

**MORGAN STANLEY & CO. LLC**  
**(SEC I.D. No. 8-15869)**

**CONSOLIDATED STATEMENT OF FINANCIAL CONDITION**  
**AS OF DECEMBER 31, 2016**  
**AND**  
**REPORT OF INDEPENDENT REGISTERED**  
**PUBLIC ACCOUNTING FIRM**

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**Filed pursuant to Rule 17a-5(e)(3)**  
**under the Securities Exchange Act of 1934**  
**as a Public Document.**

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors of  
Morgan Stanley & Co. LLC

We have audited the accompanying consolidated statement of financial condition of Morgan Stanley & Co. LLC and subsidiaries (the "Company") as of December 31, 2016, that you are filing pursuant to Rule 17a-5 under the Securities Exchange Act of 1934. This consolidated financial statement is the responsibility of the Company's management. Our responsibility is to express an opinion on this consolidated financial statement based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statement is free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audit included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statement, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In our opinion, such consolidated statement of financial condition presents fairly, in all material respects, the financial position of Morgan Stanley & Co. LLC and subsidiaries as of December 31, 2016 in conformity with accounting principles generally accepted in the United States of America.

A handwritten signature in black ink that reads "DELOITTE & TOUCHE LLP". The signature is written in a cursive, flowing style.

February 28, 2017

**MORGAN STANLEY & CO. LLC**  
**CONSOLIDATED STATEMENT OF FINANCIAL CONDITION**  
**December 31, 2016**  
(In millions of dollars)

**ASSETS**

Cash	\$ 3,981
Cash deposited with clearing organizations or segregated under federal and other regulations or requirements	15,053
Financial instruments owned, at fair value (approximately \$56,724 were pledged to various parties; \$44 related to consolidated variable interest entities generally not available to the Company)	79,747
Securities received as collateral, at fair value	18,700
Securities purchased under agreements to resell (includes \$302 at fair value)	65,299
Securities borrowed	94,159
Receivables:	
Customers	10,750
Brokers, dealers and clearing organizations	4,314
Interest and dividends	444
Fees and other	14,871
Affiliates	134
Other assets	586
Total assets	<u>\$ 308,038</u>

**LIABILITIES AND MEMBER'S EQUITY**

Short-term borrowings	\$ 4
Financial instruments sold, not yet purchased, at fair value	20,647
Obligation to return securities received as collateral, at fair value	20,252
Securities sold under agreements to repurchase (includes \$730 at fair value)	86,234
Securities loaned	21,387
Other secured financings (includes \$34 at fair value; \$33 related to consolidated variable interest entities generally not available to the Company)	2,228
Payables:	
Customers	121,846
Brokers, dealers and clearing organizations	4,204
Interest and dividends	382
Affiliates	1,484
Other liabilities and accrued expenses	8,443
Long-term borrowings (includes \$539 at fair value)	4,332
Total liabilities	<u>291,443</u>
Commitments and contingent liabilities (See Note 9)	
Subordinated liabilities	<u>11,300</u>
Member's equity:	
Morgan Stanley & Co. LLC member's equity	5,726
Accumulated other comprehensive loss	<u>(431)</u>
Total member's equity	<u>5,295</u>
Total liabilities and member's equity	<u>\$ 308,038</u>

See Notes to Consolidated Statement of Financial Condition

**MORGAN STANLEY & CO. LLC**  
**NOTES TO CONSOLIDATED STATEMENT OF FINANCIAL CONDITION**  
**As of December 31, 2016**  
**(In millions of dollars, except where noted)**

**Note 1 - Introduction and Basis of Presentation**

**The Company**

Morgan Stanley & Co. LLC (“MS&Co.”), together with its wholly owned subsidiaries (the “Company”), provides a wide variety of products and services to a large and diversified group of clients and customers, including corporations, government entities and financial institutions. Its businesses include securities underwriting and distribution; financial advisory services, including advice on mergers and acquisitions, restructurings, real estate and project finance; sales, trading, financing and market-making activities in equity and related products, and fixed income products securities and related products; and sales, trading, financing and market-making activities in other instruments including foreign exchange and commodities futures activities.

MS&Co. and one of its subsidiaries are registered with the U.S. Securities and Exchange Commission (“SEC”) as broker-dealers. MS&Co. is also registered as a futures commission merchant and provisionally registered as a swap dealer with the Commodity Futures Trading Commission (“CFTC”).

MS&Co. is a wholly owned subsidiary of Morgan Stanley Domestic Holdings, Inc. (“MSDHI”). MSDHI is a wholly owned subsidiary of Morgan Stanley Capital Management, LLC, which is a wholly owned subsidiary of Morgan Stanley (the “Ultimate Parent”).

**Basis of Financial Information**

The consolidated statement of financial condition is prepared in accordance with accounting principles generally accepted in the United States of America (“U.S. GAAP”), which require the Company to make estimates and assumptions regarding the valuations of certain financial instruments, the valuation of goodwill, compensation, deferred tax assets, the outcome of legal and tax matters, and other matters that affect the consolidated statement of financial condition and related disclosures. The Company believes that the estimates utilized in the preparation of its consolidated statement of financial condition are prudent and reasonable. Actual results could differ materially from these estimates.

**Consolidation**

The consolidated statement of financial condition includes the accounts of MS&Co., its wholly owned subsidiaries and other entities in which MS&Co. has a controlling financial interest, including certain variable interest entities (“VIE”) (see Note 10).

At December 31, 2016, the Company’s consolidated subsidiaries reported \$21,006 of assets, \$20,962 of liabilities and \$44 of equity on a stand-alone basis.

All material intercompany balances and transactions with its subsidiaries have been eliminated in consolidation.

For entities where (1) the total equity investment at risk is sufficient to enable the entity to finance its activities without additional subordinated financial support and (2) the equity holders bear the economic residual risks and returns of the entity and have the power to direct the activities of the entity that most significantly affect its economic performance, MS&Co. consolidates those entities it controls either through a majority voting interest or otherwise. For VIEs (i.e., entities that do not meet these criteria),

MS&Co. consolidates those entities where it has the power to make the decisions that most significantly affect the economic performance of the VIE and has the obligation to absorb losses or the right to receive benefits that could potentially be significant to the VIE.

Equity and partnership interests held by entities qualifying for accounting purposes as investment companies are carried at fair value.

## **Note 2 - Significant Accounting Policies**

### **Fair Value of Financial Instruments**

Instruments within Financial instruments owned and Financial instruments sold, not yet purchased, are measured at fair value, either in accordance with accounting guidance or through the fair value option election (discussed below). These financial instruments primarily represent the Company's trading and investment positions and include both cash and derivative products. In addition, Securities received as collateral and Obligation to return securities received as collateral are measured at fair value.

The fair value of OTC financial instruments, including derivative contracts related to financial instruments, is presented in the accompanying consolidated statement of financial condition on a net-by-counterparty basis, when appropriate. Additionally, the Company nets the fair value of cash collateral paid or received against the fair value amounts recognized for net derivative positions executed with the same counterparty under the same master netting agreement.

#### *Fair Value Option*

The fair value option permits the irrevocable fair value option election on an instrument-by-instrument basis at initial recognition of an asset or liability or upon an event that gives rise to a new basis of accounting for that instrument. The Company applies the fair value option for eligible instruments, including certain repurchase agreements, certain reverse repurchase agreements and certain other secured financings.

#### *Fair Value Measurement – Definition and Hierarchy*

Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (i.e., the "exit price") in an orderly transaction between market participants at the measurement date.

In determining fair value, the Company uses various valuation approaches and establishes a hierarchy for inputs used in measuring fair value that maximizes the use of relevant observable inputs and minimizes the use of unobservable inputs by requiring that the most observable inputs be used when available. Observable inputs are inputs that market participants would use in pricing the asset or liability that were developed based on market data obtained from sources independent of the Company. Unobservable inputs are inputs that reflect assumptions the Company believes other market participants would use in pricing the asset or liability that are developed based on the best information available in the circumstances. The hierarchy is broken down into three levels based on the observability of inputs as follows:

- Level 1 - Valuations based on quoted prices in active markets that the Company has the ability to access for identical assets or liabilities. Valuation adjustments and block discounts are not applied to Level 1 instruments. Since valuations are based on quoted prices that are readily and regularly available in an active market, valuation of these products does not entail a significant degree of judgment.

- Level 2 - Valuations based on one or more quoted prices in markets that are not active or for which all significant inputs are observable, either directly or indirectly.
- Level 3 - Valuations based on inputs that are unobservable and significant to the overall fair value measurement.

The availability of observable inputs can vary from product to product and is affected by a wide variety of factors, including, for example, the type of product, whether the product is new and not yet established in the marketplace, the liquidity of markets and other characteristics particular to the product. To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Company in determining fair value is greatest for instruments categorized in Level 3 of the fair value hierarchy.

The Company considers prices and inputs that are current as of the measurement date, including during periods of market dislocation. In periods of market dislocation, the observability of prices and inputs may be reduced for many instruments. This condition could cause an instrument to be reclassified from Level 1 to Level 2 or from Level 2 to Level 3 of the fair value hierarchy (see Note 4).

In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, for disclosure purposes, the level in the fair value hierarchy within which the fair value measurement falls in its entirety is determined based on the lowest level input that is significant to the fair value measurement in its entirety.

For assets and liabilities that are transferred between levels in the fair value hierarchy during the year, fair values are ascribed as if the assets or liabilities had been transferred as of the beginning of the year.

#### *Valuation Techniques*

Many cash instruments and OTC derivative contracts have bid and ask prices that can be observed in the marketplace. Bid prices reflect the highest price that a party is willing to pay for an asset. Ask prices represent the lowest price that a party is willing to accept for an asset. The Company carries positions at the point within the bid-ask range that meet the Company's best estimate of fair value. For offsetting positions in the same financial instrument, the same price within the bid-ask spread is used to measure both the long and short positions.

Fair value for many cash instruments and OTC derivative contracts is derived using pricing models. Pricing models take into account the contract terms, as well as multiple inputs, including, where applicable, equity prices, interest rate yield curves, credit curves, correlation, creditworthiness of the counterparty, creditworthiness of the Company, option volatility and currency rates.

Where appropriate, valuation adjustments are made to account for various factors such as liquidity risk (bid-ask adjustments), credit quality, model uncertainty and concentration risk. Adjustments for liquidity risk adjust model-derived mid-market levels of Level 2 and Level 3 financial instruments for the bid-mid or mid-ask spread required to properly reflect the exit price of a risk position. Bid-mid and mid-ask spreads are marked to levels observed in trade activity, broker quotes or other external third-party data. Where these spreads are unobservable for the particular position in question, spreads are derived from observable levels of similar positions.

The Company applies credit-related valuation adjustments to its OTC derivatives. For OTC derivatives, the impact of changes in both the Company's and the counterparty's credit rating is considered when measuring fair value. In determining the expected exposure, the Company simulates the distribution of the



future exposure to a counterparty, then applies market-based default probabilities to the future exposure, leveraging external third-party credit default swap (“CDS”) spread data. Where CDS spread data are unavailable for a specific counterparty, bond market spreads, CDS spread data based on the counterparty’s credit rating or CDS spread data that reference a comparable counterparty may be utilized. The Company also considers collateral held and legally enforceable master netting agreements that mitigate the Company’s exposure to each counterparty.

Adjustments for model uncertainty are taken for positions whose underlying models are reliant on significant inputs that are neither directly nor indirectly observable, hence requiring reliance on established theoretical concepts in their derivation. These adjustments are derived by making assessments of the possible degree of variability using statistical approaches and market-based information where possible.

Fair value is a market-based measure considered from the perspective of a market participant rather than an entity-specific measure. Therefore, even when market assumptions are not readily available, assumptions are set to reflect those that the Company believes market participants would use in pricing the asset or liability at the measurement date. Where the Company manages a group of financial assets and financial liabilities on the basis of its net exposure to either market risks or credit risk, the Company measures the fair value of that group of financial instruments consistently with how market participants would price the net risk exposure at the measurement date.

See Note 4 for a description of valuation techniques applied to the major categories of financial instruments measured at fair value.

#### *Valuation Process*

The Valuation Review Group (“VRG”) within the Financial Control Group (“FCG”) of the Ultimate Parent and its consolidated subsidiaries is responsible for the Ultimate Parent and its consolidated subsidiaries’ fair value valuation policies, processes and procedures. VRG is independent of the business units and reports to the Chief Financial Officer of the Ultimate Parent and its consolidated subsidiaries (“CFO”), who has final authority over the valuation of the Company’s financial instruments. VRG implements valuation control processes designed to validate the fair value of the Company’s financial instruments measured at fair value, including those derived from pricing models.

*Model Review.* VRG, in conjunction with the Model Risk Management (“MRM”), which reports to the Chief Risk Officer of the Ultimate Parent and its consolidated subsidiaries (“Chief Risk Officer”), independently review valuation models’ theoretical soundness, the appropriateness of the valuation methodology and calibration techniques developed by the business units using observable inputs. Where inputs are not observable, VRG reviews the appropriateness of the proposed valuation methodology to determine that it is consistent with how a market participant would arrive at the unobservable input. The valuation methodologies utilized in the absence of observable inputs may include extrapolation techniques and the use of comparable observable inputs. As part of the review, VRG develops a methodology to independently verify the fair value generated by the business unit’s valuation models. The Company generally subjects valuations and models to a review process initially and on a periodic basis thereafter.

*Independent Price Verification.* The business units are responsible for determining the fair value of financial instruments using approved valuation models and valuation methodologies. Generally on a monthly basis, VRG independently validates the fair value of financial instruments determined using valuation models by determining the appropriateness of the inputs used by the business units and by

testing compliance with the documented valuation methodologies approved in the model review process described above.

The results of this independent price verification and any adjustments made by VRG to the fair value generated by the business units are presented to management, the CFO and the Chief Risk Officer on a regular basis.

VRG uses recently executed transactions, other observable market data such as exchange data, broker-dealer quotes, third-party pricing vendors and aggregation services for validating the fair values of financial instruments generated using valuation models. VRG assesses the external sources and their valuation methodologies to determine if the external providers meet the minimum standards expected of a third-party pricing source. Pricing data provided by approved external sources are evaluated using a number of approaches; for example, by corroborating the external sources' prices to executed trades, by analyzing the methodology and assumptions used by the external source to generate a price, and/or by evaluating how active the third-party pricing source (or originating sources used by the third-party pricing source) is in the market. Based on this analysis, VRG generates a ranking of the observable market data designed to ensure that the highest-ranked market data source is used to validate the business unit's fair value of financial instruments.

VRG reviews the models and valuation methodology used to price new material Level 2 and Level 3 transactions, and both FCG and MRM must approve the fair value of the trade that is initially recognized.

*Level 3 Transactions.* VRG reviews the business unit's valuation techniques to assess whether these are consistent with market participant assumptions.

For further information on financial assets and liabilities that are measured at fair value on a recurring basis, see Note 4.

### **Offsetting of Derivative Instruments**

In connection with its derivative activities, the Company generally enters into master netting agreements and collateral agreements with its counterparties. These agreements provide the Company with the right, in the event of a default by the counterparty, to net a counterparty's rights and obligations under the agreement and to liquidate and set off collateral against any net amount owed by the counterparty.

