

**Citigroup Inc.**

**Basel II.5 Market Risk Disclosures**

**As of and For the Period Ended December 31, 2013**



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## OVERVIEW

### Organization

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

Citi currently operates, for management reporting purposes, via two primary business segments: Citicorp, consisting of Citi's *Global Consumer Banking* 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. Although present in both of these business segments, Citi's market risk arises principally from trading and market making activities undertaken by Citi's Securities and Banking businesses within *ICG*.

### Capital Adequacy

Citi is subject to the risk-based capital guidelines issued by the Federal Reserve Board (FRB) which currently constitute the Basel I credit risk capital rules and also the final (revised) market risk capital rules (Basel II.5),<sup>1</sup> the latter as subsequently amended. In December 2013, the FRB revised Basel II.5 by conforming such rules to certain elements of the final U.S. Basel III rules (Final Basel III Rules), as well as incorporating additional clarifications. These Basel II.5 revisions have not had a material impact on the measurement of Citi's market risk-weighted assets.

Basel II.5 substantially revised the market risk capital framework, and implemented a more comprehensive and risk sensitive methodology for calculating market risk capital requirements for defined "covered positions." Furthermore, the U.S. version of the Basel II.5 rules also implemented the Dodd-Frank Wall Street Reform and Consumer Protection Act requirement that all federal agencies remove references to, and reliance on, credit ratings in their regulations, and replace these references with alternative standards for evaluating creditworthiness. As a result, the U.S. banking agencies provided alternative methodologies to external credit ratings which are to be used in assessing capital requirements on certain debt and securitization positions.

The market risk disclosures discussed herein provide quantitative information regarding Citi's market risk capital components and related risk-weighted assets, as well as qualitative information, such as Citi's risk management policies, practices and internal models, each as required under Basel II.5. These market risk disclosures were reviewed and approved in accordance with Citi's Basel Public Disclosure

<sup>1</sup> 77 FR 53060 (August 30, 2012). The final (revised) market risk capital rules are at 12 CFR Part 3, Appendix B (OCC); 12 CFR Parts 208 and 225, Appendix E (Federal Reserve Board); and 12 CFR Part 325, Appendix C (FDIC).

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

For additional information regarding Citi's capital adequacy and risk management policies and methodologies generally, see "Capital Resources" in Citi's 2013 Annual Report on Form 10-K.

### Basel II.5 Covered Positions

As defined under Basel II.5, 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 benefitting 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.<sup>2</sup>

OR

- (2) A foreign exchange or commodity position (other than any structural foreign currency positions<sup>3</sup> 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.

<sup>2</sup> A 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.

<sup>3</sup> A structural foreign currency position is defined as 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, such as Citi's, Tier 1 and Tier 2 Capital; or (4) a position designed to hedge a banking organization's, such as Citi's, capital ratios or earnings.

Accordingly, the characterization of an asset or liability as a “trading asset” or “trading liability” under U.S. generally accepted accounting principles (U.S. GAAP) does not determine whether such assets and liabilities are trading positions for Basel II.5 purposes. The scope of positions or exposures recognized as trading assets or trading liabilities for U.S. GAAP purposes is generally more expansive than trading positions under Basel II.5. Positions or exposures excluded from market risk capital treatment are subject to the credit risk capital rules applicable to non-trading 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 Basel II.5, including the establishment of a firm-wide governance committee that meets quarterly and serves as a decision-making body on key trading book boundary strategies and reporting approaches. Specifically, the committee reviews the intent and ability to trade covered 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 (formerly SFAS 157), *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 Basel II.5 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 Basel II.5. 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 resecuritization 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.

The majority of derivatives entered into by Citi are executed over-the-counter and 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**

For fair value measurements of substantially all assets and liabilities held by Citi, individual business units are responsible for valuing the trading account assets and liabilities, and Product Control within Citi Finance performs independent price verification procedures to evaluate those fair value measurements. Product Control 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.<sup>4</sup> 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.

