

**MORGAN STANLEY & CO. LLC**

**CONSOLIDATED STATEMENT OF FINANCIAL CONDITION  
AS OF JUNE 30, 2017  
(UNAUDITED)**

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**MORGAN STANLEY & CO. LLC**  
**CONSOLIDATED STATEMENT OF FINANCIAL CONDITION**  
**As of June 30, 2017**  
**(In millions of dollars)**  
**(Unaudited)**

**ASSETS**

Cash	\$	3,871
Cash deposited with clearing organizations or segregated under federal and other regulations or requirements		10,635
Financial instruments owned, at fair value (approximately \$54,229 were pledged to various parties; \$34 related to consolidated variable interest entities generally not available to the Company)		89,815
Securities received as collateral, at fair value		20,170
Securities purchased under agreements to resell (includes \$102 at fair value)		57,005
Securities borrowed		111,249
Receivables:		
Customers		13,846
Brokers, dealers and clearing organizations		4,187
Interest and dividends		770
Fees and other		5,914
Affiliates		83
Other assets		543
Total assets	<u>\$</u>	<u>318,088</u>

**LIABILITIES AND MEMBER'S EQUITY**

Financial instruments sold, not yet purchased, at fair value	\$	24,047
Obligation to return securities received as collateral, at fair value		21,476
Securities sold under agreements to repurchase (includes \$738 at fair value)		81,810
Securities loaned		21,745
Other secured financings (includes \$336 at fair value; \$22 related to consolidated variable interest entities generally not available to the Company)		4,119
Payables:		
Customers		128,214
Brokers, dealers and clearing organizations		3,118
Interest and dividends		754
Affiliates		1,838
Other liabilities and accrued expenses		9,268
Long-term borrowings (includes \$50 at fair value)		4,803
Total liabilities		<u>301,192</u>
Commitments and contingent liabilities (See Note 9)		
Subordinated liabilities		<u>11,300</u>
Member's equity:		
Morgan Stanley & Co. LLC member's equity		6,028
Accumulated other comprehensive loss		(432)
Total member's equity		<u>5,596</u>
Total liabilities and member's equity	<u>\$</u>	<u>318,088</u>

See Notes to Consolidated Statement of Financial Condition.

**MORGAN STANLEY & CO. LLC**  
**NOTES TO CONSOLIDATED STATEMENT OF FINANCIAL CONDITION**  
**As of June 30, 2017**  
**(In millions of dollars, except where noted)**  
**(Unaudited)**

**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 securities and related products, fixed income securities and related products, and other instruments including foreign exchange and commodities futures.

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 unaudited consolidated statement of financial condition (“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 (“VIEs”) (see Note 10).

At June 30, 2017, the Company’s consolidated subsidiaries reported \$21,406 of assets, \$21,361 of liabilities and \$45 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 over-the-counter ("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 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 first six months of 2017, fair values are ascribed as if the assets or liabilities had been transferred as of January 1, 2017.

#### *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 risk 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 Department (“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; 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 Securities purchased under agreements to resell (“reverse repurchase agreements”) and securities loaned or Securities sold under agreements to repurchase (“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.

### **Receivables and Payables – Customers**

Receivables from 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 securities 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 Company adopted the following accounting update on January 1, 2017:

*Improvements to Employee Share-Based Payment Accounting.* This accounting update simplifies the accounting for employee share-based payments, including the recognition of forfeitures and the classification of income tax consequences.

In addition, this accounting update permits an entity to elect whether to continue to estimate the total forfeitures, or to account for forfeitures on an actual basis as they occur. The Company has elected to account for forfeitures on an actual basis as they occur. This change is required to be applied using a modified retrospective approach, and upon adoption, the Company recorded a cumulative catch-up adjustment, decreasing Member's equity by approximately \$8 net of tax, increasing Other liabilities and accrued expenses by approximately \$12 and decreasing Payables to affiliates by approximately \$4.