However, in certain circumstances, the Company may not have such an agreement in place. In addition, the relevant insolvency regime may not support the enforceability of the master netting agreement or collateral agreement or the Company may not have sought legal advice to support the enforceability of the agreement. In cases where the Company has not determined an agreement to be enforceable, the related amounts are not offset in the tabular disclosures (see Note 5).

The Company's policy is generally to receive securities and cash posted as collateral (with rights of rehypothecation), irrespective of the enforceability determination regarding the master netting and collateral agreement. In certain cases, the Company may agree for such collateral to be posted to a third-party custodian under a control agreement that enables it to take control of such collateral in the event of a counterparty default. The enforceability of the master netting agreement is taken into account in the Company's risk management practices and application of counterparty credit limits.

For information related to offsetting of derivatives and certain collateralized transactions, see Notes 5 and 6, respectively.



## **Income Taxes**

The Company accounts for income taxes using the asset and liability method. Under this method, the consolidated statement of financial condition includes deferred tax assets, related valuation allowance and deferred tax liabilities associated with expected tax consequences of future events. Under this method, deferred tax assets and liabilities are recorded based upon the temporary differences between the financial statement and income tax bases of assets and liabilities using currently enacted tax rates in effect for the year in which the differences are expected to reverse.

The Company recognizes net deferred tax assets to the extent that it believes these assets are more likely than not to be realized. In making such a determination, the Company considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax planning strategies and results of recent operations. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. If the Company determines that it would be able to realize deferred tax assets in the future in excess of their net recorded amount, it would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

In accordance with the terms of the Tax Sharing Agreement with the Ultimate Parent, substantially all current and deferred taxes (federal, combined and unitary state) are offset with all other intercompany balances with the Ultimate Parent.

Uncertain tax positions are recorded on the basis of a two-step process whereby (1) the Company determines whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position and (2) for those tax positions that meet the more-likely-than-not recognition threshold, the Company recognizes the largest amount of tax benefit that is more than 50% likely to be realized upon ultimate settlement with the related tax authority.

## **Cash**

Cash represents funds deposited with financial institutions.

### **Cash Deposited with Clearing Organizations or Segregated Under Federal and Other Regulations or Requirements**

Cash deposited with clearing organizations or segregated under federal and other regulations or requirements include cash segregated in compliance with federal and other regulations and represent funds deposited by customers and funds accruing to customers as a result of trades or contracts, as well as restricted cash.

### **Repurchase and Securities Lending Transactions**

Securities borrowed or reverse repurchase agreements and securities loaned or repurchase agreements are treated as collateralized financings. Reverse repurchase agreements and repurchase agreements are carried on the consolidated statement of financial condition at the amounts of cash paid or received, plus accrued interest, except for certain repurchase agreements for which the Company has elected the fair value option (see Note 4). Where appropriate, transactions with the same counterparty are reported on a net basis. Securities borrowed and Securities loaned are recorded at the amount of cash collateral advanced or received.

## **Securitization Activities**

The Company engages in securitization activities related to U.S. agency collateralized mortgage obligations and other types of financial assets (see Note 10). Such transfers of financial assets are generally accounted for as sales when the Company has relinquished control over the transferred assets and does not consolidate the transferee. The gain or loss on sale of such financial assets depends, in part, on the previous carrying amount of the assets involved in the transfer (generally at fair value) and the sum of the proceeds and the fair value of the retained interests at the date of sale. Transfers that are not accounted for as sales are treated as secured financings (“failed sales”).

## **Receivables and Payables – Customers**

Receivables from customers and payables to customers include amounts due on cash and margin transactions. Securities owned by customers, including those that collateralize margin or similar transactions, are not reflected on the consolidated statement of financial condition.

## **Receivables and Payables – Brokers, Dealers and Clearing Organizations**

Receivables from brokers, dealers and clearing organizations include amounts receivable for failed to deliver by the Company to a purchaser by the settlement date, margin deposits, and commissions. Payables to brokers, dealers and clearing organizations include amounts payable for securities failed to receive by the Company from a seller by the settlement date and payables to clearing organizations. Receivables and payables arising from unsettled trades are reported on a net basis.

## **Customer Transactions**

Customers’ securities transactions are recorded on a settlement date basis.

## **Accounting Standards Adopted**

The Firm adopted the following accounting update as of January 1, 2016:

*Recognition and Measurement of Financial Assets and Financial Liabilities.* In January 2016, the Financial Accounting Standards Board (the “FASB”) issued an accounting update that changed the requirements for the recognition and measurement of certain financial assets and financial liabilities. The Firm early adopted the provision in this guidance relating to liabilities measured at fair value pursuant to a fair value option election that requires presenting unrealized DVA in Other comprehensive income (loss) (“OCI”), a change from the previous requirement to present DVA in net income. Realized DVA amounts will be recycled from AOCI to Principal transactions revenues. DVA amounts from periods prior to adoption remain in Principal transactions revenues as previously reported. A cumulative catch-up adjustment, net of tax, of \$(15) was recorded as of January 1, 2016 to move the cumulative unrealized DVA loss amount from MS&Co. LLC member's equity into AOCI.

Other provisions of this rule may not be early adopted and will be effective January 1, 2018, but they are not expected to have a material impact on the consolidated statement of financial condition.

### **Note 3 – Related Party Transactions**

The Company has transactions with the Ultimate Parent and its consolidated affiliates, including the performance of administrative services and the execution of securities transactions, and obtains long-term funding as described in Note 7. Subordinated liabilities are transacted with the Ultimate Parent as described in Note 8.

Receivables from and payables to affiliates consist of affiliate transactions that occur in the normal course of business. Payables to affiliates are unsecured, bear interest at rates established by the treasury function of the Ultimate Parent and approximate the market rate of interest that the Ultimate Parent incurs in funding its business as it is periodically reassessed and are payable on demand.

The Company classifies certain receivables and payables related to brokerage, financing, clearance and custodial services from certain affiliates as non-customer as there is an agreement between the two parties by which the affiliate is subordinated against any claims to creditors. These receivables and payables are recorded in Receivables - Fees and other and Other liabilities and accrued expenses on the consolidated statement of financial condition.

The Company clears securities and futures transactions for affiliates with standard settlement terms. Pending settlement balances are recorded within Receivables from or Payables to customers, and Receivables from or Payables to brokers, dealers and clearing organizations.

On March 1, 2016 the Company entered into a service level agreement with an affiliated service entity, Morgan Stanley Services Group Inc. (“MSSG”), to receive certain support services as an initial phase to reorganize support services for recovery and resolution planning purposes. The service level agreement includes support services associated with Technology. In connection with this agreement, the Company effected a series of steps to transfer related assets and liabilities to MSSG at their then carrying values. The steps included a dividend of \$1,376 of assets by the Company to its immediate parent, which, after taking into account the derecognition of \$420 of net deferred tax liabilities related to such assets, resulted in a reduction in member’s equity by \$956.

During 2016, the Company’s Board of Directors approved the transfer of additional support personnel as well as associated assets and liabilities to MSSG, and the receipt of additional support services in 2017 as the final phase to reorganize support services for recovery and resolution planning purposes. The service level agreement will be expanded on March 1, 2017 and will consolidate the existing Technology related services with remaining support services (with limited exceptions as a subset of regulatory services will remain on the Company).

Assets and receivables from affiliated companies at December 31, 2016 are comprised of:

Cash	\$	347
Financial instruments owned, at fair value		277
Reverse repurchase agreements		19,465
Securities borrowed		18,344
Receivables - Customers		338
Receivables - Brokers, dealers and clearing organizations		2,544
Receivables - Fees and other		14,392
Receivables - Affiliates		134

Liabilities and payables to affiliated companies at December 31, 2016 are comprised of:

Financial instruments sold, not yet purchased, at fair value	\$	268
Repurchase agreements		58,863
Securities loaned		17,030
Payables - Customers		24,383
Payables - Brokers, dealers and clearing organizations		1,064
Payables - Affiliates		1,484
Other liabilities and accrued expenses		5,198
Long-term borrowings		4,261
Subordinated liabilities		11,300

#### **Note 4 – Fair Value Disclosures**

##### **Fair Value Measurements**

A description of the valuation techniques applied to the Company's major categories of assets and liabilities measured at fair value on a recurring basis follows.

##### ***Financial Instruments Owned and Financial Instruments Sold, Not Yet Purchased***

##### ***U.S. Government and Agency Securities***

##### **U.S. Treasury Securities**

U.S. Treasury securities are valued using quoted market prices. Valuation adjustments are not applied. Accordingly, U.S. Treasury securities are generally categorized in Level 1 of the fair value hierarchy.

##### **U.S. Agency Securities**

U.S. agency securities are composed of three main categories consisting of agency-issued debt, agency mortgage pass-through pool securities and collateralized mortgage obligations. Non-callable agency-issued debt securities are generally valued using quoted market prices, and callable agency-issued debt securities are valued by benchmarking model-derived prices to quoted market prices and trade data for comparable instruments. The fair value of agency mortgage pass-through pool securities is model-driven based on spreads of the comparable to-be-announced security. Collateralized mortgage obligations are valued using quoted market prices and trade data adjusted by subsequent changes in related indices for comparable instruments. Non-callable agency-issued debt securities are generally categorized in Level 1 of the fair value hierarchy. Callable agency-issued debt securities, agency mortgage pass-through pool securities and collateralized mortgage obligations are generally categorized in Level 2 of the fair value

hierarchy. In instances where the inputs are unobservable, these securities are categorized in Level 3 of the fair value hierarchy.

### ***Other Sovereign Government Obligations***

Foreign sovereign government obligations are valued using quoted prices in active markets when available. These bonds are generally categorized in Level 1 of the fair value hierarchy. If the market is less active or prices are dispersed, these bonds are categorized in Level 2 of the fair value hierarchy. In instances where the inputs are unobservable, these bonds are categorized in Level 3 of the fair value hierarchy.

### ***Corporate and Other Debt***

#### **State and Municipal Securities**

The fair value of state and municipal securities is determined using recently executed transactions, market price quotations or pricing models that factor in, where applicable, interest rates, bond or CDS spreads and volatility and/or volatility skew, adjusted for any basis difference between cash and derivative instruments. These bonds are generally categorized in Level 2 of the fair value hierarchy.

Residential Mortgage-Backed Securities (“RMBS”), Commercial Mortgage-Backed Securities (“CMBS”) and other Asset-Backed Securities (“ABS”)

RMBS, CMBS and other ABS may be valued based on price or spread data obtained from observed transactions or independent external parties such as vendors or brokers. When position-specific external price data are not observable, the fair value determination may require benchmarking to comparable instruments, and/or analyzing expected credit losses, default and recovery rates, and/or applying discounted cash flow techniques. When evaluating the comparable instruments for use in the valuation of each security, security collateral-specific attributes, including payment priority, credit enhancement levels, type of collateral, delinquency rates and loss severity, are considered. In addition, for RMBS borrowers, Fair Isaac Corporation (“FICO”) scores and the level of documentation for the loan are considered. Market standard models, such as Intex, Trepp or others, may be deployed to model the specific collateral composition and cash flow structure of each transaction. Key inputs to these models are market spreads, forecasted credit losses, and default and prepayment rates for each asset category. Valuation levels of RMBS and CMBS indices are used as an additional data point for benchmarking purposes or to price outright index positions.

RMBS, CMBS and other ABS are generally categorized in Level 2 of the fair value hierarchy. If external prices or significant spread inputs are unobservable or if the comparability assessment involves significant subjectivity related to property type differences, cash flows, performance and other inputs, then RMBS, CMBS and other ABS are categorized in Level 3 of the fair value hierarchy.

#### **Corporate Bonds**

The fair value of corporate bonds is determined using recently executed transactions, market price quotations, bond spreads, CDS spreads, or at the money volatility and/or volatility skew obtained from independent external parties, such as vendors and brokers, adjusted for any basis difference between cash and derivative instruments. The spread data used are for the same maturity as the bond. If the spread data do not reference the issuer, then data that reference a comparable issuer are used. When position-specific external price data are not observable, fair value is determined based on either benchmarking to

comparable instruments or cash flow models with yield curves, bond or single name CDS spreads and recovery rates as significant inputs. Corporate bonds are generally categorized in Level 2 of the fair value hierarchy; in instances where prices or significant spread inputs are unobservable, they are categorized in Level 3 of the fair value hierarchy.

#### Collateralized Debt Obligations (“CDO”) and Collateralized Loan Obligations (“CLO”)

The Company holds cash CDOs/CLOs that typically reference a tranche of an underlying synthetic portfolio of single name CDS spreads collateralized by corporate bonds (“credit-linked notes”) or cash portfolio of asset-backed securities/loans (“asset-backed CDOs/CLOs”). Credit correlation, a primary input used to determine the fair value of credit-linked notes, is usually unobservable and derived using a benchmarking technique. Other model inputs such as credit spreads, including collateral spreads, and interest rates are typically observable. Asset-backed CDOs/CLOs are valued based on an evaluation of the market and model input parameters sourced from comparable instruments as indicated by market activity. Each asset-backed CDO/CLO position is evaluated independently taking into consideration available comparable market levels, underlying collateral performance and pricing, deal structures and liquidity. Cash CDOs/CLOs are categorized in Level 2 of the fair value hierarchy when either the credit correlation input is insignificant or comparable market transactions are observable. In instances where the credit correlation input is deemed to be significant or comparable market transactions are unobservable, cash CDOs/CLOs are categorized in Level 3 of the fair value hierarchy.

#### Mortgage Loans

Mortgage loans are valued using observable prices based on transactional data or third-party pricing for identical or comparable instruments, when available. Where position-specific external prices are not observable, fair value is estimated based on benchmarking to prices and rates observed in the primary market for similar loan or borrower types or based on the present value of expected future cash flows using its best estimates of the key assumptions, including forecasted credit losses, prepayment rates, forward yield curves and discount rates commensurate with the risks involved or a methodology that utilizes the capital structure and credit spreads of recent comparable securitization transactions. Mortgage loans valued based on observable market data for comparable instruments are categorized in Level 2 of the fair value hierarchy. Where prices or significant spread inputs are unobservable, mortgage loans are categorized in Level 3 of the fair value hierarchy.

#### *Corporate Equities*

##### Exchange-Traded Equity Securities

Exchange-traded equity securities are generally valued based on quoted prices from the exchange. To the extent these securities are actively traded, valuation adjustments are not applied, and they are categorized in Level 1 of the fair value hierarchy. Exchange-traded securities are categorized in Level 2 or Level 3 of the fair value hierarchy if the securities are not actively traded, or are undergoing a recent mergers and acquisitions event or corporate action.

##### Unlisted Equity Securities

Unlisted equity securities are valued based on an assessment of each underlying security, considering rounds of financing and third-party transactions, discounted cash flow analyses and market-based information, including comparable Company transactions, trading multiples and changes in market outlook, among other factors. These securities are generally categorized in Level 3 of the fair value hierarchy.



## ***Derivative Contracts***

### **Listed Derivative Contracts**

Listed derivatives that are actively traded are valued based on quoted prices from the exchange and are categorized in Level 1 of the fair value hierarchy. Listed derivatives that are not actively traded are valued using the same approaches as those applied to OTC derivatives; they are generally categorized in Level 2 of the fair value hierarchy.

### **OTC Derivative Contracts**

OTC derivative contracts include forward, swap and option contracts related to interest rates, foreign currencies, credit standing of reference entities, or equity prices.