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<sup>4</sup> ASC 820-10 defines the fair value hierarchy 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*.

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 25, "Fair Value Measurement," in the Notes to Consolidated Financial Statements of Citi's 2013 Annual Report on Form 10-K.

## MARKET RISK MEASURES AND RISK-WEIGHTED ASSETS

### Market Risk-Weighted Assets

Under Basel II.5, 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)

The following table sets forth the components of Citi's market risk-weighted assets as of December 31, 2013 and September 30, 2013.

**Table 1: Market Risk-Weighted Assets**

<i>In millions of dollars</i>	December 31, 2013	September 30, 2013
Regulatory VaR <sup>(1)</sup>	\$20,696	\$22,199
Regulatory SVaR <sup>(2)</sup>	33,868	31,270
IRC	5,682	4,201
CRM	12,452	11,201
SSRC	9,367	10,521
Securitization Charges <sup>(3)</sup>	33,805	39,422
Other <sup>(4)</sup>	12,888	6,715
<b>Total</b>	<b>\$128,758</b>	<b>\$125,529</b>

- (1) Includes \$ 2,288 million and \$2,515 million add-on for Risk Not In the VaR Model (RNIM) as of December 31, 2013 and September 30, 2013, respectively.
- (2) Includes \$ 6,539 million and \$5,579 million add-on for RNIM as of December 31, 2013 and September 30, 2013, respectively.
- (3) Securitization Charges include standard specific risk charges attributable to securitization positions, as well as non-modeled correlation trading securitization positions.
- (4) Includes, for both periods presented, de-minimis risk charges and a management adjustment primarily related to SSRC RWA.

Citi's total market risk-weighted assets of \$128,758 million at December 31, 2013 includes various hedges against the market sensitivity of the credit valuation adjustment ("CVA") for derivative counterparty risk, but excludes the market sensitivity of the CVA itself. Under the Final Basel III Rules, hedges of CVA will no longer be considered covered positions upon implementation of the "Advanced Approaches" for deriving market risk-weighted assets. Citi's total market risk-weighted assets at December 31, 2013, assuming the exclusion of CVA hedges, would have been approximately \$112,154 million.

The following table sets forth rollforwards of Citi's market risk-weighted assets for the three and twelve months ended December 31, 2013.

**Table 1.1: Market Risk-Weighted Assets Rollforward**

<i>In millions of dollars</i>	Three Months Ended December 31, 2013	Twelve Months Ended December 31, 2013
<b>Balance, beginning of period</b>	<b>\$125,529</b>	<b>\$41,531<sup>(1)</sup></b>
Impact of adoption of Basel II.5	-	127,721
Movements in risk levels Model and methodology updates	(1,252)	(29,542)
Other <sup>(2)</sup>	(1,988)	(22,261)
Other <sup>(2)</sup>	6,469	11,309
Net change	3,229	87,227
<b>Balance, end of period</b>	<b>\$128,758</b>	<b>\$128,758</b>

- (1) Market RWA under Basel I market risk capital rules.
- (2) Represents a management adjustment primarily related to SSRC RWA.

Citi's Basel II.5 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 be calibrated 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 risk-weighted asset "add-on" in accordance with Basel II.5.

Citi's Basel II.5 internal models and related framework were approved by the FRB and the Office of the Comptroller of the Currency (OCC) in December 2012. These internal models are used to calculate:

- Regulatory VaR
- Regulatory SVaR
- IRC
- CRM

The approval of the FRB and OCC was, in certain instances, contingent upon Citi's implementation of internal model enhancements and refinements. These enhancements and refinements are reflected in Citi's December 31, 2013 and September 30, 2013 calculations of market risk capital requirements and related risk-weighted assets, although these remain subject to final review and approval of the FRB and OCC. In the absence of such approvals, Citi's market risk-weighted assets could be substantially higher than that presented at December 31, 2013 and September 30, 2013.