### **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, 2017 the Company expanded upon a service level agreement that it signed with an affiliated service entity, Morgan Stanley Services Group Inc. (“MSSG”), to receive additional support services as part of the final phase to reorganize support services for recovery and resolution planning purposes. The service level agreement includes support services associated with multiple divisions including Technology, Operations, Finance, Legal and Compliance, Risk Management, Human Resources, Internal Audit and Administration. A subset of regulatory services which exclusively support the Company and are essential in maintaining compliance with applicable regulatory rules will continue to be performed by the Company. In connection with this agreement, the Company affected a series of steps to transfer related assets and liabilities to MSSG at their then carrying values, as well as support service personnel. The steps included a dividend of \$140 of assets by the Company to its immediate parent, which, after taking into account the derecognition of \$58 of related net deferred tax assets, resulted in a reduction in member’s equity by \$198.

Assets and receivables from affiliated companies at June 30, 2017 are comprised of:

Cash	\$	358
Financial instruments owned, at fair value		232
Reverse repurchase agreements		13,878
Securities borrowed		27,348
Receivables - Customers		1,163
Receivables - Brokers, dealers and clearing organizations		2,476
Receivables - Interest and dividends		28
Receivables - Fees and other		5,445
Receivables - Affiliates		83

Liabilities and payables to affiliated companies at June 30, 2017 are comprised of:

Financial instruments sold, not yet purchased, at fair value	\$	117
Repurchase agreements		57,507
Securities loaned		18,431
Other secured financings		315
Payables - Customers		29,194
Payables - Brokers, dealers and clearing organizations		973
Payables - Interest and dividends		26
Payables - Affiliates		1,838
Other liabilities and accrued expenses		6,873
Long-term borrowings		4,720
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 agency 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. Agency 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 agency 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, 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.

#### ***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.

#### ***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.

The following fair value hierarchy table presents information about the Company's assets and liabilities measured at fair value on a recurring basis at June 30, 2017. 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 June 30, 2017

	Level 1	Level 2	Level 3	Counter- party and Cash Collateral Netting	At June 30, 2017
<b>Assets:</b>					
Financial instruments owned:					
U.S. government and agency securities:					
U.S. Treasury securities	\$ 21,297	\$ -	\$ -	\$ -	\$ 21,297
U.S. agency securities	2,148	25,548	-	-	27,696
Total U.S. government and agency securities	23,445	25,548	-	-	48,993
Other sovereign government obligations	2,246	375	96	-	2,717
Corporate and other debt:					
State and municipal securities	-	2,572	9	-	2,581
Residential mortgage-backed securities	-	442	7	-	449
Commercial mortgage-backed securities	-	1,390	123	-	1,513
Asset-backed securities	-	148	2	-	150
Corporate bonds	-	6,663	199	-	6,862
Collateralized debt and loan obligations	-	163	44	-	207
Mortgage loans	-	-	34	-	34
Other debt	-	76	69	-	145
Total corporate and other debt	-	11,454	487	-	11,941
Corporate equities <sup>(1)</sup>	24,833	179	94	-	25,106
Derivative contracts:					
Interest rate contracts	433	1,551	-	-	1,984
Credit contracts	-	365	-	-	365
Foreign exchange contracts	12	8,175	-	-	8,187
Equity contracts	796	7,381	47	-	8,224
Netting <sup>(2)</sup>	(1,091)	(16,055)	(41)	(524)	(17,711)
Total derivative contracts	150	1,417	6	(524)	1,049
Investments:					
Principal investments	-	1	8	-	9
Total investments	-	1	8	-	9
Total financial instruments owned <sup>(3)</sup>	\$ 50,674	\$ 38,974	\$ 691	\$ (524)	\$ 89,815
Securities received as collateral	\$ 20,160	\$ 9	\$ 1	\$ -	\$ 20,170
Securities purchased under agreements to resell	-	102	-	-	102