Depending on the product and the terms of the transaction, the fair value of OTC derivative products can be modeled using a series of techniques, including closed-form analytic formulas, such as the Black-Scholes option-pricing model, simulation models or a combination thereof. Many pricing models do not entail material subjectivity because the methodologies employed do not necessitate significant judgment, since model inputs may be observed from actively quoted markets, as is the case for generic interest rate swaps, many equity and foreign currency option contracts and certain CDS. In the case of more established derivative products, the pricing models used by the Company are widely accepted by the financial services industry. OTC derivative products are generally categorized in Level 2 of the fair value hierarchy when valued using observable inputs, or where the unobservable input is not deemed significant. In instances where the unobservable inputs are deemed significant, OTC derivative products are categorized in Level 3 of the fair value hierarchy.

For further information on the valuation techniques for OTC derivative products, see Note 2.

For further information on derivative instruments, see Note 5.

## ***Long-term borrowings***

Long-term borrowings include hybrid financial instruments with embedded derivatives. See the Derivative Contracts section above for a description of the valuation technique applied to the Company's Long-term borrowings.

## ***Reverse Repurchase Agreements and Repurchase Agreements***

The fair value of a reverse repurchase agreement or repurchase agreement is computed using a standard cash flow discounting methodology. The inputs to the valuation include contractual cash flows and collateral funding spreads, which are estimated using various benchmarks, interest rate yield curves and option volatilities. Reverse repurchase agreements or repurchase agreements are generally categorized in Level 2 of the fair value hierarchy. In instances where the unobservable inputs are deemed significant, reverse repurchase agreements and repurchase agreements are categorized in Level 3 of the fair value hierarchy.

The following fair value hierarchy table presents information about the Company's assets and liabilities measured at fair value on a recurring basis at December 31, 2016. See Note 2 for a discussion of the Company's policies regarding the fair value hierarchy.

## Assets and Liabilities Measured at Fair Value on a Recurring Basis at December 31, 2016

	Level 1	Level 2	Level 3	Counter-party and Cash Collateral Netting	At December 31, 2016
<b>Assets:</b>					
Financial instruments owned:					
U.S. government and agency securities:					
U.S. Treasury securities	\$ 18,420	\$ -	\$ -	\$ -	\$ 18,420
U.S. agency securities	2,122	20,209	74	-	22,405
Total U.S. government and agency securities	20,542	20,209	74	-	40,825
Other sovereign government obligations	1,628	305	1	-	1,934
Corporate and other debt:					
State and municipal securities	-	2,354	250	-	2,604
Residential mortgage-backed securities	-	346	9	-	355
Commercial mortgage-backed securities	-	675	112	-	787
Asset-backed securities	-	44	2	-	46
Corporate bonds	-	5,197	110	-	5,307
Collateralized debt and loan obligations	-	311	52	-	363
Mortgage loans	-	-	44	-	44
Other debt	-	50	68	-	118
Total corporate and other debt	-	8,977	647	-	9,624
Corporate equities <sup>(1)</sup>	25,489	269	37	-	25,795
Derivative contracts:					
Interest rate contracts	744	1,476	-	-	2,220
Credit contracts	-	428	-	-	428
Foreign exchange contracts	19	11,694	-	-	11,713
Equity contracts	631	7,088	327	-	8,046
Netting <sup>(2)</sup>	(1,105)	(17,607)	(207)	(1,927)	(20,846)
Total derivative contracts	289	3,079	120	(1,927)	1,561
Investments:					
Principal investments	-	-	8	-	8
Total investments	-	-	8	-	8
Total financial instruments owned	\$ 47,948	\$ 32,839	\$ 887	\$ (1,927)	\$ 79,747
Securities received as collateral, at fair value	18,677	22	1	-	18,700
Securities purchased under agreements to resell	-	302	-	-	302

<sup>(1)</sup> For trading purposes the Company holds or sells short equity securities issued by entities in diverse industries and of varying sizes.

<sup>(2)</sup> For positions with the same counterparty that cross over the levels of the fair value hierarchy, both counterparty netting and cash collateral netting are included in the column titled "Counterparty and Cash Collateral Netting." For contracts with the same counterparty, counterparty netting among positions classified within the same level is included within that shared level. For further information on derivative instruments, see Note 5.

	Level 1	Level 2	Level 3	Counter-party and Cash Collateral Netting	At December 31, 2016
<b>Liabilities:</b>					
Financial instruments sold, not yet purchased:					
U.S. government and agency securities:					
U.S. Treasury securities	\$ 10,275	\$ -	\$ -	\$ -	10,275
U.S. agency securities	891	62	-	-	953
Total U.S. government and agency securities	11,166	62	-	-	11,228
Other sovereign government obligations	14	154	-	-	168
Corporate and other debt	-	3,020	3	-	3,023
Corporate equities <sup>(1)</sup>	3,486	3	1	-	3,490
Derivative contracts:					
Interest rate contracts	844	1,316	-	-	2,160
Credit contracts	-	390	-	-	390
Foreign exchange contracts	3	11,877	-	-	11,880
Equity contracts	645	7,547	549	-	8,741
Netting <sup>(2)</sup>	(1,105)	(17,607)	(207)	(1,514)	(20,433)
Total derivative contracts	387	3,523	342	(1,514)	2,738
Total financial instruments sold, not yet purchased	\$ 15,053	\$ 6,762	\$ 346	\$ (1,514)	\$ 20,647
Obligation to return securities received as collateral, at fair value	20,227	24	1	-	20,252
Securities sold under agreements to repurchase	-	580	150	-	730
Other secured financings	-	33	1	-	34
Long-term borrowings	-	474	65	-	539

<sup>(1)</sup> For trading purposes the Company holds or sells short equity securities issued by entities in diverse industries and of varying size.

<sup>(2)</sup> For positions with the same counterparty that cross over the levels of the fair value hierarchy, both counterparty netting and cash collateral netting are included in the column titled "Counterparty and Cash Collateral Netting." For contracts with the same counterparty, counterparty netting among positions classified within the same level is included within that shared level. For further information on derivative instruments, see Note 5.

## Transfers Between Fair Value Hierarchy Levels

*Financial instruments owned—U.S government and agency securities.* During 2016, the Company reclassified approximately \$59 of agency securities assets from Level 2 to Level 1 as transactions in these securities occurred with sufficient frequency and volume to constitute an active market.

*Financial instruments owned—Corporate equities and Financial instruments sold, not yet purchased—Corporate equities.* During 2016, the Company reclassified approximately \$18 of Corporate equities liabilities from Level 1 to Level 2 as transactions in these securities did not occur with sufficient frequency and volume to constitute an active market.

The Company also reclassified approximately \$41 of Corporate equities assets from Level 2 to Level 1 as transactions in these securities occurred with sufficient frequency and volume to constitute an active market.

*Financial instruments owned—Derivative contracts and Financial instruments sold, not yet purchased—Derivative contracts.* During 2016, the Company reclassified approximately \$188 of derivative assets and approximately \$157 of derivative liabilities from Level 2 to Level 1 as these listed derivatives became actively traded and were valued based on quoted prices from exchanges.

*Financial instruments owned-Corporate and other debt.* During 2016, the Company reclassified approximately \$119 of certain Corporate and other debt, primarily CMBS, from Level 2 to Level 3. The Company reclassified these CMBS as external prices and/or spread inputs for these instruments became less observable.

*Financial instruments sold-Corporate and other debt.* During 2016, the Company reclassified approximately \$73 of certain Corporate and other debt, primarily corporate bonds and CDO, from Level 3 to Level 2. The Company reclassified these corporate bonds and CDO as external prices and/or spread inputs for these instruments became observable and certain unobservable inputs were deemed insignificant to the overall measurement.

*Financial instruments owned-Corporate equities.* During 2016, the Company reclassified approximately \$24 of certain Corporate equities from Level 2 to Level 3. The Company reclassified these Corporate equities as external prices and/or spread inputs for these instruments became less observable.

## Significant Unobservable Inputs Used in Recurring Level 3 Fair Value Measurements

The following disclosures provide information on the valuation techniques, significant unobservable inputs and their ranges and averages for each major category of assets and liabilities measured at fair value on a recurring basis with a significant Level 3 balance. The level of aggregation and breadth of products cause the range of inputs to be wide and not evenly distributed across the inventory. Further, the range of unobservable inputs may differ across firms in the financial services industry because of diversity in the types of products included in each firm's inventory. The following disclosures also include qualitative information on the sensitivity of the fair value measurements to changes in the significant unobservable inputs. There are no predictable relationships between multiple significant unobservable inputs attributable to a given valuation technique. A single amount is disclosed when there is no significant difference between the minimum, maximum and average (weighted).

	At December 31, 2016	Predominant Valuation Techniques/ Significant Unobservable Inputs	Range (Weighted Averages)
<b>Assets</b>			
Financial instruments owned:			
U.S. government and agency securities:			
U.S. agency securities	\$74	Comparable pricing Comparable bond price	96 to 105 points (102 points)
Corporate and other debt:			
State and municipal securities	250	Comparable pricing Comparable bond price	53 to 100 points (91 points)
Commercial mortgage-backed securities	112	Comparable pricing Comparable bond price	0 to 86 points (36 points)
Corporate bonds	110	Comparable pricing Comparable bond price	4 to 110 points (99 points)
Collateralized debt and loan obligations	52	Comparable pricing Comparable bond price Correlation model Credit correlation	0 to 68 points (40 points) 35 to 39% (38%)
Mortgage loans	44	Comparable pricing Comparable loan price	65 to 102 points (92 points)
Other debt	68	Option model At the money volatility	16 to 52% (52%)
Corporate equities	37	Comparable pricing Comparable equity price	100% (100%)
Net derivative contracts:			
Equity contracts	(222)	Option model At the money volatility Option model Volatility skew	16 to 60% (36%) -3 to 0% (0%)
<b>Liabilities</b>			
Securities sold under agreements to repurchase	150	Discounted cash flow Funding spread	118 to 127 bps (121 bps)
Long-term borrowings	65	Option model At the money volatility	16 to 52% (52%)

bps- Basis points. A basis point equals 1/100<sup>th</sup> of 1%.

Points- Percentage of par

The following provides a description of significant unobservable inputs included in the December 31, 2016 table above for all major categories of assets and liabilities:

*Comparable bond price*— a pricing input used when prices for the identical instrument are not available. Significant subjectivity may be involved when fair value is determined using pricing data available for comparable instruments. Valuation using comparable instruments can be done by calculating an implied yield (or spread over a liquid benchmark) from the price of a comparable bond, then adjusting that yield (or spread) to derive a value for the bond. The adjustment to yield (or spread) should account for relevant differences in the bonds such as maturity or credit quality.

Alternatively, a price-to-price basis can be assumed between the comparable instrument and the bond being valued in order to establish the value of the bond. Additionally, as the probability of default increases for a given bond (i.e., as the bond becomes more distressed), the valuation of that bond will increasingly reflect its expected recovery level assuming default. The decision to use price-to-price or yield/spread comparisons largely reflects trading market convention for the financial instruments in question. Price-to-price comparisons are primarily employed for RMBS, CMBS, ABS, CDOs, CLOs and distressed corporate bonds. Implied yield (or spread over a liquid benchmark) is utilized predominately for non-distressed corporate bonds.

In general, an increase (decrease) to the comparable bond price for an asset would result in a higher (lower) fair value.

*Volatility*—the measure of the variability in possible returns for an instrument given how much that instrument changes in value over time. Volatility is a pricing input for options, and generally, the lower the volatility, the less risky the option. The level of volatility used in the valuation of a particular option depends on a number of factors, including the nature of the risk underlying that option (e.g., the volatility of a particular underlying equity security may be significantly different from one another), the tenor and the strike price of the option.

In general, an increase (decrease) to the volatility would result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Firm is long or short the exposure.

*Correlation*—a pricing input where the payoff is driven by more than one underlying risk. Correlation is a measure of the relationship between the movements of two variables (i.e., how the change in one variable influences a change in the other variable). Credit correlation, for example, is the factor that describes the relationship between the probability of individual entities to default on obligations and the joint probability of multiple entities to default on obligations.

In general, an increase (decrease) to the correlation would result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Firm is long or short the exposure.

*Comparable equity price* - A price derived from equity raises, share buybacks and external bid levels, etc. A discount or premium may be included in the fair value estimate.

In general, an increase (decrease) to the comparable equity price of an asset would result in a higher (lower) fair value.

*Volatility skew*—the measure of the difference in implied volatility for options with identical underliers and expiry dates but with different strikes. The implied volatility for an option with a strike price that is above or below the current price of an underlying asset will typically deviate from the implied volatility for an option with a strike price equal to the current price of that same underlying asset.

In general, an increase (decrease) to the volatility skew would result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Firm is long or short the exposure.

*Funding spread*—the difference between the general collateral rate (which refers to the rate applicable to a broad class of U.S. Treasury issuances) and the specific collateral rate (which refers to the rate applicable to a specific type of security pledged as collateral, such as a municipal bond). Repurchase agreements are discounted based on collateral curves. The curves are constructed as spreads over the corresponding overnight index swap (“OIS”) / London Interbank Offered Rate (“LIBOR”) curves, with the short end of the curve representing spreads over the corresponding OIS curves and the long end of the curve representing spreads over LIBOR.



In general, an increase (decrease) to the funding spread of an asset would result in a lower (higher) fair value.

### Financial Instruments Not Measured at Fair Value

The table below presents the carrying value, fair value and fair value hierarchy category of certain financial instruments that are not measured at fair value in the Company's consolidated statement of financial condition.

The carrying value of cash, including other short-term financial instruments such as reverse repurchase agreements, Securities borrowed, repurchase agreements, Securities loaned, certain receivables and payables arising in the ordinary course of business, Short-term borrowings, certain Other secured financings, Other assets and Other liabilities and accrued expenses approximate fair value because of the relatively short period of time between their origination and expected maturity.

For longer-dated reverse repurchase agreements, Securities borrowed, repurchase agreements, Securities loaned and Other secured financings, fair value is determined using a standard cash flow discounting methodology. The inputs to the valuation include contractual cash flows and collateral funding spreads, which are estimated using various benchmarks and interest rate yield curves.

The fair value of Subordinated liabilities and Long-term borrowings are generally determined based on transactional data or third party pricing for identical or comparable instruments, when available. Where position-specific external prices are not observable, fair value is determined based on current interest rates and credit spreads for debt instruments with similar terms and maturity.

### Financial Instruments Not Measured at Fair Value

	At December 31, 2016		Fair Value by Level:		
	Carrying Value	Fair Value	Level 1	Level 2	Level 3
<b>Financial Assets:</b>					
Cash	\$ 3,981	\$ 3,981	\$ 3,981	\$ -	\$ -
Cash deposited with clearing organizations or segregated under federal and other regulations or requirements	15,053	15,053	15,053	-	-
Securities purchased under agreements to resell	64,997	64,793	-	63,517	1,276
Securities borrowed	94,159	94,160	-	94,160	-
Receivables: <sup>(1)</sup>					
Customers	10,750	10,750	-	10,750	-
Brokers, dealers and clearing organizations	4,314	4,314	-	4,314	-
Fees and other	14,871	14,871	-	14,871	-
Affiliates	134	134	-	134	-
Other assets <sup>(2)</sup>	112	112	-	112	-
<b>Financial Liabilities:</b>					
Short-term borrowings	\$ 4	\$ 4	\$ -	\$ 4	\$ -
Securities sold under agreements to repurchase	85,504	85,528	-	84,048	1,480
Securities loaned	21,387	21,387	-	21,387	-
Other secured financings	2,194	2,199	-	2,199	-
Payables: <sup>(1)</sup>					
Customers	121,846	121,846	-	121,846	-
Brokers, dealers and clearing organizations	4,204	4,204	-	4,204	-
Affiliates	1,484	1,484	-	1,484	-
Other liabilities and accrued expenses <sup>(2)</sup>	5,348	5,348	-	5,348	-
Long-term borrowings	3,793	3,857	-	3,823	34
Subordinated liabilities	11,300	11,358	-	11,358	-

<sup>(1)</sup> Accrued interest and dividend receivables and payables where carrying value approximates fair value have been excluded.