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 or further refinements and enhancements to Citi's internal models. Where material, such changes have been disclosed in Citi's Basel II.5 Market Risk Disclosures and/or in Citi's Forms 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 300,000 market factors, making use of 180,000 time series, with risk sensitivities updated daily and model parameters updated weekly. 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 eligible for market risk treatment under Basel II.5. 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 and model review and validation, see "Managing Global Risk – Market Risk – Price Risk – Trading Portfolios" in Citi's 2013 Annual Report on 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 II.5 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 risk-weighted assets as of December 31, 2013.

**Table 2: Regulatory VaR Risk-Weighted Assets**

<i>In millions of dollars</i>	<b>As of December 31, 2013</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>
	<b>\$491</b>	<b>\$1473</b>	<b>\$20,696</b>

- (1) Based on a 60-day average and using a 10-day time horizon.
- (2) Regulatory VaR times a capital multiplier of 3.
- (3) Regulatory VaR-Based Capital times 12.5 plus \$2,288 million add-on for risks not in the VaR model.

Presented in the following table are Citi's period end, high, low and mean Regulatory VaR, as well as associated primary risk factors, as of and for the three months ended December 31, 2013.

**Table 2.1: 10-Day Regulatory VaR by Risk Factors**

<i>In millions of dollars</i>	<b>As of</b>	<b>Three Months Ended</b>		
	<b>December 31, 2013</b>	<b>December 31, 2013</b>		
<b>Risk Factors</b>		<b>High</b>	<b>Low</b>	<b>Mean<sup>(1)</sup></b>
Interest Rate	\$235	\$346	\$195	\$276
Credit Spread	368	491	365	426
Equity Price	49	165	22	56
Foreign Exchange	185	185	69	121
Commodity Price	37	44	18	31
Diversification Benefit <sup>(2)</sup>	(450)	NM	NM	(419)
<b>Total</b>	<b>\$424</b>	<b>\$604</b>	<b>\$382</b>	<b>\$491</b>

NM: Not meaningful

- (1) Mean is based on a 60-day average.
- (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, high, low and mean Regulatory VaR for each of Citi's material portfolios of covered positions, as of and for the three months ended December 31, 2013.

**Table 2.2: 10-Day Regulatory VaR by Material Portfolio**

<i>In millions of dollars</i>	<b>As of</b>	<b>Three Months Ended</b>		
	<b>December 31, 2013</b>	<b>December 31, 2013</b>		
<b>Material Portfolio</b>		<b>High</b>	<b>Low</b>	<b>Mean<sup>(1)</sup></b>
ICG	\$313	\$360	\$201	\$280
Other <sup>(2)</sup>	339	495	336	420
Diversification Benefit <sup>(3)</sup>	(228)	NM	NM	(209)
<b>Total</b>	<b>\$424</b>	<b>\$604</b>	<b>\$382</b>	<b>\$491</b>

- (1) Based on a 60-day average and using a 10-day time horizon.
- (2) Other is primarily comprised of hedges of the market sensitivity of the CVA for derivative counterparty risk in ICG. Under Basel II.5, only CVA hedges, and not the related hedged CVA exposures, are considered covered positions. However, as previously noted, CVA hedges will no longer be considered covered positions when the application of the "Advanced Approaches" for deriving market risk-weighted assets under the Final Basel III Rules is implemented. Citi's total Regulatory VaR, assuming the exclusion of CVA hedges, would have been approximately \$281 million at December 31, 2013.
- (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 highs and lows of respective material portfolios as they may be derived from different close of business dates.

