustments for conversion to credit equivalent amounts	(716,011)
19 Off-balance sheet exposures (sum of lines 17 and 18)	273,443
<b>Capital and total leverage exposure</b>	
20 Tier 1 capital	\$ 178,091
21 Total leverage exposure (sum of lines 3, 11, 16 and 19)	\$ 2,305,454
<b>Supplementary leverage ratio</b>	
22 Supplementary leverage ratio	7.72%

**Advanced Approaches banking organization** is, in general, a U.S. banking organization with consolidated total assets of at least \$250 billion or consolidated total on-balance sheet foreign exposures of at least \$10 billion.

**Banking book** refers to exposures not included in the trading book.

**Black-Scholes** is a mathematical methodology for valuing derivatives of financial securities such as equity or bond options that takes into account whether an option is in or out of the money, the volatility of the underlying exposure, the time to expiration of the option, whether the option is a put or a call and the current rate of return on a risk-free asset such as a Treasury bill.

**Capital Conservation Buffer**, which is composed solely of Common Equity Tier 1 Capital, is equal to the lowest of the following risk-based capital ratios (subject to a floor of zero), calculated as of the last day of the previous calendar quarter based on the banking organization's most recent regulatory report:

- (1) The banking organization's Common Equity Tier 1 Capital ratio minus the banking organization's stated minimum Common Equity Tier 1 Capital ratio requirement;
- (2) The banking organization's Tier 1 Capital ratio minus the banking organization's stated minimum Tier 1 Capital ratio requirement; and
- (3) The banking organization's Total Capital ratio minus the banking organization's stated minimum Total Capital ratio requirement.

**Central counterparty** is a counterparty (for example, a clearing house) that facilitates trades between counterparties in one or more financial markets by either guaranteeing trades or novating contracts.

**Confidence interval** measures the probability that a population parameter will fall between two set values. The confidence interval can take any number of probabilities, with the most common being 95% or 99%.

**Credit valuation adjustment** is the fair value adjustment to reflect counterparty credit risk in valuation of OTC derivative contracts.

**Distribution** means:

(1) A reduction of Tier 1 Capital through the repurchase of a Tier 1 Capital instrument or by other means, except when a banking organization, within the same quarter when the repurchase is announced, fully replaces a Tier 1 Capital instrument it has repurchased by issuing another capital instrument that meets the eligibility criteria for:

(i) A Common Equity Tier 1 Capital instrument if the instrument being repurchased was part of the banking organization's Common Equity Tier 1 Capital, or

- (ii) A Common Equity Tier 1 or Additional Tier 1 Capital instrument if the instrument being repurchased was part of the banking organization's Tier 1 Capital;
- (2) A reduction of Tier 2 Capital through the repurchase, or redemption prior to maturity, of a Tier 2 Capital instrument or by other means, except when a banking organization, within the same quarter when the repurchase or redemption is announced, fully replaces a Tier 2 Capital instrument it has repurchased by issuing another capital instrument that meets the eligibility criteria for a Tier 1 or Tier 2 Capital instrument;
- (3) A dividend declaration or payment on any Tier 1 Capital instrument;
- (4) A dividend declaration or interest payment on any Tier 2 Capital instrument if the banking organization has full discretion to permanently or temporarily suspend such payments without triggering an event of default; or
- (5) Any similar transaction that the U.S. banking agency (e.g., FRB) determines to be in substance a distribution of capital.

**Eligible retained income** is the banking organization's net income for the four calendar quarters preceding the current calendar quarter, based on the banking organization's quarterly regulatory reports, net of any distributions and associated tax effects not already reflected in net income.

**Event risk** is the risk of loss on equity or hybrid equity positions as a result of a financial event, such as a company merger, acquisition, spin-off, or dissolution.

**Exchange traded derivatives** include derivatives executed directly on an organized exchange that provides pre-trade price transparency.

**Fair value hierarchy** is defined by ASC 820-10 as follows:

- Level 1 inputs as quoted prices for *identical* instruments in active markets;
- Level 2 inputs as 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; and
- Level 3 inputs as valuations derived from valuation techniques in which one or more significant inputs or significant value drivers are *unobservable*.

**Fat-tailed distribution** is a probability distribution for which the likelihood of a large deviation from the mean is greater than would be implied by a normal distribution.

**FICO score** 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" 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).



**Financial assets** may be loans, commitments, guarantees, receivables, asset-backed securities, mortgage-backed securities, other debt securities, equity securities or credit derivatives.

**Idiosyncratic risk** is the risk of loss in the value of a position that arises from changes in risk factors unique to that position.

**ISDA** refers to International Swap Dealers Association.

**LIBOR** refers to London Interbank Offered Rate.

**Monte Carlo simulation** is a statistical technique, widely used in finance, engineering, and physics, for simulating outcomes of complex processes. Citi's use of Monte-Carlo simulation to calculate the potential loss of market value of a trading portfolio rests on measurements of the volatilities and correlations of the market rates that affect the market value of the portfolio and on the sensitivities of the market value of the portfolio to changes in market rates.