<sup>(2)</sup> Other assets and Other liabilities and accrued expenses exclude certain items that do not meet the definition of a financial instrument. Other liabilities and accrued expenses also excludes certain financial instruments that are not in scope.

## **Note 5 - Derivative Instruments**

The Company trades and makes markets globally in listed futures, OTC swaps, forwards, options and other derivatives referencing, among other things, interest rates, equities, currencies, investment grade and non-investment grade corporate credits, bonds, U.S. and other sovereign securities, emerging market bonds, credit indices, ABS indices, property indices, and mortgage-related and other ABS. The Company uses these instruments for market-making, foreign currency exposure management and asset and liability management. The Company does not apply hedge accounting.

The Company manages its market-making positions by employing a variety of risk mitigation strategies. These strategies include diversification of risk exposures and hedging. Hedging activities consist of the purchase or sale of positions in related securities and financial instruments, including a variety of derivative products (*e.g.*, futures, forwards, swaps and options). The Company manages the market risk associated with its market-making activities on a Company-wide basis, on a worldwide trading division level and on an individual product basis.

### ***Derivative Assets and Liabilities***

Derivatives Assets At December 31, 2016								
	Fair Value				Notional			
	Bilateral OTC	Cleared OTC	Exchange- Traded	Total	Bilateral OTC	Cleared OTC	Exchange- Traded	Total
<b>Derivatives contracts <sup>(1)</sup>:</b>								
Interest rate contracts	\$ 1,469	\$ 747	\$ 4	\$ 2,220	\$ 119,685	\$ 64,173	\$ 32,053	\$ 215,911
Credit contracts	428	-	-	428	5,748	-	-	5,748
Foreign exchange contracts	11,694	-	19	11,713	355,340	-	764	356,104
Equity contracts	3,197	-	4,849	8,046	47,478	-	146,340	193,818
<b>Total gross derivatives contracts <sup>(2)</sup></b>	<b>\$ 16,788</b>	<b>\$ 747</b>	<b>\$ 4,872</b>	<b>\$ 22,407</b>	<b>\$ 528,251</b>	<b>\$ 64,173</b>	<b>\$ 179,157</b>	<b>\$ 771,581</b>
<b>Amounts offset</b>								
Cash collateral netting	(1,927)	-	-	(1,927)	-	-	-	-
Counterparty netting	(13,775)	(314)	(4,830)	(18,919)	-	-	-	-
<b>Total gross derivative assets <sup>(3)</sup></b>	<b>\$ 1,086</b>	<b>\$ 433</b>	<b>\$ 42</b>	<b>\$ 1,561</b>	<b>\$ 528,251</b>	<b>\$ 64,173</b>	<b>\$ 179,157</b>	<b>\$ 771,581</b>
<b>Amounts not offset <sup>(3)</sup></b>								
Financial instruments collateral	(125)	-	-	(125)				
Other cash collateral	(20)	-	-	(20)				
<b>Net amounts</b>	<b>\$ 941</b>	<b>\$ 433</b>	<b>\$ 42</b>	<b>\$ 1,416</b>				

Derivative Liabilities At December 31, 2016								
	Fair Value				Notional			
	Bilateral OTC	Cleared OTC	Exchange- Traded	Total	Bilateral OTC	Cleared OTC	Exchange- Traded	Total
<b>Derivatives contracts <sup>(1)</sup>:</b>								
Interest rate contracts	\$ 1,413	\$ 747	\$ -	\$ 2,160	\$ 103,103	\$ 61,087	\$ 30,736	\$ 194,926
Credit contracts	390	-	-	390	3,280	-	-	3,280
Foreign exchange contracts	11,877	-	3	11,880	356,220	-	3,505	359,725
Equity contracts	3,675	-	5,066	8,741	38,472	-	163,531	202,003
<b>Total gross derivatives contracts <sup>(2)</sup></b>	<b>\$ 17,355</b>	<b>\$ 747</b>	<b>\$ 5,069</b>	<b>\$ 23,171</b>	<b>\$ 501,075</b>	<b>\$ 61,087</b>	<b>\$ 197,772</b>	<b>\$ 759,934</b>
<b>Amounts offset</b>								
Cash collateral netting	(1,514)	-	-	(1,514)	-	-	-	-
Counterparty netting	(13,775)	(314)	(4,830)	(18,919)	-	-	-	-
<b>Total derivative liabilities</b>	<b>\$ 2,066</b>	<b>\$ 433</b>	<b>\$ 239</b>	<b>\$ 2,738</b>	<b>\$ 501,075</b>	<b>\$ 61,087</b>	<b>\$ 197,772</b>	<b>\$ 759,934</b>
<b>Amounts not offset <sup>(3)</sup></b>								
Financial instruments collateral	(31)	(1)	-	(32)				
Other cash collateral	(4)	-	-	(4)				
<b>Net amounts</b>	<b>\$ 2,031</b>	<b>\$ 432</b>	<b>\$ 239</b>	<b>\$ 2,702</b>				

(1) Notional amounts include gross notionals related to open long and short futures contracts of \$28,403 and \$43,350, respectively. The unsettled fair value on these futures contracts (excluded from the table above) of \$368 and \$81, is included in Receivables - Brokers, dealers and clearing organizations and Payables - Brokers, dealers and clearing organizations, respectively, in the Company's consolidated statement of financial condition.

(2) Amounts include transactions that are either not subject to master netting agreements or collateral agreements or are subject to such agreements but the Company has not determined the agreements to be legally enforceable as follows: \$220 of derivative assets and \$375 of derivative liabilities.

(3) Amounts relate to master netting agreements and collateral agreements that have been determined by the Company to be legally enforceable in the event of default but where certain other criteria are not met in accordance with applicable offsetting accounting guidance.

For information related to offsetting of certain collateralized transactions, see Note 6.

### ***Credit Risk-Related Contingencies***

In connection with certain OTC trading agreements, the Company may be required to provide additional collateral or immediately settle any outstanding liability balances with certain counterparties in the event of a credit rating downgrade.

The following table presents the aggregate fair value of certain derivative contracts that contain risk-related contingent features that are in a net liability position for which the Company has posted collateral in the normal course of business.

### ***Net Derivative Liabilities and Collateral Posted***

	<u>At December 31, 2016</u>
Net derivative liabilities with credit risk-related contingent features	\$ 873
Collateral posted	484

The additional collateral or termination payments that may be called in the event of a future credit rating downgrade vary by contract and can be based on ratings by either or both of Moody's Investors Service, Inc. ("Moody's") and Standard & Poor's Global Ratings ("S&P"). The following table shows the future potential collateral amounts and termination payments that could be called or required by counterparties or exchange and clearing organizations in the event of one-notch or two-notch downgrade scenarios based on the relevant contractual downgrade triggers.

	<b>At December 31, 2016 <sup>(1)</sup></b>
Incremental collateral or terminating payments upon future rating downgrade	
One-notch downgrade	\$ 6
Two-notch downgrade	5

<sup>(1)</sup> Amounts relate to bilateral arrangements between the Company and other parties where upon the downgrade of one party, the downgraded party must deliver collateral to the other party. These bilateral downgrade arrangements are used by the Company to manage the risk of counterparty downgrades.

### ***Credit Derivatives and Other Credit Contracts***

The Company enters into credit derivatives, principally through credit default swaps, under which it receives or provides protection against the risk of default on a set of debt obligations issued by specified reference entities. A majority of the Company's counterparties for these derivatives are banks, broker-dealers, and other financial institutions. The following table summarizes the notional and fair value of protection sold and protection purchased through credit default swaps at December 31, 2016:

	<b>Maximum Potential Payout/Notional</b>			
	<b>Protection Sold</b>		<b>Protection Purchased</b>	
	<b>Fair Value</b>		<b>Fair Value</b>	
	<b>Notional</b>	<b>(Asset)/Liability</b>	<b>Notional</b>	<b>(Asset)/Liability</b>
Index and basket credit default swaps	\$ 3,280	\$ 390	\$ 5,748	\$ (428)

For non-tranched index and basket credit default swaps, the Company has purchased protection with a notional amount of \$5,605, compared with a notional amount of \$3,280 of credit protection sold with identical underlying reference obligations.

The purchase of credit protection does not represent the sole manner in which the Company risk manages its exposure to credit derivatives. The Company manages its exposure to these derivative contracts through a variety of risk mitigation strategies, which include managing the credit and correlation risk across non-tranched indices and baskets, and cash positions. Aggregate market risk limits have been established for credit derivatives, and market risk measures are routinely monitored against these limits. The Company may also recover amounts on the underlying reference obligation delivered to the Company under credit default swaps where credit protection was sold.

The following table summarizes the credit ratings of reference obligations and maturities of credit protection sold at December 31, 2016:

	Maximum Potential Payout/Notional					Fair Value (Asset)/ Liability <sup>(1)</sup>
	Years to Maturity					
	Less than 1	1-3	3-5	Over 5	Total	
Index and basket credit default swaps: <sup>(2)</sup>						
Non-investment grade	\$ -	\$ -	\$ -	\$ 3,280	\$ 3,280	\$ 390
Total credit default swaps sold	-	-	-	3,280	3,280	390
Other credit contracts	47	-	-	187	234	(17)
Total credit derivatives and other credit contracts	\$ 47	\$ -	\$ -	\$ 3,467	\$ 3,514	\$ 373

<sup>(1)</sup> Fair value amounts are shown on a gross basis prior to cash collateral or counterparty netting.

<sup>(2)</sup> In order to provide an indication of the current payment status or performance risk of the CDS, a breakdown of CDS based on the Company's internal credit ratings by investment grade and non-investment grade is provided. Internal credit ratings serve as the Credit Risk Management Department's assessment of credit risk, and the basis for a comprehensive credit limits framework used to control credit risk. The Company uses quantitative models and judgment to estimate the various risk parameters related to each obligor.

*Index and Basket Credit Default Swaps.* Index and basket credit default swaps are products where credit protection is provided on a portfolio of single name credit default swaps. Generally, in the event of a default on one of the underlying names, the Company pays a pro rata portion of the total notional amount of the credit default swap.

The Company also enters into tranching index and basket credit default swaps where credit protection is provided on a particular portion of the portfolio loss distribution. The most junior tranches cover initial defaults, and once losses exceed the notional of the tranche, they are passed on to the next most senior tranche in the capital structure.

*Credit Protection Sold through Credit Linked Notes and CDOs.* The Company has invested in credit-linked notes (“CLNs”) and CDOs, which are hybrid instruments containing embedded derivatives, in which credit protection has been sold to the issuer of the note. If there is a credit event of a reference entity underlying the instrument, the principal balance of the note may not be repaid in full to the Company.

#### **Note 6 - Collateralized Transactions**

The Company enters into reverse repurchase agreements, repurchase agreements, securities borrowed and securities loaned transactions to, among other things, acquire securities to cover short positions and settle other securities obligations, to accommodate customers’ needs and to finance the Company’s inventory positions.

The Company manages credit exposure arising from such transactions by, in appropriate circumstances, entering into master netting agreements and collateral agreements with counterparties that provide the Company, in the event of a counterparty default (such as bankruptcy or a counterparty’s failure to pay or perform), with the right to net a counterparty’s rights and obligations under such agreement and liquidate and set off collateral held by the Company against the net amount owed by the counterparty.

The Company’s policy is generally to take possession of securities purchased or borrowed in connection with reverse repurchase agreements and securities borrowed transactions, respectively, and to receive cash and securities delivered under repurchase agreements or securities loaned transactions (with rights of rehypothecation). In certain cases, the Company may be permitted to post collateral to a third-party custodian under a tri-party arrangement that enables the Company to take control of such collateral in the event of a counterparty default.

The Company also monitors the fair value of the underlying securities as compared with the related receivable or payable, including accrued interest, and, as necessary, requests additional collateral as provided under the applicable agreement to ensure such transactions are adequately collateralized or the return of excess collateral.

The risk related to a decline in the market value of collateral (pledged or received) is managed by setting appropriate market-based haircuts. Increases in collateral margin calls on secured financing due to market value declines may be mitigated by increases in collateral margin calls on reverse repurchase agreements and securities borrowed transactions with similar quality collateral. Additionally, the Company may request lower quality collateral pledged be replaced with higher quality collateral through collateral substitution rights in the underlying agreements.

The Company actively manages its secured financing in a manner that reduces the potential refinancing risk of secured financing for less liquid assets. The Company considers the quality of collateral when negotiating collateral eligibility with counterparties, as defined by the Company’s fundability criteria. The

Company utilizes shorter-term secured financing for highly liquid assets and has established longer tenor limits for less liquid assets, for which funding may be at risk in the event of a market disruption.

***Offsetting of Certain Collateralized Transactions***

At December 31, 2016						
	Gross Amounts <sup>(1)</sup>	Amounts Offset	Net Amounts Presented	Amounts not Offset <sup>(2)</sup>	Net Amounts	
<b>Assets</b>						
Reverse repurchase agreements	\$ 117,811	\$ (52,512)	\$ 65,299	\$ (52,233)	\$ 13,066	
Securities borrowed	94,159	-	94,159	(90,805)	3,354	
<b>Liabilities</b>						
Repurchase agreements	\$ 138,746	\$ (52,512)	\$ 86,234	\$ (81,340)	\$ 4,894	
Securities loaned	21,387	-	21,387	(21,343)	44	

<sup>(1)</sup> Amounts include transactions that are either not subject to master netting agreements or are subject to such agreements but the Company has not determined the agreements to be legally enforceable as follows: \$11,163 of reverse repurchase agreements, \$580 of Securities borrowed, \$4,750 of repurchase agreements and \$1 of Securities loaned.

<sup>(2)</sup> Amounts relate to master netting agreements that have been determined by the Company to be legally enforceable in the event of default but where certain other criteria are not met in accordance with applicable offsetting accounting guidance.

For information related to offsetting of derivatives, see Note 5.