### **Regulatory VaR Backtesting**

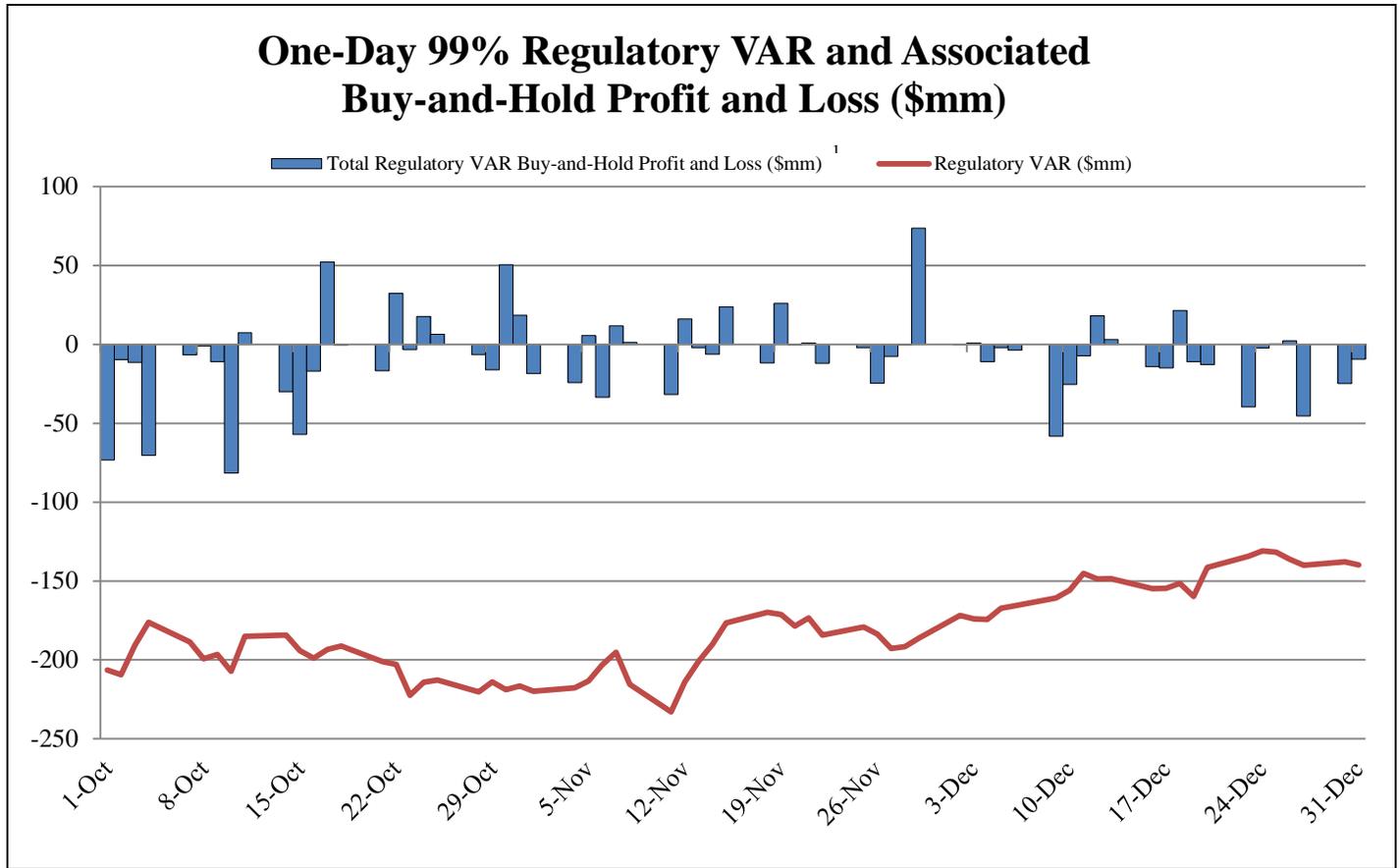
In accordance with Basel II.5, Citi is required to perform backtesting to evaluate the effectiveness of its VaR model and as a basis to determine its Regulatory VaR and Regulatory SVaR-based capital multiplier.<sup>5</sup> Regulatory VaR backtesting is the process in which the daily 1-day VaR, at a 99% 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. As of December 31, 2013, there were no backtesting exceptions observed for Citi's Regulatory VaR for the prior 12 months. 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.