	Level 1	Level 2	Level 3	Counter- party and Cash Collateral Netting	At June 30, 2017
<b>Liabilities:</b>					
Financial instruments sold, not yet purchased:					
U.S. government and agency securities:					
U.S. Treasury securities	\$ 14,101	\$ -	\$ -	\$ -	\$ 14,101
U.S. agency securities	439	84	-	-	523
Total U.S. government and agency securities	14,540	84	-	-	14,624
Other sovereign government obligations	37	219	-	-	256
Corporate and other debt	-	4,186	2	-	4,188
Corporate equities <sup>(1)</sup>	3,791	-	1	-	3,792
Derivative contracts:					
Interest rate contracts	376	1,670	-	-	2,046
Credit contracts	-	302	-	-	302
Foreign exchange contracts	16	8,396	-	-	8,412
Equity contracts	814	8,002	586	-	9,402
Netting <sup>(2)</sup>	(1,091)	(16,055)	(41)	(1,788)	(18,975)
Total derivative contracts	115	2,315	545	(1,788)	1,187
Total financial instruments sold, not yet purchased <sup>(3)</sup>	\$ 18,483	\$ 6,804	\$ 548	\$ (1,788)	\$ 24,047
Obligation to return securities received as collateral	\$ 21,466	\$ 9	\$ 1	\$ -	\$ 21,476
Securities sold under agreements to repurchase	-	589	149	-	738
Other secured financings	-	276	60	-	336
Long-term borrowings	-	50	-	-	50

<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.

<sup>(3)</sup> Amounts exclude the unsettled fair value on long futures contracts of \$392 and unsettled fair value of short futures contracts of \$76 at June 30, 2017 included in Receivables - Brokers, dealers and clearing organizations and Payables - Brokers, dealers and clearing organizations, respectively, in the consolidated statement of financial condition. These contracts are primarily classified as Level 1 in the fair value hierarchy, actively traded, and valued based on quoted prices from the exchange.

## Transfers Between Fair Value Hierarchy Levels

*Financial instruments owned — Corporate and other debt.* During the six months ended June 30, 2017, the Company reclassified approximately \$145 of certain Corporate and other debt, primarily state and municipal securities, from Level 3 to Level 2. The Company reclassified these securities as external prices and/or spread inputs for these instruments became more observable.

*Financial instruments owned— Corporate equities.* During the six months ended June 30, 2017, the Company reclassified approximately \$22 of Corporate equities, primarily exchange traded notes, from Level 2 to Level 1 as external prices and/or spread inputs became more observable.

The Company also reclassified approximately \$68 of Corporate equities from Level 2 to Level 3 as external prices and/or spread inputs for these instruments became less observable.



*Financial instruments owned — Derivative contracts and Financial instruments sold, not yet purchased — Derivative contracts.* During the six months ended June 30, 2017, the Company reclassified approximately \$192 of derivative assets and approximately \$221 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. Additionally, the Company reclassified approximately \$92 of derivative assets and approximately \$136 of derivative liabilities from Level 1 to Level 2 as these securities became less actively traded.

The Company also reclassified approximately \$75 of derivative assets, particularly equity contracts, from Level 2 to Level 3, as external prices and/or spread inputs for these instruments became less observable.

### **Significant Unobservable Inputs Used in Recurring and Nonrecurring 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 and nonrecurring 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).