## ***Maturities and Collateral Pledged***

### ***Gross Secured Financing Balances by Remaining Contractual Maturity***

	<b>At December 31, 2016</b>				
	<b>Overnight and Open</b>	<b>Less than 30 Days</b>	<b>30-90 Days</b>	<b>Over 90 Days</b>	<b>Total</b>
Repurchase agreements <sup>(1)</sup>	\$ 76,971	\$ 17,942	\$ 23,764	\$ 20,069	\$ 138,746
Securities loaned <sup>(1)</sup>	18,888	-	250	2,249	21,387
Gross amount of secured financing included in the offsetting disclosure	95,859	17,942	24,014	22,318	160,133
Obligation to return securities received as collateral	20,252	-	-	-	20,252
Total	<u>\$ 116,111</u>	<u>\$ 17,942</u>	<u>\$ 24,014</u>	<u>\$ 22,318</u>	<u>\$ 180,385</u>

### ***Gross Secured Financing Balances by Class of Collateral Pledged***

	<b>At December 31, 2016</b>
<b>Repurchase agreements <sup>(1)</sup></b>	
U.S. government and agency securities	\$ 106,224
State and municipal securities	1,364
Other sovereign government obligations	208
Asset-backed securities	1,844
Corporate and other debt	1,204
Corporate equities	27,748
Other	154
Total repurchase agreements	<u>138,746</u>
<b>Securities loaned <sup>(1)</sup></b>	
U.S. government and agency securities	28
Other sovereign government obligations	352
Asset-backed securities	9
Corporate and other debt	1,041
Corporate equities	19,915
Other	42
Total securities loaned	<u>21,387</u>
Gross amount of secured financing included in the offsetting disclosure	<u>160,133</u>
<b>Obligation to return securities received as collateral</b>	
Corporate equities	<u>20,252</u>
Total obligation to return securities received as collateral	<u>20,252</u>
Total	<u>\$ 180,385</u>

<sup>(1)</sup> Amounts are presented on a gross basis, prior to netting in the consolidated statement of financial condition.

## ***Financial Instruments Pledged***

The Company pledges its Financial instruments owned to collateralize repurchase agreements and other secured financings. Pledged financial instruments that can be sold or repledged by the secured party are identified as Financial instruments owned (pledged to various parties) in the Company's consolidated statement of financial condition. At December 31, 2016 the carrying value of Financial instruments

owned that have been loaned or pledged to counterparties, where those counterparties do not have the right to sell or repledge the collateral was \$31,894.

### ***Collateral Received***

The Company receives collateral in the form of securities in connection with reverse repurchase agreements, securities borrowed and derivative transactions, and customer margin loans. In many cases, the Company is permitted to sell or repledge these securities held as collateral and use the securities to secure repurchase agreements, to enter into securities lending and derivative transactions or for delivery to counterparties to cover short positions. The Company additionally receives securities as collateral in connection with certain securities-for-securities transactions. In instances where the Company is the lender and permitted to sell or repledge these securities, the Company reports the fair value of the collateral received and the related obligation to return the collateral in the consolidated statement of financial condition. At December 31, 2016, the total fair value of financial instruments received as collateral where the Company is permitted to sell or repledge the securities was \$378,431 and the fair value of the portion that had been sold or repledged was \$312,088.

### ***Concentration Risk***

The Company is subject to concentration risk by holding large positions in certain types of securities or commitments to purchase securities of a single issuer, including sovereign governments and other entities, issuers located in a particular country or geographic area, public and private issuers involving developing countries, or issuers engaged in a particular industry. Financial instruments owned by the Company include U.S. government and agency securities, which, in the aggregate, represented approximately 13% of the Company's total assets at December 31, 2016. In addition, substantially all of the collateral held by the Company for reverse repurchase agreements or bonds borrowed, which together represented approximately 26% of the Company's total assets at December 31, 2016, consist of securities issued by the U.S. government, federal agencies or other sovereign government obligations. Positions taken and commitments made by the Company, including positions taken and underwriting and financing commitments made in connection with its private equity, principal investment and lending activities, often involve substantial amounts and significant exposure to individual issuers and businesses, including non-investment grade issuers.

At December 31, 2016, cash and securities of \$15,053 and \$21,113, respectively, were deposited with clearing organizations or segregated under federal and other regulations or requirements. Securities deposited with clearing organizations or segregated under federal and other regulations or requirements are sourced from reverse repurchase agreements and Financial instruments owned in the Company's consolidated statement of financial condition.

### ***Customer Margin Lending***

The Company also engages in margin lending to clients that allows the client to borrow against the value of qualifying securities. Margin loans are included within Customer receivables in the Company's consolidated statement of financial condition. Under these agreements and transactions, the Company either receives or provides collateral, including U.S. government and agency securities, other sovereign government obligations, corporate and other debt, and corporate equities. Customer receivables generated from margin lending activities are collateralized by customer-owned securities held by the Company. The Company monitors required margin levels and established credit terms daily and, pursuant to such guidelines, requires customers to deposit additional collateral, or reduce positions, when necessary.

Margin loans are extended on a demand basis and are not committed facilities. Factors considered in the review of margin loans are the amount of the loan, the intended purpose, the degree of leverage being employed in the account, and overall evaluation of the portfolio to ensure proper diversification or, in the case of concentrated positions, appropriate liquidity of the underlying collateral or potential hedging strategies to reduce risk.

Underlying collateral for margin loans is reviewed with respect to the liquidity of the proposed collateral positions, valuation of securities, historic trading range, volatility analysis and an evaluation of industry concentrations. For these transactions, adherence to the Company's collateral policies significantly limits the Company's credit exposure in the event of a customer default. The Company may request additional margin collateral from customers, if appropriate, and, if necessary, may sell securities that have not been paid for or purchase securities sold but not delivered from customers. At December 31, 2016, the amounts related to margin lending was approximately \$8,287.

### ***Other***

Other secured financings include the liabilities related to transfers of financial assets that are accounted for as financings rather than sales, consolidated VIEs where the Company is deemed to be the primary beneficiary, and other secured borrowings. These liabilities are generally payable from the cash flows of the related assets accounted for as Financial instruments owned (see Note 7 and 10).

## **Note 7 – Borrowings and Other Secured Financings**

### ***Short-term Borrowings***

Short-term borrowings consist of cash overdrafts and other short-term borrowings with affiliates with varying maturities of 12 months or less.

### ***Long-term Borrowings***

Long-term borrowings consist of unsecured borrowings from affiliates and hybrid financial instruments with embedded derivatives. The unsecured borrowings from affiliates are callable with maturities of 13 months or more from when it is called. The interest rates for the unsecured borrowings from affiliates are established by the treasury function of the Ultimate Parent and approximate the market rate of interest that the Ultimate Parent incurs in funding its business as it is periodically reassessed.

### ***Other Secured Financings***

Other secured financings include the liabilities related to transfers of financial assets that are accounted for as financings rather than sales, consolidated VIEs where the Company is deemed to be the primary beneficiary and other secured borrowings. See Note 10 for further information on other secured financings related to VIEs and securitization activities.

The Company's Other secured financings at December 31, 2016 consisted of the following:

Secured financings with original maturities greater than one year	\$	1,715
Secured financings with original maturities one year or less		512
Failed sales <sup>(1)</sup>		<u>1</u>
Total	\$	<u><u>2,228</u></u>

<sup>(1)</sup> For more information on failed sales, see Note 10.

Secured financings with original maturities greater than one year by maturity and rate type at December 31, 2016 consisted of the following:

	<b>Fixed Rate</b>	<b>Variable Rate<sup>(1)</sup></b>	<b>Total</b>
Due in 2017	\$ -	\$ 375	\$ 375
Due in 2018	-	1,300	1,300
Due in 2019	1	-	1
Due in 2020	-	-	-
Due in 2021	-	-	-
Thereafter	39	-	39
Total	<u>\$ 40</u>	<u>\$ 1,675</u>	<u>\$ 1,715</u>

Weighted average coupon rate at period-end <sup>(2)</sup> 3.29% 1.36% 1.43%

<sup>(1)</sup> Variable rate borrowings bear interest based on a variety of indices, including LIBOR. Amounts include borrowings that are equity-linked, credit-linked or linked to some other index.

<sup>(2)</sup> Weighted average coupon was calculated utilizing U.S. interest rates.

At December 31, 2016 there were failed sales of \$1 all of which due to mature in 2017. For more information of failed sales, see Note 10.

### **Note 8 - Subordinated Liabilities**

Subordinated liabilities consist of a Cash Subordination Agreement and a \$12,000 Subordinated Revolving Credit Agreement with the Ultimate Parent at December 31, 2016. On April 30, 2016, the credit agreements were amended to extend the maturity dates and modify the interest rates, with the total line of credit remaining unchanged at \$12,000. The maturity dates, interest rates and book value of the subordinated notes at December 31, 2016 are as follows:

<b>Subordinated Notes</b>	<b>Maturity Date</b>	<b>Interest Rate</b>	<b>Book Value</b>
Cash Subordination Agreement	April 30, 2026	4.70%	\$ 2,500
Subordinated Revolving Credit Agreement	April 30, 2026	3.89%	8,800
Total			<u>\$ 11,300</u>

### **Note 9 – Commitments, Guarantees and Contingencies**

#### **Premises and Equipment**

At December 31, 2016, future minimum rental commitments (net of sublease commitments, principally on office rentals) were as follows:

<b>Fiscal Year</b>	<b>Gross Amount</b>	<b>Sublease Income</b>	<b>Net Amount</b>
2017	\$ 161	3	\$ 158
2018	158	3	155
2019	125	3	122
2020	119	3	116
2021	115	-	115
Thereafter	1,050	-	1,050
Total	<u>\$ 1,728</u>	<u>12</u>	<u>\$ 1,716</u>

Occupancy lease agreements, in addition to base rentals, generally provide for rent and operating expense escalations resulting from increased assessments for real estate taxes and other charges.

### Securities Activities

Financial instruments sold, not yet purchased represent obligations of the Company to deliver specified financial instruments at contracted prices, thereby creating commitments to purchase the financial instruments in the market at prevailing prices. Consequently, the Company's ultimate obligation to satisfy the sale of financial instruments sold, not yet purchased may exceed the amounts recognized in the consolidated statement of financial condition.

The Company enters into forward-starting reverse repurchase agreements and forward-starting securities borrow agreements (agreements that have a trade date as of or prior to December 31, 2016 and settle subsequent to December 31, 2016) that are primarily secured by collateral from U.S. government agency securities and other sovereign government obligations. At December 31, 2016, the Company had commitments to enter into reverse repurchase agreements and securities borrow agreements of \$4,217. At December 31, 2016, \$3,967 of these agreements settled within three business days.

### Guarantees

The following table summarizes certain information regarding the Company's obligation under guarantee arrangements at December 31, 2016.

Type of Guarantee	Maximum Potential Payout/Notional					Carrying Amount (Asset)/ Liability
	Years to Maturity					
	Less than 1	1 - 3	3 - 5	Over 5	Total	
Credit derivative contracts <sup>(1)</sup>	\$ -	\$ -	\$ -	\$ 3,280	\$ 3,280	\$ 390
Other credit contracts	47	-	-	187	234	(17)
Non-credit derivative contracts <sup>(1)</sup>	81,154	9,547	470	772	91,943	2,558

<sup>(1)</sup> Carrying amount of derivatives contracts are shown on a gross basis prior to cash collateral or counterparty netting. For further information on derivative contracts, see Note 5.

The Company has obligations under certain guarantee arrangements, including contracts and indemnification agreements that contingently require the Company to make payments to the guaranteed party based on changes in an underlying measure (such as an interest or foreign exchange rate, security or commodity price, an index or the occurrence or non-occurrence of a specified event) related to an asset, liability or equity security of a guaranteed party. Also included as guarantees are contracts that contingently require the Company to make payments to the guaranteed party based on another entity's failure to perform under an agreement, as well as indirect guarantees of the indebtedness of others.

### Derivative Contracts

Certain derivative contracts meet the accounting definition of a guarantee, including certain written options, contingent forward contracts and credit default swaps (see Note 5 regarding credit derivatives in which the Company has sold credit protection to the counterparty). The Company has disclosed information regarding all derivative contracts that could meet the accounting definition of a guarantee and

has used the notional amount as the maximum potential payout for certain derivative contracts, such as written foreign currency options.

In certain situations, collateral may be held by the Company for those contracts that meet the definition of a guarantee. Generally, the Company sets collateral requirements by counterparty so that the collateral covers various transactions and products and is not allocated specifically to individual contracts. Also, the Company may recover amounts related to the underlying asset delivered to the Company under the derivative contract.

The Company records derivative contracts at fair value. Aggregate market risk limits have been established, and market risk measures are routinely monitored against these limits. The Company also manages its exposure to these derivative contracts through a variety of risk mitigation strategies, including, but not limited to, entering into offsetting economic hedge positions. The Company believes that the notional amounts of the derivative contracts generally overstate its exposure.

#### *Exchange/Clearinghouse Member Guarantees*

The Company is a member of various U.S. exchanges and clearinghouses that trade and clear securities and/or derivative contracts. Associated with its membership, the Company may be required to pay a certain amount as determined by the exchange or the clearinghouse in case of a default of any of its members or pay a proportionate share of the financial obligations of another member that may default on its obligations to the exchange or the clearinghouse. While the rules governing different exchange or clearinghouse memberships and the forms of these guarantees may vary, in general the Company's obligations under these rules would arise only if the exchange or clearinghouse had previously exhausted its resources.

In addition, some clearinghouse rules require members to assume a proportionate share of losses resulting from the clearinghouse's investment of guarantee fund contributions and initial margin, and of other losses unrelated to the default of a clearing member, if such losses exceed the specified resources allocated for such purpose by the clearinghouse.

The maximum potential payout under these rules cannot be estimated. The Company has not recorded any contingent liability in its consolidated statement of financial condition for these agreements and believes that any potential requirement to make payments under these agreements is remote.

#### **Legal**

In the normal course of business, the Company has been named, from time to time, as a defendant in various legal actions, including arbitrations, class actions and other litigation, arising in connection with its activities as a global diversified financial services institution. Certain of the actual or threatened legal actions include claims for substantial compensatory and/or punitive damages or claims for indeterminate amounts of damages. In some cases, the entities that would otherwise be the primary defendants in such cases are bankrupt or are in financial distress. These actions have included, but are not limited to, residential mortgage and credit-crisis related matters. Over the last several years, the level of litigation and investigatory activity (both formal and informal) by governmental and self-regulatory agencies has increased materially in the financial services industry. As a result, the Company expects that it may become the subject of elevated claims for damages and other relief and, while the Company has identified below any individual proceedings where the Company believes a material loss to be reasonably possible and reasonably estimable, there can be no assurance that material losses will not be incurred from claims that have not yet been asserted or are not yet determined to be probable or possible and reasonably estimable losses.



The Company is also involved, from time to time, in other reviews, investigations and proceedings (both formal and informal) by governmental and self-regulatory agencies regarding the Company's business, and involving, among other matters, sales and trading activities, financial products or offerings sponsored, underwritten or sold by the Company, and accounting and operational matters, certain of which may result in adverse judgments, settlements, fines, penalties, injunctions or other relief.

The Company contests liability and/or the amount of damages as appropriate in each pending matter. Where available information indicates that it is probable a liability had been incurred at the date of the consolidated statement of financial condition and the Company can reasonably estimate the amount of that loss, the Company accrues the estimated loss by a charge to income.

In many proceedings and investigations, however, it is inherently difficult to determine whether any loss is probable or even possible or to estimate the amount of any loss. In addition, even where loss is possible or an exposure to loss exists in excess of the liability already accrued with respect to a previously recognized loss contingency, it is not always possible to reasonably estimate the size of the possible loss or range of loss.