Table 3 below presents a graph of 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 October 1, 2013 through December 31, 2013. As the table indicates, potential losses observed on a single day did not exceed Citi's 1-day 99% Regulatory VaR during this three month period.

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<sup>5</sup> For additional information on Regulatory SVaR, see "Regulatory Stressed Value-at-Risk (SVaR)" below.

**Table 3: 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 risk-weighted assets as of December 31, 2013.

**Table 4: Regulatory SVaR Risk-Weighted Assets**

<i>In millions of dollars</i>	<b>As of December 31, 2013</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>
<b>\$729</b>	<b>\$2,187</b>	<b>\$33,868</b>

- (1) Based on a 60-day average and using a 10-day time horizon.
- (2) Regulatory SVaR times a capital multiplier of 3.
- (3) Regulatory SVaR-Based Capital times 12.5 plus \$6,539 million add-on for risks not in the VaR model.

The following table presents period end, high, low and mean Regulatory SVaR, for each of Citi's material portfolios of covered positions, as of and for the three months ended December 31, 2013.

**Table 4.1: 10-Day Regulatory SVaR by Material Portfolio**

<i>In millions of dollars</i>	<b>As of</b>			
	<b>December 31, 2013</b>	<b>Three Months Ended December 31, 2013</b>		
<b>Material Portfolio</b>		<b>High</b>	<b>Low</b>	<b>Mean<sup>(1)</sup></b>
ICG	\$722	\$1,434	\$155	\$442
Other <sup>(2)</sup>	814	843	764	810
Diversification Benefit <sup>(3)</sup>	(591)	NM	NM	(523)
<b>Total</b>	<b>\$945</b>	<b>\$1,458</b>	<b>\$461</b>	<b>\$729</b>

- (1) Based on a 60-day average and using a 10-day time horizon.
- (2) Other is primarily comprised of hedges of the market sensitivity of the CVA for derivative counterparty risk in ICG. Under Basel II.5, only CVA hedges, and not the related hedged CVA exposures, are considered covered positions. However, as previously noted, CVA hedges will no longer be considered covered positions when the application of the "Advanced Approaches" for deriving market risk-weighted assets under the Final Basel III Rules is implemented. Citi's total Regulatory SVaR, assuming the exclusion of CVA hedges, would have been approximately \$436 million at December 31, 2013.
- (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 highs and lows of respective material portfolios as they may be derived 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 positions maturity date) 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 risk-weighted assets as of December 31, 2013.

**Table 5: IRC Risk-Weighted Assets**

<i>In millions of dollars</i>	<b>As of December 31, 2013<sup>(1)</sup></b>
<b>IRC</b>	<b>IRC RWA<sup>(2)</sup></b>
<b>\$455</b>	<b>\$5,682</b>

- (1) IRC is calculated once per week.
- (2) IRC RWA is the IRC Charge times 12.5.

Presented in the following table is the period end high, low and mean IRC charge for each of Citi's material portfolios of covered positions as of and for the three months ended December 31, 2013.

**Table 5.1: IRC by Material Portfolio**

<i>In millions of dollars</i>	<b>As of</b>			
	<b>December 31, 2013</b>	<b>Three Months Ended December 31, 2013</b>		
<b>Material Portfolio</b>		<b>High</b>	<b>Low</b>	<b>Mean</b>
ICG	\$638	\$901	\$331	\$622
Other <sup>(1)</sup>	64	65	54	61
Diversification Benefit <sup>(2)</sup>	(247)	NM	NM	(255)
<b>Total</b>	<b>\$455</b>	<b>\$660</b>	<b>\$226</b>	<b>\$428</b>

- (1) Other is primarily comprised of hedges of the market sensitivity of the CVA for derivative counterparty risk in ICG. Under Basel II.5, only CVA hedges, and not the related hedged CVA exposures, are considered covered positions. However, as previously noted, CVA hedges will no longer be considered covered positions when the application of the "Advanced Approaches" for deriving market risk-weighted assets under the Final Basel III Rules is implemented. Citi's total IRC, assuming the exclusion of CVA hedges, would increase to approximately \$621 million at December 31, 2013 due to the loss of credit risk transference associated with the removal of the CVA hedges.
- (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 highs and lows of respective material portfolios as they may be derived from different close of business dates.