	<u>At June 30, 2017</u>	<u>Predominant Valuation Techniques/ Significant Unobservable Inputs</u>	<u>Range (Weighted Averages)</u>
<b>Assets</b>			
Financial instruments owned:			
Other sovereign government obligations	\$96	Comparable pricing Comparable bond price	92 to 99 points (96 points)
Corporate and other debt:			
Commercial mortgage-backed securities	123	Comparable pricing Comparable bond price	0 to 102 points (42 points)
Corporate bonds	199	Comparable pricing Comparable bond price	2 to 106 points (47 points)
Collateralized debt and loan obligations	44	Comparable pricing Comparable bond price Correlation model Credit correlation	0 to 79 points (38 points) 42 to 49% (44%)
Mortgage loans	34	Comparable pricing Comparable loan price	91 points
Other debt	69	Option model At the money volatility	17 to 52% (52%)
Corporate equities	94	Comparable pricing Comparable equity price	100%
Net derivative contracts:			
Equity contracts	(539)	Option model At the money volatility Option model Volatility skew	20 to 56% (39%) -2%
<b>Liabilities</b>			
Securities sold under agreements to repurchase	\$149	Discounted cash flow Funding spread	131 to 145 bps (136 bps)
Other secured financing	60	Option model At the money volatility	17 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 June 30, 2017 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 Company 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 Company 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 Company 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 June 30, 2017		Fair Value by Level:		
	Carrying Value	Fair Value	Level 1	Level 2	Level 3
<b>Financial Assets:</b>					
Cash	\$ 3,871	\$ 3,871	\$ 3,871	\$ -	\$ -
Cash deposited with clearing organizations or segregated under federal and other regulations or requirements	10,635	10,635	10,635	-	-
Securities purchased under agreements to resell	56,903	56,839	-	56,164	675
Securities borrowed	111,249	111,249	-	111,249	-
Receivables: <sup>(1)</sup>					
Customers	13,846	13,846	-	13,846	-
Brokers, dealers and clearing organizations	4,187	4,187	-	4,187	-
Fees and other	5,914	5,914	-	5,914	-
Affiliates	83	83	-	83	-
Other assets <sup>(2)</sup>	167	167	-	167	-
<b>Financial Liabilities:</b>					
Securities sold under agreements to repurchase	\$ 81,072	\$ 81,052	\$ -	\$ 79,703	\$ 1,349
Securities loaned	21,745	21,745	-	21,745	-
Other secured financings	3,783	3,789	-	3,789	-
Payables: <sup>(1)</sup>					
Customers	128,214	128,214	-	128,214	-
Brokers, dealers and clearing organizations	3,118	3,118	-	3,118	-
Affiliates	1,838	1,838	-	1,838	-
Other liabilities and accrued expenses <sup>(2)</sup>	6,887	6,887	-	6,887	-
Long-term borrowings	4,753	4,753	-	4,720	33
Subordinated liabilities	11,300	11,396	-	11,396	-

<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 June 30, 2017							
	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	\$ 1,736	\$ 242	\$ 6	\$ 1,984	\$ 178,353	\$ 92,496	\$ 59,160	\$ 330,009
Credit contracts	365	-	-	365	3,093	-	-	3,093
Foreign exchange contracts	8,175	-	12	8,187	391,997	-	1,704	393,701
Equity contracts	2,901	-	5,323	8,224	79,537	-	164,655	244,192
<b>Total gross derivatives contracts <sup>(2)</sup></b>	<b>13,177</b>	<b>242</b>	<b>5,341</b>	<b>18,760</b>	<b>652,980</b>	<b>92,496</b>	<b>225,519</b>	<b>970,995</b>
<b>Amounts offset</b>								
Cash collateral netting	(524)	-	-	(524)	-	-	-	-
Counterparty netting	(11,668)	(215)	(5,304)	(17,187)	-	-	-	-
<b>Total gross derivative assets</b>	<b>985</b>	<b>27</b>	<b>37</b>	<b>1,049</b>	<b>\$ 652,980</b>	<b>\$ 92,496</b>	<b>\$ 225,519</b>	<b>\$ 970,995</b>
<b>Amounts not offset <sup>(3)</sup></b>								
Financial instruments collateral	(677)	-	-	(677)				
Other cash collateral	-	-	-	-				
<b>Net amounts</b>	<b>\$ 308</b>	<b>\$ 27</b>	<b>\$ 37</b>	<b>\$ 372</b>				