For certain legal proceedings and investigations, the Company cannot reasonably estimate such losses, particularly for proceedings and investigations where the factual record is being developed or contested or where plaintiffs or governmental entities seek substantial or indeterminate damages, restitution, disgorgement or penalties. Numerous issues may need to be resolved, including through potentially lengthy discovery and determination of important factual matters, determination of issues related to class certification and the calculation of damages or other relief, and by addressing novel or unsettled legal questions relevant to the proceedings or investigations in question, before a loss or additional loss or range of loss or additional loss can be reasonably estimated for a proceeding or investigation.

For certain other legal proceedings and investigations, the Company can estimate reasonably possible losses, additional losses, ranges of loss or ranges of additional loss in excess of amounts accrued, but does not believe, based on current knowledge and after consultation with counsel, that such losses will have a material adverse effect on the Company's consolidated statement of financial condition as a whole, other than the matters referred to in the following paragraphs.

#### ***Residential Mortgage and Credit Crisis Related Matters***

On December 23, 2009, the Federal Home Loan Bank of Seattle filed a complaint against the Company and another defendant in the Superior Court of the State of Washington, styled *Federal Home Loan Bank of Seattle v. Morgan Stanley & Co. Inc., et al.* The amended complaint, filed on September 28, 2010, alleges that defendants made untrue statements and material omissions in the sale to plaintiff of certain mortgage pass-through certificates backed by securitization trusts containing residential mortgage loans. The total amount of certificates allegedly sold to plaintiff by the Company was approximately \$233. The complaint raises claims under the Washington State Securities Act and seeks, among other things, to rescind the plaintiff's purchase of such certificates. On January 23, 2017, the parties reached an agreement to settle the litigation.

On March 15, 2010, the Federal Home Loan Bank of San Francisco filed a complaint against the Company and other defendants in the Superior Court of the State of California styled *Federal Home Loan Bank of San Francisco v. Deutsche Bank Securities Inc. et al.* An amended complaint, filed on June 10, 2010, alleges that defendants made untrue statements and material omissions in connection with the sale to plaintiff of certain mortgage pass-through certificates backed by securitization trusts containing residential mortgage loans. The amount of certificates allegedly sold to plaintiff by the Company was



approximately \$276. The complaint raises claims under both the federal securities laws and California law and seeks, among other things, to rescind the plaintiff's purchase of such certificates. On December 21, 2016, the parties reached an agreement to settle the litigation.

On July 15, 2010, China Development Industrial Bank ("CDIB") filed a complaint against the Company, styled *China Development Industrial Bank v. Morgan Stanley & Co. Incorporated et al.*, which is pending in the Supreme Court of the State of New York, New York County ("Supreme Court of NY"). The complaint relates to a \$275 credit default swap referencing the super senior portion of the STACK 2006-1 CDO. The complaint asserts claims for common law fraud, fraudulent inducement and fraudulent concealment and alleges that the Company misrepresented the risks of the STACK 2006-1 CDO to CDIB, and that the Company knew that the assets backing the CDO were of poor quality when it entered into the credit default swap with CDIB. The complaint seeks compensatory damages related to the approximately \$228 that CDIB alleges it has already lost under the credit default swap, rescission of CDIB's obligation to pay an additional \$12, punitive damages, equitable relief, fees and costs. On February 28, 2011, the court denied the Company's motion to dismiss the complaint. Based on currently available information, the Company believes it could incur a loss of up to approximately \$240 plus pre- and post-judgment interest, fees and costs.

On October 15, 2010, the Federal Home Loan Bank of Chicago filed a complaint against the Company and other defendants in the Circuit Court of the State of Illinois, styled *Federal Home Loan Bank of Chicago v. Bank of America Funding Corporation et al.* A corrected amended complaint was filed on April 8, 2011. The corrected amended complaint alleges that defendants made untrue statements and material omissions in the sale to plaintiff of a number of mortgage pass-through certificates backed by securitization trusts containing residential mortgage loans and asserts claims under Illinois law. The total amount of certificates allegedly sold to plaintiff by the Company at issue in the action was approximately \$203. The complaint seeks, among other things, to rescind the plaintiff's purchase of such certificates. The defendants filed a motion to dismiss the corrected amended complaint on May 27, 2011, which was denied on September 19, 2012. On December 13, 2013, the court entered an order dismissing all claims related to one of the securitizations at issue. After that dismissal, the remaining amount of certificates allegedly issued by the Company or sold to plaintiff by the Company was approximately \$78. At December 25, 2016, the current unpaid balance of the mortgage pass-through certificates at issue in this action was approximately \$46, and the certificates had not yet incurred actual losses. Based on currently available information, the Company believes it could incur a loss in this action up to the difference between the \$46 unpaid balance of these certificates (plus any losses incurred) and their fair market value at the time of a judgment against the Company, plus pre- and post-judgment interest, fees and costs. The Company may be entitled to be indemnified for some of these losses and to an offset for interest received by the plaintiff prior to a judgment.

On April 20, 2011, the Federal Home Loan Bank of Boston filed a complaint against the Company and other defendants in the Superior Court of the Commonwealth of Massachusetts styled *Federal Home Loan Bank of Boston v. Ally Financial, Inc. F/K/A GMAC LLC et al.* An amended complaint was filed on June 29, 2012 and alleges that defendants made untrue statements and material omissions in the sale to plaintiff of certain mortgage pass-through certificates backed by securitization trusts containing residential mortgage loans. The total amount of certificates allegedly issued by the Company or sold to plaintiff by the Company was approximately \$385. The amended complaint raises claims under the Massachusetts Uniform Securities Act, the Massachusetts Consumer Protection Act and common law and seeks, among other things, to rescind the plaintiff's purchase of such certificates. On May 26, 2011, defendants removed the case to the United States District Court for the District of Massachusetts. The defendants' motions to dismiss the amended complaint were granted in part and denied in part on September 30, 2013. On November 25, 2013, July 16, 2014, and May 19, 2015, respectively, the plaintiff voluntarily dismissed its claims against the Company with respect to three of the securitizations at issue.

After these voluntary dismissals, the remaining amount of certificates allegedly issued by the Company or sold to plaintiff by the Company was approximately \$332. At December 25, 2016, the current unpaid balance of the mortgage pass-through certificates at issue in this action was approximately \$51, and the certificates had not yet incurred actual losses. Based on currently available information, the Company believes it could incur a loss in this action up to the difference between the \$51 unpaid balance of these certificates (plus any losses incurred) and their fair market value at the time of a judgment against the Company, or upon sale, plus pre- and post-judgment interest, fees and costs. The Company may be entitled to be indemnified for some of these losses and to an offset for interest received by the plaintiff prior to a judgment.

On May 17, 2013, plaintiff in *IKB International S.A. in Liquidation, et al. v. Morgan Stanley, et al.* filed a complaint against the Company and certain affiliates in the Supreme Court of NY. The complaint alleges that defendants made material misrepresentations and omissions in the sale to plaintiff of certain mortgage pass-through certificates backed by securitization trusts containing residential mortgage loans. The total amount of certificates allegedly sponsored, underwritten and/or sold by the Company to plaintiff was approximately \$132. The complaint alleges causes of action against the Company for common law fraud, fraudulent concealment, aiding and abetting fraud, and negligent misrepresentation, and seeks, among other things, compensatory and punitive damages. On October 29, 2014, the court granted in part and denied in part the Company's motion to dismiss. All claims regarding four certificates were dismissed. After these dismissals, the remaining amount of certificates allegedly issued by the Company or sold to plaintiff by the Company was approximately \$116. On August 26, 2015, the Company perfected its appeal from the court's October 29, 2014 decision. At December 25, 2016, the current unpaid balance of the mortgage pass-through certificates at issue in this action was approximately \$25, and the certificates had incurred actual losses of \$58. Based on currently available information, the Company believes it could incur a loss in this action up to the difference between the \$25 unpaid balance of these certificates (plus any losses incurred) and their fair market value at the time of a judgment against the Company, or upon sale, plus pre- and post-judgment interest, fees and costs. The Company may be entitled to be indemnified for some of these losses and to an offset for interest received by the plaintiff prior to a judgment.

On May 3, 2013, plaintiffs in *Deutsche Zentral-Genossenschaftsbank AG et al. v. Morgan Stanley et al.* filed a complaint against the Company, certain affiliates, and other defendants in the Supreme Court of NY. The complaint alleges that defendants made material misrepresentations and omissions in the sale to plaintiffs of certain mortgage pass-through certificates backed by securitization trusts containing residential mortgage loans. The total amount of certificates allegedly sponsored, underwritten and/or sold by the Company to plaintiff currently at issue in this action was approximately \$644. The complaint alleges causes of action against the Company for common law fraud, fraudulent concealment, aiding and abetting fraud, negligent misrepresentation, and rescission and seeks, among other things, compensatory and punitive damages. On June 10, 2014, the court granted in part and denied in part the Company's motion to dismiss the complaint. The Company perfected its appeal from that decision on June 12, 2015. At December 25, 2016, the current unpaid balance of the mortgage pass-through certificates at issue in this action was approximately \$247, and the certificates had incurred actual losses of approximately \$86. Based on currently available information, the Company believes it could incur a loss in this action up to the difference between the \$247 unpaid balance of these certificates (plus any losses incurred) and their fair market value at the time of a judgment against the Company, or upon sale, plus pre- and post-judgment interest, fees and costs. The Company may be entitled to be indemnified for some of these losses.

On April 1, 2016, the California Attorney General's Office filed an action against the Firm in California state court styled *California v. Morgan Stanley, et al.*, on behalf of California investors, including the

California Public Employees' Retirement System and the California Teachers' Retirement System. The complaint alleges that the Firm made misrepresentations and omissions regarding residential mortgage-backed securities and notes issued by the Cheyne SIV, and asserts violations of the California False Claims Act and other state laws and seeks treble damages, civil penalties, disgorgement, and injunctive relief. On September 30, 2016, the court granted the Firm's demurrer, with leave to replead. On October 21, 2016, the California Attorney General filed an amended complaint. On January 25, 2017, the court denied the Firm's demurrer with respect to the amended complaint.

#### **Note 10 – Variable Interest Entities and Securitization Activities**

The Company is involved with various special purpose entities ("SPEs") in the normal course of business. In most cases, these entities are deemed to be VIEs.

The Company's variable interests in VIEs include debt and equity interests, commitments, guarantees, derivative instruments and certain fees. The Company's involvement with VIEs arises primarily from:

- Interests purchased in connection with market-making activities and retained interests held as a result of securitization activities, including re-securitization transactions.
- Residual interests retained in connection with municipal bond securitizations.
- Structuring of CLNs or other asset-repackaged notes designed to meet the investment objectives of clients.

The Company determines whether it is the primary beneficiary of a VIE upon its initial involvement with the VIE and reassesses whether it is the primary beneficiary on an ongoing basis as long as it has any continuing involvement with the VIE. This determination is based upon an analysis of the design of the VIE, including the VIE's structure and activities, the power to make significant economic decisions held by the Company and by other parties, and the variable interests owned by the Company and other parties.

The power to make the most significant economic decisions may take a number of different forms in different types of VIEs. The Company considers servicing or collateral management decisions as representing the power to make the most significant economic decisions in transactions such as securitizations or CDOs. As a result, the Company does not consolidate securitizations or CDOs for which it does not act as the servicer or collateral manager unless it holds certain other rights to replace the servicer or collateral manager or to require the liquidation of the entity. If the Company serves as servicer or collateral manager, or has certain other rights described in the previous sentence, the Company analyzes the interests in the VIE that it holds and consolidates only those VIEs for which it holds a potentially significant interest of the VIE.

The structure of securitization vehicles and CDOs is driven by several parties, including loan seller(s) in securitization transactions, the collateral manager in a CDO, one or more rating agencies, a financial guarantor in some transactions and the underwriter(s) of the transactions, that serve to reflect specific investor demand. In addition, subordinate investors, such as the "B-piece" buyer (i.e., investors in most subordinated bond classes) in commercial mortgage backed securitizations or equity investors in CDOs, can influence whether specific loans are excluded from a CMBS transaction or investment criteria in a CDO.

For many transactions, such as re-securitization transactions, CLNs and other asset-repackaged notes, there are no significant economic decisions made on an ongoing basis. In these cases, the Company

focuses its analysis on decisions made prior to the initial closing of the transaction and at the termination of the transaction. Based upon factors, which include an analysis of the nature of the assets, including whether the assets were issued in a transaction sponsored by the Company and the extent of the information available to the Company and to investors, the number, nature and involvement of investors, other rights held by the Company and investors, the standardization of the legal documentation and the level of continuing involvement by the Company, including the amount and type of interests owned by the Company and by other investors, the Company concluded in most of these transactions that decisions made prior to the initial closing were shared between the Company and the initial investors. The Company focused its control decision on any right held by the Company or investors related to the termination of the VIE. Most re-securitization transactions, CLNs and other asset-repackaged notes have no such termination rights.

The Company accounts for the assets held by the entities primarily in Financial instruments owned and the liabilities of the entities as Other secured financings in the consolidated statement of financial condition. The assets and liabilities are measured at fair value.

The following table presents information at December 31, 2016 about VIEs that the Company consolidates. Consolidated VIE assets and liabilities are presented after intercompany eliminations and include assets financed on a non-recourse basis.

	<u>Assets</u>	<u>Liabilities</u>
Mortgage- and Asset-Backed Securitizations	\$ 44	\$ 33

The Company has no additional maximum exposure to losses on assets not recognized in its consolidated statement of financial condition as of December 31, 2016.

The following table presents information about non-consolidated VIEs in which the Company has determined that its maximum exposure to loss is greater than specific thresholds or meets certain other criteria and excludes exposure to loss from liabilities due to immateriality. Most of the VIEs included in the following table are sponsored by unrelated parties; the Company's involvement generally is the result of the Company's secondary market-making activities.

	<u>At December 31, 2016</u>			
	<u>Mortgage- and Asset-Backed Securitizations</u>	<u>Collateralized Debt Obligations</u>	<u>Municipal Tender Option Bonds</u>	<u>Other</u>
VIE assets that the Company does not consolidate (unpaid principal balance)	\$ 12,897	\$ 4,621	\$ 145	\$ 112
Total maximum exposure to loss and carrying value of exposure to loss:				
Debt and equity interests	\$ 782	\$ 250	\$ 49	\$ 12

## Non-consolidated VIE Mortgage- and Asset-Backed Securitization Assets

	At December 31, 2016	
	Unpaid Principal Balance	Debt and Equity Interests
Residential mortgages	\$ 1,601	\$ 206
Commercial mortgages debt obligations	10,808	415
U.S. agency collateralized mortgage obligations	488	161
Total	<u>\$ 12,897</u>	<u>\$ 782</u>

The Company's maximum exposure to loss does not include the offsetting benefit of any financial instruments that the Company may utilize to hedge these risks associated with the Company's variable interests. In addition, the Company's maximum exposure to loss is not reduced by the amount of collateral held as part of a transaction with the VIE or any party to the VIE directly against a specific exposure to loss.

Securitization transactions generally involve VIEs. Primarily as a result of its secondary market-making activities, the Company owned additional VIE assets mainly issued by securitization SPEs for which the maximum exposure to loss is less than specific thresholds. These additional assets totaled \$1,531 at December 31, 2016. These assets were either retained in connection with transfers of assets by the Company, or acquired in connection with secondary market-making activities. These assets consisted of securities backed by residential mortgage loans, commercial mortgage loans, or other consumer loans, such as credit card receivables, automobile loans and student loans, and CDOs or CLOs and investment funds. The Company's primary risk exposure is to the securities issued by the SPE owned by the Company, with the risk highest on the most subordinate class of beneficial interests. These assets generally are included in Financial instruments owned-Corporate and other debt and are measured at fair value (see Note 4). The Company does not provide additional support in these transactions through contractual facilities, such as liquidity facilities, guarantees, or similar derivatives. The Company's maximum exposure to loss generally equals the fair value of the assets owned.