## Comprehensive Risk Measure (CRM)

CRM is primarily comprised of correlation trading securitization positions within ICG Securities and Banking.

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 Basel II.5 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 Basel II.5), which are included in the model.

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 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 factors and others, 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 risk factors as of December 31, 2013, as well as the period end, high, low and mean CRM Charge, as of and for the three months ended December 31, 2013.

**Table 7: CRM Risk-Weighted Assets**

<i>In millions of dollars</i>			
			As of
			December 31, 2013
CRM Charge <sup>(1)</sup>	CRM RWA	8% CRM Surcharge <sup>(2)</sup>	Total CRM RWA <sup>(3)</sup>
\$592	\$7,407	\$5,045	\$12,452

- (1) CRM Charge is calculated once per week.
- (2) A CRM floor is based on the fair value of net long positions (inclusive of netting) as per Basel II.5.
- (3) Total CRM RWA = CRM Charge times 12.5 plus the 8% surcharge

**Table 7.1: CRM Charge**

<i>In millions of dollars</i>			
As of	Three Months Ended		
December 31, 2013	December 31, 2013		
	High	Low	Mean
\$592	\$778	\$220	\$482

**Table 7.2: CRM Risk Factors**

<i>In millions of dollars</i>	As of
	December 31, 2013 <sup>(1)</sup>
Default Risk	\$618
Recovery Rate Risk	(55)
Credit Spread Risk <sup>(2)</sup>	38
Cross Gamma Risk	(5)
Correlation Risk	(4)
<b>Total CRM</b>	<b>\$592</b>

- (1) CRM is inclusive of diversification benefits across risk factors and are additive.
- (2) Credit spread risk includes credit migration risk.

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 December 31, 2013. Correlation trading securitization positions that are not included in the CRM model are included in Table 8 "Covered Trading Securitization and Resecuritization Positions" below.

**Table 7.3: Correlation Trading Securitization Positions (included in CRM Model)**

<i>In millions of dollars</i>	As of
	December 31, 2013
Net Short Market Value	\$(51,695)
Net Long Market Value	\$47,002
<b>Total Net Market Value</b>	<b>\$(4,693)</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,<sup>6</sup> default risk and idiosyncratic risk.<sup>7</sup>

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 Basel II.5 rules, standard specific risk charges are derived by taking a percentage of the market value where the percentage is a function of the 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.

<sup>6</sup> 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.

<sup>7</sup> Idiosyncratic risk is the risk of loss in the value of a position that arises from changes in risk factors unique to that position.

### Securitization and Resecuritization Positions

A covered securitization or resecuritization position, carried in the trading book is an on- or off-balance sheet financing structure that typically creates tranching credit exposures and which arises from either a traditional (cash) or synthetic securitization. A traditional securitization is a transaction with the following attributes:

- All or a portion of the credit risk of the underlying assets is transferred to third parties other than through the use of credit derivatives or guarantees;
- The credit risk associated with the underlying exposures has been separated into at least two tranches reflecting different levels of seniority;
- Performance of the transaction is solely dependent on the performance of the underlying assets; and
- All or substantially all of the underlying assets are financial assets.<sup>8</sup>

A synthetic securitization shares the same attributes as a traditional securitization except that all or a portion of the credit risk of the underlying assets is transferred through the use of credit derivatives or guarantees.<sup>9</sup>

Resecuritization is a securitization in which one or more of the underlying exposures is a previously securitized position. Furthermore, a resecuritization position means a covered position that is: (i) an on- or off-balance sheet exposure to a resecuritization; or (ii) an exposure that directly or indirectly references a resecuritization.