**Netting set** is a group of transactions with a single counterparty that are subject to a qualifying master netting agreement.

**Over-the-counter derivatives** include derivatives executed and settled bilaterally with counterparties without the use of an organized exchange or central clearing house.

**Potential future exposure** is an add-on for expected future credit exposure related to OTC derivative contracts and is based on the type and remaining maturity of the derivative contract.

**Pillar 3** is a component of a mutually reinforcing three pillar capital framework established by the U.S. Basel II rules, and sets forth minimum disclosure requirements for banking organizations which are intended to improve transparency and strengthen market discipline. Although not specifically referred to as such, the disclosure requirements under the U.S. Basel III rules are founded upon and consistent with the former Pillar 3 disclosures.

**Qualifying revolving exposure**, generally, is an exposure which is revolving, is unsecured and unconditionally cancelable by the banking organization.

**Retail exposure** is a residential mortgage exposure, a qualifying revolving exposure, or another retail exposure.

**Scaling factor** is a number which scales, or multiplies, some quantity.

**Segmentation for retail exposures** is required under the U.S. Basel III rules and means the grouping of retail exposures in each retail subcategory into segments that have homogeneous risk characteristics.

**Specific risk** is the risk of loss from changes in the market value of a position that could result from factors other than broad market movements and includes event risk, default risk and other idiosyncratic risks of specific issuers of debt or equity securities.

**Structural foreign currency position** is a position that is not a trading position and that is: (1) subordinated debt, equity, or a minority interest in a consolidated subsidiary that is denominated in a foreign currency; (2) capital assigned to a foreign branch that is denominated in a foreign currency; (3) a position related to an unconsolidated subsidiary or another item that is denominated in a foreign currency and that is deducted from the banking organization's Tier 1 and Tier 2 Capital; or (4) a position designed to hedge a banking organization's capital ratios or earnings.

**Synthetic securitization** is a transaction in which all or a portion of the credit risk of one or more underlying exposures is retained or transferred to one or more third parties through the use of one or more credit derivatives or guarantees and the credit risk associated with the underlying exposures has been separated into at least two tranches reflecting different levels of seniority.

**Systematic risk** is a broad class of market risk that is differentiated from the specific risk of individual issuers of debt and equity securities. Examples of systematic risk include the risk of changes in equity indices, commodity prices, the Treasury yield curve, spot foreign exchange rates, and average credit spreads per rating and currency. In contrast, examples of specific risk include the risk of changes in the component of the spread of a specific bond or the price of a specific equity that are caused by factors idiosyncratic to the issuer of the security.

**Total Leverage Exposure** is the sum of the daily average of on-balance sheet assets for the quarter and the average of certain off-balance sheet exposures calculated as of the last day of each month in the quarter, less applicable Tier 1 Capital deductions.

**Two-way market** means a market where there are independent bona fide offers to buy and sell so that a price reasonably related to the last sales price or current bona fide competitive bid and offer quotations can be determined within one day and settled at that price within a relatively short timeframe conforming to trade custom.

**U.S. GAAP** refers to generally accepted accounting principles in the United States.

**Wholesale exposure** is a credit exposure to a company, natural person, sovereign, or governmental entity (other than a securitization exposure, retail exposure, pre-sold construction loan, unsettled transaction, or equity exposure).

## APPENDIX B: DISCLOSURE INDEX

	Pillar 3 Disclosures	First Quarter 2016 Form 10-Q	2015 Form 10-K
<b>OVERVIEW</b>			
Organization	2		
Regulatory Capital Standards and Disclosures	2		33-53
Pillar 3 Disclosure Requirements - Consolidated and Enhanced Framework	2		
<b>SCOPE OF APPLICATION</b>			
Basis of Consolidation	3	99, 150-162	
Funds and Capital Transfer Restrictions	3		219
Regulated Subsidiaries' Capital	3		
<b>CAPITAL STRUCTURE</b>			
Regulatory Capital Instruments	4-5	93-94, 144, 148-149, 218	34-35
Regulatory Capital Tiers	5	29-34	
<b>CAPITAL ADEQUACY</b>			
Capital Management	6		33
Capital Planning and Stress Testing	6		36-37
Economic Capital	6		
Advanced Approaches Risk-Weighted Assets	7-8		34-35
Risk-Based Capital Ratios	8	29-35	
<b>CAPITAL CONSERVATION AND COUNTERCYCLICAL CAPITAL BUFFERS</b>	9		33-35
<b>RISK MANAGEMENT</b>			
Overview	10		65-68
Scope and Nature of Credit Risk Reporting and Measurement Systems	10		
<b>CREDIT RISK: GENERAL DISCLOSURES</b>			
Credit Risk Management	11		
Corporate Credit Risk	11		
Consumer Credit Risk	11		
Past Due and Impaired Exposures	11	117-139	120-121, 140-144
Allowance for Credit Losses	11		
Credit Risk Exposures	12-14	48-65, 76, 112-141, 163-176, 203-208	76-77, 210, 280-285
<b>CREDIT RISK: PORTFOLIO DISCLOSURES – INTERNAL RATINGS- BASED APPROACH</b>			
Overview	15		
Wholesale Credit Risk Management	15-16		
<i>Wholesale Credit Risk Exposures</i>	15		
<i>Use of Risk Parameter Estimates Other Than for Regulatory Capital Purposes</i>	15-16		