	Derivative Liabilities At June 30, 2017							
	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	\$ 1,745	\$ 300	\$ 1	\$ 2,046	\$ 110,896	\$ 103,641	\$ 60,411	\$ 274,948
Credit contracts	302	-	-	302	2,445	-	-	2,445
Foreign exchange contracts	8,396	-	16	8,412	395,085	-	3,339	398,424
Equity contracts	4,030	-	5,372	9,402	75,140	-	186,092	261,232
Other	-	-	-	-	364	-	-	364
<b>Total gross derivatives contracts <sup>(2)</sup></b>	<b>14,473</b>	<b>300</b>	<b>5,389</b>	<b>20,162</b>	<b>583,930</b>	<b>103,641</b>	<b>249,842</b>	<b>937,413</b>
<b>Amounts offset</b>								
Cash collateral netting	(1,788)	-	-	(1,788)	-	-	-	-
Counterparty netting	(11,668)	(215)	(5,304)	(17,187)	-	-	-	-
<b>Total derivative liabilities</b>	<b>1,017</b>	<b>85</b>	<b>85</b>	<b>1,187</b>	<b>\$ 583,930</b>	<b>\$ 103,641</b>	<b>\$ 249,842</b>	<b>\$ 937,413</b>
<b>Amounts not offset <sup>(3)</sup></b>								
Financial instruments collateral	(100)	-	(59)	(159)				
Other cash collateral	(5)	-	-	(5)				
<b>Net amounts</b>	<b>\$ 912</b>	<b>\$ 85</b>	<b>\$ 26</b>	<b>\$ 1,023</b>				

<sup>(1)</sup> Notional amounts include gross notionals related to open long and short futures contracts of \$38,848 and \$52,996, respectively. The unsettled fair value on these futures contracts (excluded from the table above) of \$392 and \$76, is included in Receivables - Brokers, dealers and clearing organizations and Payables - Brokers, dealers and clearing organizations, respectively, in the consolidated statement of financial condition.

<sup>(2)</sup> 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: \$231 of derivative assets and \$756 of derivative liabilities.

<sup>(3)</sup> 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 June 30, 2017</u>	
Net derivative liabilities with credit risk-related contingent features	\$	329
Collateral posted		81

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 of the Company.

	<u>At June 30, 2017<sup>(1)</sup></u>	
Incremental collateral or terminating payments upon future rating downgrade		
One-notch downgrade	\$	1
Two-notch downgrade		-

<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 a specified reference entity or entities. A majority of the Company's counterparties for these derivatives are banks, broker-dealers, and other financial institutions.

***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.

The following table summarizes the notional and fair value of protection sold and protection purchased through credit default swaps at June 30, 2017:

	<b>Maximum Potential Payout/Notional</b>			
	<b>Protection Sold</b>		<b>Protection Purchased</b>	
	<b>Notional</b>	<b>Fair Value (Asset)/Liability</b>	<b>Notional</b>	<b>Fair Value (Asset)/Liability</b>
Index and basket credit default swaps	\$ 2,445	\$ 300	\$ 3,093	\$ (363)

For non-tranched index and basket credit default swaps, the Company has purchased protection with a notional amount of \$3,026, compared with a notional amount of \$2,445 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 June 30, 2017:

	<b>Maximum Potential Payout/Notional</b>					<b>Fair Value (Asset)/ Liability <sup>(1)</sup></b>
	<b>Years to Maturity</b>					
	<b>Less than 1</b>	<b>1-3</b>	<b>3-5</b>	<b>Over 5</b>	<b>Total</b>	
Index and basket credit default swaps: <sup>(2)</sup>						
Non-investment grade	\$ -	\$ -	\$ -	\$ 2,445	\$ 2,445	\$ 300
Total credit default swaps sold	-	-	-	2,445	2,445	300
Other credit contracts	26	-	13	103	142	(15)
Total credit derivatives and other credit contracts	<u>\$ 26</u>	<u>\$ -</u>	<u>\$ 13</u>	<u>\$ 2,548</u>	<u>\$ 2,587</u>	<u>\$ 285</u>

<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.