The Company's transactions with VIEs primarily includes securitizations, municipal tender option bond trusts, credit protection purchased by affiliates through CLNs, and collateralized loan and debt obligations. Such activities are further described below.

### *Securitization Activities*

In a securitization transaction, the Company or an affiliate transfers assets (generally commercial or U.S. agency securities) to an SPE, sells to investors most of the beneficial interests, such as notes or certificates, issued by the SPE, and, in many cases, retains other beneficial interests. The purchase of the transferred assets by the SPE is financed through the sale of these interests.

Although not obligated, the Company generally makes a market in the securities issued by SPEs in these transactions. As a market maker, the Company offers to buy these securities from, and sell these securities to, investors. Securities purchased through these market-making activities are not considered to be retained interests, although these beneficial interests generally are included in Financial instruments owned- Corporate and other debt and are measured at fair value.

The Company enters into derivatives, generally interest rate swaps and interest rate caps, with a senior payment priority in many securitization transactions. The risks associated with these and similar derivatives with SPEs are essentially the same as similar derivatives with non-SPE counterparties and are



managed as part of the Company's overall exposure. See Note 5 for further information on derivative instruments and hedging activities.

#### *Municipal Tender Option Bond Trusts*

In a municipal tender option bond transaction, the Company, generally on behalf of a client, transfers a municipal bond to a trust. The trust issues short-term securities that the Company, as the remarketing agent, sells to investors. The client retains a residual interest. The short-term securities are supported by a liquidity facility pursuant to which the investors may put their short-term interests. In some programs, an affiliate of the Company provides this liquidity facility; in most programs, a third-party provider will provide such liquidity facility. The Company may purchase short-term securities in its role as remarketing agent. The client can generally terminate the transaction at any time. The liquidity provider can generally terminate the transaction upon the occurrence of certain events. When the transaction is terminated, the municipal bond is generally sold or returned to the client. Any losses suffered by the liquidity provider upon the sale of the bond are the responsibility of the client. This obligation generally is collateralized. Liquidity facilities provided to municipal tender option bond trusts generally are provided by affiliates of the Company. The Company consolidates any municipal tender option bond trusts in which it holds the residual interest. No such trust was consolidated at December 31, 2016.

#### *Credit Linked Notes*

In a CLN transaction, the Company transfers assets (generally high quality securities or money market investments) to an SPE. An affiliate of the Company enters into a derivative transaction in which the SPE writes protection on an unrelated reference asset or group of assets, through a credit default swap, a total return swap or similar instrument, and sells to investors the securities issued by the SPE. In some transactions, an affiliate of the Company may also enter into interest rate or currency swaps with the SPE. Upon the occurrence of a credit event related to the reference asset, the SPE will deliver collateral securities as payment to the affiliate of the Company that serves as the derivative counterparty. These transactions are designed to provide investors with exposure to certain credit risk on the reference asset. In some transactions, the assets and liabilities of the SPE are recognized in the Company's consolidated statement of financial condition. In other transactions, the transfer of the collateral securities is accounted for as a sale of assets, and the SPE is not consolidated. The structure of the transaction determines the accounting treatment. CLNs are included in Other in the above VIE tables.

The derivatives in CLN transactions consist of total return swaps, credit default swaps or similar contracts in which an affiliate of the Company has purchased protection on a reference asset or group of assets. Payments by the SPE are collateralized.

#### *Collateralized Loan and Debt Obligations*

A CLO or a CDO is an SPE that purchases a pool of assets, consisting of corporate loans, corporate bonds, asset-backed securities or synthetic exposures on similar assets through derivatives, and issues multiple tranches of debt and equity securities to investors. The Company underwrites the securities issued in CLO transactions on behalf of unaffiliated sponsors and provides advisory services to these unaffiliated sponsors. An affiliate of the Company sells corporate loans to many of these SPEs, in some cases representing a significant portion of the total assets purchased. If necessary, the Company may retain unsold securities issued in these transactions. Although not obligated, the Company generally makes a market in the securities issued by SPEs in these transactions. These beneficial interests are included in Financial instruments owned and are measured at fair value.

### ***Transfers of Assets with Continuing Involvement***

Transfers with SPEs in which the Company, acting as principal, transferred financial assets with continuing involvement and received sales treatment are shown below.

	<b>At December 31, 2016</b>		
	<b>Commercial Mortgage Loans</b>	<b>U.S. Agency Collateralized Mortgage Obligations</b>	<b>Credit-Linked Notes and Other <sup>(1)</sup></b>
SPE assets (unpaid principal balance)	\$ 333	\$ 11,092	\$ 89
Retained interests (fair value):			
Investment grade	\$ -	\$ 375	\$ -
Non-investment grade	28	-	-
Total retained interests (fair value)	<u>\$ 28</u>	<u>\$ 375</u>	<u>\$ -</u>
Interests purchased in the secondary market (fair value):			
Investment grade	\$ -	\$ 26	\$ -
Non-investment grade	4	-	1
Total interests purchased in the secondary market (fair value)	<u>\$ 4</u>	<u>\$ 26</u>	<u>\$ 1</u>

<sup>(1)</sup> Amounts include assets transferred by unrelated transferors.

	<b>At December 31, 2016</b>		
	<b>Level 2</b>	<b>Level 3</b>	<b>Total</b>
Retained interests (fair value):			
Investment grade	\$ 375	\$ -	\$ 375
Non-investment grade	-	28	28
Total	<u>\$ 375</u>	<u>\$ 28</u>	<u>\$ 403</u>
Interests purchased in the secondary market (fair value):			
Investment grade	\$ 26	\$ -	\$ 26
Non-investment grade	1	4	5
Total	<u>\$ 27</u>	<u>\$ 4</u>	<u>\$ 31</u>

Transferred assets are carried at fair value prior to securitization. The Company may act as underwriter of the beneficial interests issued by these securitization vehicles. The Company may retain interests in the securitized financial assets as one or more tranches of the securitization. These retained interests are included in the Company's consolidated statement of financial condition at fair value.

### ***Failed Sales***

For transfers that fail to meet the accounting criteria for a sale, the Company continues to recognize the assets in Financial instruments owned at fair value, and the Company recognizes the associated liabilities in Other secured financings at fair value in the consolidated statement of financial condition.

The assets transferred to certain unconsolidated VIEs in transactions accounted for as failed sales cannot be removed unilaterally by the Company and are not generally available to the Company. The related liabilities are non-recourse to the Company.



The following table presents information about the carrying value of assets and liabilities related to failed sales at December 31, 2016.

	<u>Assets</u>	<u>Liabilities</u>
Credit-linked notes	\$ 1	\$ 1

## **Note 11 – Sales and Trading Activities**

### **Sales and Trading**

The Company conducts sales, trading, financing and market-making activities on securities and futures exchanges and in OTC markets. The Company's Institutional Securities sales and trading activities comprise Equity Trading; Fixed Income and Commodities; Clients and Services; Research; and Investments.

The Company's trading portfolios are managed with a view toward the risk and profitability of the portfolios. The following is a discussion of the nature of the equities and fixed income activities conducted by the Company, including the use of derivative products in these businesses, and the Company's primary risks: market risk, credit risk, operational risk, and liquidity policies and procedures covering these activities.

### **Equities**

The Company acts as a principal (including as a market-maker) and agent in executing transactions in equity and equity-related products, including common stock, American Depositary Receipts ("ADRs"), global depositary receipts and exchange-traded funds.

The Company's equity derivatives sales, trading and market-making activities cover equity-related products, including equity swaps, options, warrants and futures overlying individual securities, indices and baskets of securities and other equity-related products. The Company also issues and makes a principal market in equity-linked products to institutional and individual investors.

### **Fixed Income**

The Company trades, invests and makes markets in fixed income securities and related products, including, among other products, investment and non-investment grade corporate debt, distressed debt, U.S. and other sovereign securities, emerging market bonds, convertible bonds, collateralized debt and loan obligations, credit, currency, interest rate and other fixed income-linked notes, securities issued by structured investment vehicles, mortgage-related and other asset-backed securities, municipal securities, preferred stock and commercial paper, money-market and other short-term securities. The Company is a primary dealer of U.S. federal government securities and a member of the selling groups that distribute various U.S. agency and other debt securities.

The Company trades, invests and makes markets in listed futures.

The Company trades, invests and makes markets in major foreign currencies, such as the British pound, Canadian dollar, Euro, Japanese yen and Swiss franc, as well as in emerging markets currencies. The Company trades these currencies on a principal basis in the spot, forward, option and futures markets.

Through the use of repurchase and reverse repurchase agreements, the Company acts as an intermediary between borrowers and lenders of short-term funds and provides funding for various inventory positions. In addition, the Company engages in principal securities lending with clients, institutional lenders and other broker-dealers.

## **Risk Management**

The Company's risk management policies and related procedures are aligned with those of the Ultimate Parent and its other consolidated subsidiaries. These policies and related procedures are administered on a coordinated global and legal entity basis with consideration given the Company's specific capital and regulatory requirements.

Risk is an inherent part of the Company's business and activities. Management believes effective risk management is vital to the success of the Company's business activities. Accordingly, the Company has policies and procedures in place to identify, measure, monitor, advise, challenge and control the principal risks involved in the activities of its business and support functions. The Company's ability to properly and effectively identify, measure, monitor, advise, challenge and control each of the various types of risk involved in its activities is critical to its soundness and profitability.

The cornerstone of the Company's risk management philosophy is the execution of risk-adjusted returns through prudent risk-taking that protects the Company's capital base and franchise. Five key principles underlie this philosophy: integrity, comprehensiveness, independence, accountability and transparency. To help ensure the efficacy of risk management, which is an essential component of the Company's reputation, senior management requires thorough and frequent communication and the appropriate escalation of risk matters. The fast-paced, complex, and constantly-evolving nature of global financial markets requires that the Company maintain a risk management culture that is incisive, knowledgeable about specialized products and markets, and subject to ongoing review and enhancement.

## **Market Risk**

Market risk refers to the risk that a change in the level of one or more market prices, rates, indices, implied volatilities (the price volatility of the underlying instrument imputed from option prices), correlations or other market factors, such as market liquidity, will result in losses for a position or portfolio. Generally, the Company incurs market risk as a result of trading, investing and client facilitation activities, principally within the Institutional Securities business segment where the substantial majority of the Company's market risk exposure is generated.

Sound market risk management is an integral part of the Company's culture. The various business units trading desks are responsible for ensuring that market risk exposures are well-managed and prudent. Market risk is also monitored through various measures: using statistics; by measures of position sensitivity; and through routine stress testing, which measures the impact on the value of existing portfolios of specified changes in market factors, and scenario analyses conducted in collaboration with business units.

## **Credit Risk**

Credit risk refers to the risk of loss arising when a borrower, counterparty or issuer does not meet its financial obligations. The Company primarily incurs credit risk exposure to institutions and individuals. This risk may arise from a variety of business activities, including, but not limited to, entering into derivative contracts under which counterparties have obligations to make payments to the Company; extending credit to clients; providing funding that is secured by physical or financial collateral whose value may at times be insufficient to cover the loan repayment amount; and posting margin and/or collateral to counterparties. This type of risk requires credit analysis of specific counterparties, both initially and on an ongoing basis. The Company also incurs credit risk in traded securities and whereby the value of these assets may fluctuate based on realized or expected defaults on the underlying obligations or loans.

The Company has structured its credit risk management framework to reflect that each of its businesses generate unique credit risks, and establishes practices to evaluate, monitor and control credit risk exposure both within and across its business activities. The Company is responsible for ensuring transparency of material credit risks, ensuring compliance with established limits, approving material extensions of credit, and escalating risk concentrations to appropriate senior management. The Company's credit risk exposure is managed by credit professionals and risk committees that monitor risk exposures, including margin loans and credit sensitive, higher risk transactions. See Note 6 for a discussion of Concentration Risk.

### **Operational Risk**

Operational risk refers to the risk of financial or other loss, or damage to a firm's reputation, resulting from inadequate or failed processes, people, systems, or from external events (e.g., fraud, theft, legal and compliance risks, cyber attacks or damage to physical assets). The Company may incur operational risk across the full scope of its business activities, including revenue-generating activities (e.g., sales and trading) and support and control groups (e.g. information technology and trade processing). As such, the Company may incur operational risk in each of its divisions.

The goal of the operational risk management framework is to establish Company-wide operational risk standards related to risk measurement, monitoring and management. Operational risk policies are designed to reduce the likelihood and/or impact of operational incidents as well as to mitigate legal, regulatory, and reputational risks.

### **Liquidity Risk**

Liquidity risk refers to the risk that the Company will be unable to finance its operations due to a loss of access to the capital markets or difficulty in liquidating its assets. Liquidity risk also encompasses the Company's ability to meet its financial obligations without experiencing significant business disruption or reputational damage that may threaten its viability as a going concern.

The primary goal of the Company's Liquidity Risk Management Framework is to ensure that the Company has access to adequate funding across a wide range of market conditions. The framework is designed to enable the Company to fulfill its financial obligations and support the execution of its business strategies. The Company's Required Liquidity Framework reflects the amount of liquidity the Company must hold in both normal and stressed environments to ensure that its financial condition or overall soundness is not adversely affected by an inability (or perceived inability) to meet its financial obligations in a timely manner. The Required Liquidity Framework considers the most constraining liquidity requirement to satisfy all regulatory and internal limits. The Company uses Liquidity Stress Tests to model liquidity inflows and outflows across multiple scenarios over a range of time horizons. These scenarios contain various combinations of idiosyncratic and systemic stress events of different severity and duration. The methodology, implementation, production and analysis of the Company's Liquidity Stress Tests are important components of the Required Liquidity Framework.

### **Customer Activities**

The Company's customer activities involve the execution, settlement and financing of various securities and commodities transactions on behalf of customers. Customer securities activities are transacted on either a cash or margin basis. Customer commodities activities, which include the execution of customer transactions in commodity futures transactions (including options on futures), are transacted on a margin basis.

The Company's customer activities may expose it to off-balance sheet credit risk. The Company may have to purchase or sell financial instruments at prevailing market prices in the event of the failure of a

customer to settle a trade on its original terms or in the event cash and securities in customer margin accounts are not sufficient to fully cover customer losses. The Company seeks to control the risks associated with customer activities by requiring customers to maintain margin collateral in compliance with various regulations and Company policies.

## **Note 12 - Employee Stock-Based Compensation Plans**

Eligible employees of the Company participate in several of the Ultimate Parent's stock-based compensation plans.

### ***Restricted Stock Units***

Restricted stock unit ("RSUs") are generally subject to vesting over time, generally three years from the date of grant, contingent upon continued employment and subject to restrictions on sale, transfer or assignment until conversion to common stock. All or a portion of an award may be canceled if employment is terminated before the end of the relevant vesting period and after the relevant vesting period in certain situations. Recipients of RSUs may have voting rights, at the Ultimate Parent's discretion, and generally receive dividend equivalents. The Ultimate Parent determines the fair value of RSUs based on the grant-date fair value of its common stock, measured as the volume-weighted average price on the date of grant. Certain awards provide the Ultimate Parent discretion to cancel all or a portion of the award under specified circumstances.