	Pillar 3 Disclosures	First Quarter 2016 Form 10-Q	2015 Form 10-K
<i>Use of Credit Risk Mitigation</i>	16		
<i>Recognizing Credit Risk Mitigation</i>	16		
Retail Credit Risk Management	16		
<i>Policies and Processes for Retail Credit Risk Management</i>	16		
<i>Collateral Valuation and Management</i>	16		
<i>Types of Collateral</i>	16		
Calculation of Risk-Weighted Assets Using Internal Parameters	16-17		
<i>Wholesale Credit Risk</i>	16-17		
<i>Retail Credit Risk</i>	17		
Credit Rating and Basel Parameter Governance	17		
Model Risk Management Policy	17-18		
Independent Validation of Models	18		
Basel Parameters by Exposure Type	18-20		
Credit Losses	21	48-65	
<b>COUNTERPARTY CREDIT RISK: OTC DERIVATIVE CONTRACTS, REPO-STYLE TRANSACTIONS AND ELIGIBLE MARGIN LOANS</b>			
Counterparty Credit Risk Exposures	22		
Methodology Used to Assign Economic Capital	22		
Methodology Used to Assign Credit Limits	22		
Counterparty Credit Risk Capital Calculations	22		
Derivative Master Netting Agreements	22-23	163-176	
Policies for Securing, Valuing and Managing Collateral, and Establishing Credit Reserves	23		
Primary Types of Collateral	23		
Policies With Respect to Wrong-Way Risk Exposures	23		
Impact of Citi Credit Rating Downgrade on Collateral Pledged	23-24	71-72, 176	
OTC Derivative Counterparty Credit Risk Disclosures	24	163-176	
Credit Derivative Notional Amounts	24		
<b>CREDIT RISK MITIGATION</b>			
Overview	25		
Credit Risk Mitigation by Exposure Type	25		
<i>OTC Derivative Contracts, Repo-Style Transactions and Eligible Margin</i>	25		
<i>Loans</i>			
<i>Retail Exposures</i>	25		
<i>Wholesale Banking Book Exposures</i>	25		
Collateral Concentrations	25		
Guarantors and Credit Derivative Counterparties and their Creditworthiness	25		
Recognizing Credit Risk Mitigation	25		
<b>SECURITIZATIONS</b>			
Overview	26		
Objectives	26		
Risks	27		
Risk-Based Capital Approaches	27		

	<b>Pillar 3 Disclosures</b>	<b>First Quarter 2016 Form 10-Q</b>	<b>2015 Form 10-K</b>
Securitizations and VIEs	28-30	150-162, 177-198, 203-210	138
Securitization Exposures Deducted from Regulatory Capital	31		
Re-securitization Exposures Covered by Guarantees	31		
<b>EQUITY EXPOSURES NOT SUBJECT TO THE MARKET RISK CAPITAL RULES</b>			
Overview	32	117-127	139
Risk-Weighting Approaches	32		
Realized Gains (Losses)	33		
Cumulative Unrealized Gains (Losses)	33		
Latent Revaluation Gains (Losses)	33		
<b>MARKET RISK</b>			
Overview	34		97-109
Basel III Covered Positions	34		
Valuation and Accounting Policies and Methodologies	34		
<i>Determination of Fair Value</i>	34-35		
<i>Market Valuation Adjustments</i>	35		
<i>Valuation Process</i>	35	177-198	
Market Risk-Weighted Assets	35		
Regulatory Value-at-Risk (VaR)	35-36		106-108
Regulatory VaR Backtesting	37-38		
Regulatory Stressed Value-at-Risk (SVaR)	39		
Incremental Risk Charge (IRC)	39		
Comprehensive Risk Measure (CRM)	40		
Standard Specific Risk Charge (SSRC)	40		
Securitization and Re-securitization Positions	41		
De Minimis Exposures Charge	41		
Market Risk Management	41-42		
<i>Overview</i>	41		97
<i>Securitization and Re-securitization Positions</i>	41-42		
<i>Model Review and Validation</i>	42		
<i>Stress Testing</i>	42		
<b>OPERATIONAL RISK</b>			
Overview	43		
Operational Risk Measurement and Stress Testing	43		110
<b>INTEREST RATE RISK: NON-TRADING ACTIVITIES</b>	44	73-74	
<b>SUPPLEMENTARY LEVERAGE RATIO</b>			
Summary Comparison of Accounting Assets and Total Leverage Exposure	45		
Supplementary Leverage Ratio	45-46		