## **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 June 30, 2017				
	Gross Amounts <sup>(1)</sup>	Amounts Offset	Net Amounts Presented	Amounts not Offset <sup>(2)</sup>	Net Amounts
<b>Assets</b>					
Reverse repurchase agreements	\$ 87,746	\$ (30,741)	\$ 57,005	\$ (47,556)	\$ 9,449
Securities borrowed	111,449	(200)	111,249	(107,748)	3,501
<b>Liabilities</b>					
Repurchase agreements	\$ 112,551	\$ (30,741)	\$ 81,810	\$ (77,903)	\$ 3,907
Securities loaned	21,945	(200)	21,745	(19,762)	1,983

<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: \$8,785 of reverse repurchase agreements, \$383 of Securities borrowed, \$3,727 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

	At June 30, 2017				
	Overnight and Open	Less than 30 Days	30-90 Days	Over 90 Days	Total
Repurchase agreements <sup>(1)</sup>	\$ 55,532	\$ 10,810	\$ 22,998	\$ 23,211	\$ 112,551
Securities loaned <sup>(1)</sup>	19,446	-	-	2,499	21,945
Gross amount of secured financing included in the offsetting disclosure	74,978	10,810	22,998	25,710	134,496
Obligation to return securities received as collateral	21,476	-	-	-	21,476
Total	\$ 96,454	\$ 10,810	\$ 22,998	\$ 25,710	\$ 155,972

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

	<u>At June 30, 2017</u>
<b>Repurchase agreements <sup>(1)</sup></b>	
U.S. government and agency securities	\$ 79,331
Other sovereign government obligations	494
State and municipal securities	176
Asset-backed securities	1,312
Corporate and other debt	3,233
Corporate equities	27,757
Other	248
Total repurchase agreements	<u>112,551</u>
<b>Securities loaned <sup>(1)</sup></b>	
U.S. government and agency securities	63
Other sovereign government obligations	217
Asset-backed securities	9
Corporate and other debt	753
Corporate equities	20,678
Other	225
Total securities loaned	<u>21,945</u>
Gross amount of secured financing included in the offsetting disclosure	<u>134,496</u>
<b>Obligation to return securities received as collateral</b>	
Corporate equities	<u>21,476</u>
Total obligation to return securities received as collateral	<u>21,476</u>
Total	<u>\$ 155,972</u>

(1) 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, securities loaned and other secured financings. Counterparties may or may not have the right to sell or repledge the collateral. 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 June 30, 2017 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 \$33,212.

### ***Collateral Received***

The Company receives collateral in the form of securities in connection with reverse repurchase agreements, securities borrowed, 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 also 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 Financial instruments owned and Financial instruments sold, not yet purchased, respectively. At June 30, 2017, the total fair value of financial instruments received as collateral where the Company is permitted to sell or repledge the securities was \$373,034 and the fair value of the portion that had been sold or repledged was \$331,971.

### ***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 15% of the Company's total assets at June 30, 2017. In addition, substantially all of the collateral held by the Company for reverse repurchase agreements or bonds borrowed, which together represented approximately 18% of the Company's total assets at June 30, 2017, 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.

### ***Cash and Securities Deposited with Clearing Organizations or Segregated***

At June 30, 2017, cash and securities of \$10,635 and \$17,610, 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 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 June 30, 2017, balances related to net customer receivables representing margin loans were \$11,168.

### ***Other Collateralized Transactions***

Other collateralized transactions consists of secured financings that include 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**

### ***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. These liabilities are generally payable from the cash flows of the related assets accounted for as Financial instruments owned. See Note 10 for further information on other secured financings related to VIEs and securitization activities.

The Company's Other secured financings at June 30, 2017 consisted of the following:

Secured financings with original maturities greater than one year	\$	3,537
Secured financings with original maturities one year or less		582
Failed sales <sup>(1)</sup>		-
Total	\$	<u>4,119</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 June 30, 2017 consisted of the following:

	<u>Fixed Rate</u>	<u>Variable Rate<sup>(1)</sup></u>	<u>Total</u>
Due in 2017	\$ -	\$ -	\$ -
Due in 2018	203	3,224	3,427
Due in 2019	62	-	62
Due in 2020	-	-	-
Due in 2021	-	-	-
Thereafter	48	-	48
Total	<u>\$ 313</u>	<u>\$ 3,224</u>	<u>\$ 3,537</u>

<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.