### ***Performance-Based Stock Units***

Performance-based stock units ("PSUs") will vest and convert to shares of common stock at the end of the performance period only if the Ultimate Parent satisfies predetermined performance and market-based conditions over the three-year performance period that began on January 1 of the grant year and ends three years later on December 31. Under the terms of the award, the number of PSUs that will actually vest and convert to shares will be based on the extent to which the Ultimate Parent achieves the specified performance goals during the performance period. PSUs have vesting, restriction and cancellation provisions that are generally similar to those of RSUs. The Ultimate Parent determines the fair value of PSUs with non-market performance conditions based on the grant-date fair value of its common stock, measured as the volume-weighted average price on the date of grant. PSUs with market-based conditions are valued using a Monte Carlo valuation model.

### ***Stock Options***

Stock options generally have an exercise price not less than the fair value of the Ultimate Parent's common stock on the date of grant, vest and become exercisable over a three-year period and expire five to 10 years from the date of grant, subject to accelerated expiration upon certain terminations of employment. Stock options have vesting, restriction and cancellation provisions that are generally similar to those of RSUs. The fair value of stock options is determined using the Black-Scholes valuation model and the single grant life method. Under the single grant life method, option awards with graded vesting are valued using a single weighted-average expected option life.

### **Note 13 - Employee Benefit Plans**

The Ultimate Parent and its consolidated subsidiaries provide various retirement plans for the majority of its U.S. and certain non-U.S. employees. The Company provides certain other postretirement benefits, primarily health care and life insurance, to eligible U.S. employees.

#### ***Pension and Other Postretirement Plans***

Substantially all of the U.S. employees of the Company who were hired before July 1, 2007 are covered by a non-contributory, defined benefit pension plan that is qualified under Section 401(a) of the Internal Revenue Code (the “Qualified Plan”). The Qualified Plan has ceased future benefit accruals.

Unfunded supplementary plans (the “Supplemental Plans”) cover certain executives. Liabilities for benefits payable under the Supplemental Plans are accrued by the Company and are funded when paid. The Morgan Stanley Supplemental Executive Retirement and Excess Plan (the “SEREP”), a non-contributory defined benefit plan that is not qualified under Section 401(a) of the Internal Revenue Code, has ceased future benefit accruals.

The Company’s pension plans generally provide pension benefits that are based on each employee’s years of credited service and on compensation levels specified in the plans.

The Company has an unfunded postretirement benefit plan that provides medical and life insurance for eligible U.S. retirees and medical insurance for their dependents.

#### ***Benefit Obligation and Funded Status***

The following table provides a rollforward of the changes in the benefit obligation and fair value of plan assets for 2016 as well as the funded status at December 31, 2016:

	<b><u>Pension Plans</u></b>	<b><u>Other Postretirement Plan</u></b>
Rollforward of benefit obligation:		
Benefit obligation at December 31, 2015	\$ 3,164	\$ 87
Service cost	-	1
Interest cost	138	4
Actuarial loss <sup>(1)</sup>	87	-
Change in mortality assumptions	63	1
Benefits paid	(205)	(5)
Benefit obligation at December 31, 2016	<u>\$ 3,247</u>	<u>\$ 88</u>
Rollforward of fair value of plan assets:		
Fair value of plan assets at December 31, 2015	\$ 3,096	\$ -
Actual return on plan assets	115	-
Employer contributions	18	5
Benefits paid	(205)	(5)
Fair value of plan assets at December 31, 2016	<u>\$ 3,024</u>	<u>\$ -</u>
Funded (unfunded) status at December 31, 2016	<u>\$ (223)</u>	<u>\$ (88)</u>

<sup>(1)</sup> Amounts primarily reflect impact of year-over-year discount rate fluctuations.

The following tables present a summary of the funded status of accounts recognized in the Company's consolidated statement of financial condition at December 31, 2016:

	<b><u>Pension Plans</u></b>	<b><u>Other Postretirement Plan</u></b>
Assets	\$ 154	\$ -
Liabilities	(377)	(88)
Net amount recognized	<u>\$ (223)</u>	<u>\$ (88)</u>

The following tables present a summary of the funded status of accounts recognized in accumulated other comprehensive income (loss) at December 31, 2016 consist of:

	<b><u>Pension Plans</u></b>	<b><u>Other Postretirement Plan</u></b>
Prior service credit (cost)	\$ -	\$ 17
Net gain (loss)	(697)	-
Net gain (loss) recognized	<u>\$ (697)</u>	<u>\$ 17</u>

The accumulated benefit obligation, for all defined benefit pension plans, was \$3,247 as of December 31, 2016.

The following table contains information for pension plans with projected benefit obligation in excess of the fair value of plan assets at December 31, 2016:

Projected benefit obligation	\$ 377
Fair value of plan assets	\$ -

The following table contains information for pension plans with accumulated benefit obligation in excess of the fair value of plan assets at December 31, 2016:

Accumulated benefit obligation	\$ 377
Fair value of plan assets	\$ -

The following table presents the weighted average assumptions used to determine benefit obligation at December 31, 2016:

	<b><u>Pension Plans</u></b>	<b><u>Other Postretirement Plan</u></b>
Discount rate	4.27%	4.01%

The discount rates used to determine the benefit obligation for the pension and postretirement plans were selected by the Company, in consultation with its independent actuary, using a pension discount yield curve based on the characteristics of the plans, each determined independently. The pension discount yield curve represents spot discount yields based on duration implicit in a representative broad-based Aa-rated corporate bond universe of high-quality fixed income investments.

The following table presents assumed health care cost trend rates used to determine the postretirement benefit obligation at December 31, 2016:

Health care cost trend rate assumed for next year:	
Medical	5.96%
Prescription	9.32%
Rate to which the cost trend rate is assumed to decline (ultimate trend rate)	4.50%
Year that the rate reaches the ultimate trend rate	2038

Assumed health care cost trend rates can have a significant effect on the amounts reported for the Company's postretirement benefit plan.

Effect of Changes in Assumed Health Care Costs Trend Rates:

	<b>One-Percentage Point Increase</b>	<b>One-Percentage Point (Decrease)</b>
Total 2016 postretirement service and interest cost	N/M	N/M
December 31, 2016 postretirement benefit obligation	\$ 6	\$ (5)

N/M- Not meaningful

*Qualified Plan Assets*

The Qualified Plan uses a combination of active and risk-controlled fixed income investment strategies. The fixed income asset allocation consists primarily of fixed income securities and related derivative instruments designed to approximate the expected cash flows of the plan's liabilities in order to help reduce plan exposure to interest rate variation and to better align assets with the obligation. The longer duration fixed income allocation is expected to help protect the plan's funded status and maintain the stability of plan contributions over the long run.

Derivative instruments are permitted in the Qualified Plan's investment portfolio only to the extent that they comply with all of the plan's investment policy guidelines and are consistent with the plan's risk and return objectives. In addition, any investment in derivatives must meet the following conditions:

- May be used only if derivative instruments are deemed by the investment manager to be more attractive than a similar direct investment in the underlying cash market or if the vehicle is being used to manage risk of the portfolio.
- May not be used in a speculative manner or to leverage the portfolio under any circumstances.
- May not be used as short-term trading vehicles. The investment philosophy of the Qualified Plan is that investment activity is undertaken for long-term investment rather than short-term trading.
- May be used in the management of the Qualified Plan's portfolio only when the derivative instruments possible effects can be quantified, shown to enhance the risk-return profile of the portfolio, and reported in a meaningful and understandable manner.



As a fundamental operating principle, any restrictions on the underlying assets apply to a respective derivative product. This includes percentage allocations and credit quality. Derivatives are used solely for the purpose of enhancing investment in the underlying assets and not to circumvent portfolio restrictions.

Plan assets are measured at fair value using valuation techniques that are consistent with the valuation techniques applied to the Company's major categories of assets and liabilities as described in Note 4. OTC derivative contracts consist of investments in interest rate swaps.

Commingled trust funds are privately offered funds that are regulated, supervised, and subject to periodic examination by a U.S. federal or state agency and available to institutional clients. The trust must be maintained for the collective investment or reinvestment of assets contributed to it from U.S. tax qualified employee benefit plans maintained by more than one employer or controlled group of corporations. The sponsor of the commingled trust funds values the funds based on the fair value of the underlying securities. The underlying securities of the commingled trust funds held by the Qualified Plan consist mainly of long-duration fixed income instruments. Commingled trust funds are redeemable at NAV at the measurement date or in the near future.

The Company generally considers the NAV of commingled trust funds provided by the fund manager to be the best estimate of fair value.

The following table presents the fair value of plan assets and liabilities at December 31, 2016. There were no transfers between levels during 2016.

	<u>Level 1</u>	<u>Level 2</u>	<u>Level 3</u>	<u>Total</u>
<b>Assets:</b>				
Investments:				
U.S. government and agency securities:				
U.S. Treasury securities	\$ 1,493	\$ -	\$ -	\$ 1,493
U.S. agency securities	-	423	-	423
Total U.S. government and agency securities	1,493	423	-	1,916
Corporate and other debt:				
Collateralized debt obligations	-	13	-	13
Total corporate and other debt	-	13	-	13
Derivative contracts	-	159	-	159
Derivative related cash collateral receivable	-	76	-	76
Total assets <sup>(1)</sup>	\$ 1,493	\$ 671	\$ -	\$ 2,164
<b>Liabilities:</b>				
Derivative contracts	\$ -	\$ 225	\$ -	\$ 225
Total liabilities	\$ -	\$ 225	\$ -	\$ 225

<sup>(1)</sup> Amounts exclude Commingled trust funds measured at fair value using the NAV per share, which are not classified in the fair value hierarchy. Commingled trust funds consist of investments in fixed income funds and money market funds of \$999 and \$86, respectively.

### ***Morgan Stanley 401(k) Plan***

U.S. employees meeting certain eligibility requirements may participate in the Morgan Stanley 401(k) Plan. Eligible U.S. employees receive discretionary 401(k) matching cash contributions as determined annually by the Company. In 2016, the Company made a dollar for dollar Company match up to 4% of eligible pay, up to the Internal Revenue Service ("IRS") limit. Matching contributions are invested

according to each participant's investment direction. Eligible U.S. employees with eligible pay less than or equal to one hundred thousand dollars also receive a fixed contribution under the 401(k) Plan that equals 2% of eligible pay. A transition contribution is allocated to certain eligible employees.

#### **Note 14 - Income Taxes**

The Company is a single-member limited liability company that is treated as a disregarded entity for federal income tax purposes. The Company is included in the consolidated federal income tax return filed by the Ultimate Parent. Federal income taxes have generally been provided on a separate entity basis in accordance with the Tax Sharing Agreement with the Ultimate Parent. The Company is included in the combined state and local income tax returns with the Ultimate Parent and certain other subsidiaries of the Ultimate Parent. State and local income taxes have been provided on separate entity income at the effective tax rate of the Company's combined filing group.

In accordance with the terms of the Tax Sharing Agreement with the Ultimate Parent, substantially all current and deferred taxes (federal, combined and unitary state) are offset with all other intercompany balances with the Ultimate Parent.

#### **Tax Authority Examinations**

The Company, through its inclusion in the return of the Ultimate Parent, is under continuous examination by the IRS and other tax authorities in certain states in which the Company has significant business operations, such as New York. The Company is currently at various levels of field examination with respect to audits by the IRS, as well as New York State and New York City, for tax years 2009–2012 and 2007–2009, respectively. In April 2016, the Ultimate Parent received the Revenue Agent's Report from the IRS reflecting agreed closure of the 2006-2008 tax years.

The Company believes that the resolution of these tax matters will not have a material effect on the Company's consolidated statement of financial condition, although a resolution could have a material impact on the Company's consolidated income statement for a particular future period and on the Company's effective tax rate for any period in which such resolution occurs. The Company has established a liability for unrecognized tax benefits that it believes is adequate in relation to the potential for additional assessments. Once established, the Company adjusts unrecognized tax benefits only when more information is available or when an event occurs necessitating a change.

It is reasonably possible that significant changes in the balance of unrecognized tax benefits may occur within the next 12 months related to certain tax authority examinations referred to above. At this time, however, it is not possible to reasonably estimate the expected change to the total amount of unrecognized tax benefits and the impact on the Company's effective tax rate over the next 12 months.

The following are the major tax jurisdictions in which the Company and its affiliates operate and the earliest tax year subject to examination.

<b><u>Jurisdiction</u></b>	<b><u>Tax Year</u></b>
United States	1999
New York State and City	2007

### **Note 15 – Regulatory Capital and Other Requirements**

MS&Co. is a registered U.S. broker-dealer and registered futures commission merchant and, accordingly, is subject to the minimum net capital requirements of the SEC and the CFTC. Under these rules, MS&Co. is required to maintain minimum Net Capital, as defined under SEC Rule 15c3-1, of not less than the greater of 2% of aggregate debit items arising from customer transactions, plus excess margin collateral on reverse repurchase agreements or the CFTC rule stating the risk based requirement represents the sum of 8% of customer risk maintenance margin requirement and 8% of non customer risk maintenance margin requirement, as defined. At December 31, 2016, MS&Co.'s Net Capital was \$10,311 which exceeded the CFTC minimum requirement by \$8,034.

The Financial Industry Regulatory Authority may require a member firm to reduce its business if net capital is less than 4% of such aggregate debit items and may prohibit a firm from expanding its business if net capital is less than 5% of such aggregate debit items.

MS&Co. is required to hold tentative net capital in excess of \$1,000 and Net Capital in excess of \$500 in accordance with the market and credit risk standards of Appendix E of Rule 15c3-1. MS&Co. is also required to notify the SEC in the event that its tentative net capital is less than \$5,000. At December 31, 2016, MS&Co. had tentative net capital in excess of the minimum and the notification requirements.

Advances to the Ultimate Parent and its affiliates, repayment of subordinated liabilities, dividend payments and other equity withdrawals are subject to certain notification and other provisions of the SEC Net Capital rule.

As of December 31, 2016, MS&Co. met the criteria set forth under the SEC's Rule 11(a)(1)(G)(i), trading by members of Exchanges, Brokers and Dealers, and is therefore in compliance with the business mix requirements.

The Dodd-Frank Act requires the registration of "swap dealers" and "major swap participants" with the CFTC and "security-based swap dealers" and "major security-based swap participants" with the SEC (collectively, "Swaps Entities"). The Company provisionally registered with the CFTC as a swap dealer.

In December 2016, the SEC issued clarifying guidance as to how the firm, as an alternative net capital ("ANC") broker dealer, should apply SEA Rule 15c3-1e (Appendix E) in computing its capital deduction for credit risk on transactions in derivative instruments. The newly issued guidance is expected to result in a significant increase in the Company's model-based credit risk deduction and will become effective on January 31, 2017. After implementing on the effective date, the Company will continue to maintain regulatory net capital in excess of its requirements.

### **Note 16 – Subsequent Events**

The Company has evaluated subsequent events for adjustment to or disclosure in the consolidated statement of financial condition through the date of this report and the Company has not identified any recordable or disclosable events, not otherwise reported in this consolidated statement of financial condition or the notes thereto.

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