Citi's securitized assets consist of several collateral types including, among others, corporate debt instruments (in cash and synthetic form), credit card receivables and mortgages. The objective of Citi's securitization trading book is to make a market in securitized products and to facilitate clients in securitizing their financial assets. Citi may also provide administrative, asset management, underwriting, liquidity facilities and/or other services to the resulting securitization entities and may continue to service some of these financial assets.

The table below sets forth the net market value of Citi's non-modeled trading book securitization and resecuritization positions (i.e., excluding modeled credit correlation trading securitizations), by product type, as of December 31, 2013.

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<sup>8</sup> Financial assets may be loans, commitments, receivables, asset-backed securities, mortgage-backed securities, other debt securities, equity securities or credit derivatives.

<sup>9</sup> Securitization exposure includes tranche guarantee arrangements whereby an entity transfers some of the credit risk of the underlying exposures to one or more third parties but also retains a portion with differing seniority levels.

**Table 8: Covered Trading Securitization and  
Resecuritization Positions (Non-CRM Modeled)**

<i>In millions of dollars</i>	<b>As of</b>		
	<b>December 31, 2013</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 <sup>(3)</sup>	<b>\$1,160</b>	<b>\$990</b>	<b>\$2,150</b>
RMBS <sup>(4)</sup>	<b>2,120</b>	<b>270</b>	<b>2,390</b>
CDOs/CLOs <sup>(5)</sup>	<b>2,640</b>	<b>160</b>	<b>2,800</b>
Other ABS <sup>(6)</sup>	<b>740</b>	<b>60</b>	<b>800</b>
<b>Total Market Value</b>	<b>\$6,660</b>	<b>\$1,480</b>	<b>\$8,140</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.
- (3) Commercial Mortgage-Backed Securities.
- (4) Residential Mortgage-Backed Securities.
- (5) Collateralized Debt Obligations/Collateralized Loan Obligations.
- (6) Asset-Backed Securities.

**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 Basel II.5.

## MARKET RISK MANAGEMENT

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### 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 II.5 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 Citi's 2013 Annual Report on 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 the appropriate regulatory capital treatment is applied.

### Securitization and Resecuritization Positions

Citi manages its securitization and resecuritization 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 Basel II.5, 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 resecuritization 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 Basel II.5.

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 resecuritization positions. Counterparty credit risk positions are approved through credit risk management policies and procedures. Securitization and resecuritization positions are subject to product limits to ensure diversification in Citi's portfolio. These limits include mezzanine resecuritization 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**

As previously noted, Citi received approval from the FRB and OCC regarding its Basel II.5 VaR, SVaR, IRC and CRM models, contingent upon Citi's implementation of certain model enhancements and refinements, which have been incorporated into the models as required, but remain subject to the approval of the FRB and OCC. Moreover, these 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.

### **Soundness Standards**

At the core of Citi's capital assessment framework is a focus on safety, soundness, credibility and confidence, aimed to ensure Citi remains well capitalized through economic cycles. The decision-making and review process for capital-related actions by Citi is evaluated as part of a combined Comprehensive Capital Analysis and Review and Internal Capital Adequacy Assessment Process (CCAR/ICAAP). Citi utilizes a robust capital optimization process as part of its capital planning which includes both quantitative and qualitative considerations. Citi uses the CCAR scenarios as one of the elements to size its capital actions in baseline and stressed economic environments. The ICAAP framework is designed to provide a comprehensive view on capital adequacy which extends beyond the quantitative results of stress testing, and incorporates material risk identification including internal and external considerations. Citi also incorporates an evaluation of its liquidity position in both baseline and stressed economic environments. The CCAR/ICAAP is the process by which Citi's Board of Directors evaluates and approves capital actions at least annually.

Citi submitted its 2014 CCAR to the FRB on January 6, 2014 and will publish the required summary of its results under the FRB's Supervisory Severely Adverse Scenario in March 2014.

For additional information on Citi's capital planning and risk management processes, see Citi's 2013 Annual Report on Form 10-K.