### **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 June 30, 2017. The maturity dates, interest rates and book value of the subordinated notes at June 30, 2017 are as follows:

<b><u>Subordinated Notes</u></b>	<b><u>Maturity Date</u></b>	<b><u>Interest Rate</u></b>	<b><u>Book Value</u></b>
Cash Subordination Agreement	April 30, 2026	4.70%	\$ 2,500
Subordinated Revolving Credit Agreement	April 30, 2026	4.00%	8,800
Total			<u>\$ 11,300</u>

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

#### **Premises and Equipment**

At June 30, 2017, future minimum rental commitments (net of sublease commitments, principally on office rentals) were as follows:

<b><u>Fiscal Year</u></b>	<b><u>Gross Amount</u></b>	<b><u>Sublease Income</u></b>	<b><u>Net Amount</u></b>
2017	\$ 17	1	\$ 16
2018	34	3	31
2019	33	3	30
2020	28	3	25
2021	24	-	24
Thereafter	59	-	59
Total	<u>\$ 195</u>	<u>10</u>	<u>\$ 185</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 borrowed agreements (agreements with a trade date as of or prior to June 30, 2017 and settle subsequent to June 30, 2017) that are primarily secured by collateral from U.S. government agency securities and other sovereign government obligations. At June 30, 2017, the Company had commitments to enter into reverse repurchase agreements and securities borrowed agreements of \$1,402. At June 30, 2017, \$652 of these agreements settled within three business days.

The Company provides underwriting commitments in connection with its capital raising sources to a diverse group of corporate and other institutional clients. At June 30, 2017, the Company had underwriting commitments of \$30.

## Guarantees

The following table summarizes certain information regarding the Company's obligation under guarantee arrangements at June 30, 2017.

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>	\$ -	\$ -	\$ -	\$ 2,445	\$ 2,445	\$ 300
Other credit contracts	26	-	13	103	142	(15)
Non-credit derivative contracts <sup>(1)</sup>	145,553	12,143	431	1,018	159,145	2,366

<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 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 in this action 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 and January 18, 2017, the court, upon stipulations of voluntary partial discontinuance by the parties, entered orders dismissing all claims related to two 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 \$65. At June 25, 2017, the current unpaid balance of the mortgage pass-through certificates at issue in this action was approximately \$45, 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 \$45 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. On February 6, 2017, the U.S. District Court for the District of Massachusetts entered an order remanding the action to the Superior Court of the Commonwealth of Massachusetts. At June 25, 2017, the current unpaid balance of the mortgage pass-through certificates at issue in this action was approximately \$48, 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 \$48 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, plaintiffs 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 plaintiffs by the Company was approximately \$116. On August 26, 2015, the Company perfected its appeal from the court's decision filed October 29, 2014. On August 11, 2016, the Appellate Division, First Department, affirmed the lower court's October 29, 2014 order. At June 25, 2017, 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 plaintiffs 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 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. On June 20, 2017 the Appellate Division, First Department, affirmed the lower court's June 10, 2014 order. On July 28, 2017, the Company filed its motion for leave to appeal to the First Department, seeking leave to appeal to the Court of Appeals. At June 25, 2017, the current unpaid balance of the mortgage pass-through certificates at issue in this action was approximately \$237, and the certificates had incurred actual losses of approximately \$87. Based on currently available information, the Company believes it could incur a loss in this action up to the difference between the \$237 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 September 23, 2014, FGIC filed a complaint against the Company in the Supreme Court of NY styled *Financial Guaranty Insurance Company v. Morgan Stanley ABS Capital I Inc. et al.* relating to the Morgan Stanley ABS Capital I Inc. Trust 2007-NC4. The complaint asserts claims for breach of contract and fraudulent inducement and alleges, among other things, that the loans in the trust breached various representations and warranties and defendants made untrue statements and material omissions to induce FGIC to issue a financial guaranty policy on certain classes of certificates that had an original balance of approximately \$876 million. The complaint seeks, among other relief, specific performance of the loan breach remedy procedures in the transaction documents, compensatory, consequential and punitive damages, attorneys' fees and interest. On January 23, 2017, the court denied the Company's motion to dismiss the complaint. On February 24, 2017, the Company filed a notice of appeal of the court's order. Based on currently available information, the Company believes that it could incur a loss in this action of up to approximately \$277 million, the total original unpaid balance of the mortgage loans for which the Company received repurchase demands from a certificate holder and FGIC that the Company did not repurchase, plus pre- and post-judgment interest, fees and costs, as well as claim payments that FGIC has made and will make in the future. In addition, plaintiff is seeking to expand the number of loans at issue and the possible range of loss could increase.

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 June 30, 2017 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	\$ 34	\$ 22

The Company has no additional maximum exposure to losses on assets not recognized in its consolidated statement of financial condition as of June 30, 2017.

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 June 30, 2017</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)	<u>\$ 24,372</u>	<u>\$ 1,310</u>	<u>\$ 393</u>	<u>\$ 112</u>
Total maximum exposure to loss and carrying value of exposure to loss:				
Debt and equity interests	<u>\$ 1,483</u>	<u>\$ 34</u>	<u>\$ 52</u>	<u>\$ 12</u>

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

	<u>At June 30, 2017</u>	
	<u>Unpaid Principal Balance</u>	<u>Debt and Equity Interests</u>
Residential mortgages	\$ 6,708	\$ 351
Commercial mortgages debt obligations	15,848	508
U.S. agency collateralized mortgage obligations	1,628	612
Other consumer or commercial loans	188	12
<b>Total</b>	<u><b>\$ 24,372</b></u>	<u><b>\$ 1,483</b></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 \$2,295 at June 30, 2017. 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 June 30, 2017.

#### *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 June 30, 2017</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)	\$ 4,000	\$ 12,337	\$ 30
Retained interests (fair value):			
Investment grade	\$ 5	\$ 710	\$ -
Non-investment grade	32	-	-
Total retained interests (fair value)	<u>\$ 37</u>	<u>\$ 710</u>	<u>\$ -</u>
Interests purchased in the secondary market (fair value):			
Investment grade	\$ 16	\$ 66	\$ -
Non-investment grade	-	-	-
Total interests purchased in the secondary market (fair value)	<u>\$ 16</u>	<u>\$ 66</u>	<u>\$ -</u>

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

	<b>At June 30, 2017</b>		
	<b>Level 2</b>	<b>Level 3</b>	<b>Total</b>
Retained interests (fair value):			
Investment grade	\$ 715	\$ -	\$ 715
Non-investment grade	-	32	32
Total	<u>\$ 715</u>	<u>\$ 32</u>	<u>\$ 747</u>
Interests purchased in the secondary market (fair value):			
Investment grade	\$ 79	\$ 3	\$ 82
Non-investment grade	-	-	-
Total	<u>\$ 79</u>	<u>\$ 3</u>	<u>\$ 82</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 generally carried at fair value in the Company's consolidated statement of financial condition.

### *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.



At June 30, 2017, there were no transfers accounted for as failed sales in the Company's consolidated statement of financial condition.

## **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 of Equity Trading; Fixed Income and Commodities Trading; Clients and Services; and Research.

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 securities and 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 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 loss, or of damage to the Company's reputation, resulting from inadequate or failed processes or systems, human factors 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 units ("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 sponsor 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 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 eligible dependents.

#### ***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 2017, the Company made a dollar for dollar Company match up to 4% of eligible 2016 pay, up to the Internal Revenue Service ("IRS") limit. Eligible U.S. employees with eligible pay less than or equal to one hundred thousand dollars also received a fixed contribution equal to 2% of eligible 2016 pay. Certain employees received a transition contribution based on prior plan membership.

### **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.

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 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.

<u>Jurisdiction</u>	<u>Tax Year</u>
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 June 30, 2017, MS&Co.'s Net Capital was \$10,388 which exceeded the CFTC minimum requirement by \$8,312.

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 June 30, 2017, 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 June 30, 2017, 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 Company, 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 resulted in a significant increase in the Company’s model-based credit risk deduction and became effective on January 31, 2017. The Company continues 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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