

MORGAN STANLEY & CO. LLC

**CONSOLIDATED STATEMENT OF FINANCIAL CONDITION
AS OF DECEMBER 31, 2018
AND
REPORT OF INDEPENDENT REGISTERED
PUBLIC ACCOUNTING FIRM**

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Sole Member of
Morgan Stanley & Co. LLC

Opinion on the Financial Statements

We have audited the accompanying consolidated statement of financial condition of Morgan Stanley & Co. LLC and subsidiaries (the "Company") as of December 31, 2018, and the related notes (collectively referred to as the "financial statement"). In our opinion, the financial statement presents fairly, in all material respects, the financial position of the Company as of December 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

The financial statement is the responsibility of the Company's management. Our responsibility is to express an opinion on this financial statement based on our audit. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statement is free of material misstatement, whether due to error or fraud.

Our audit included performing procedures to assess the risks of material misstatement of the financial statement, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statement. Our audit also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statement. We believe that our audit of the financial statement provides a reasonable basis for our opinion.

/s/ Deloitte & Touche LLP
New York, NY
February 28, 2019

We have served as the Company's auditor since 1997.

MORGAN STANLEY & CO. LLC
CONSOLIDATED STATEMENT OF FINANCIAL CONDITION
As of December 31, 2018
(In millions of dollars)

ASSETS		
Cash	\$	2,185
Cash deposited with clearing organizations or segregated under federal and other regulations or requirements		11,652
Financial instruments owned, at fair value (approximately \$52,755 were pledged to various parties; \$59 related to consolidated variable interest entities generally not available to the Company)		93,832
Securities received as collateral, at fair value (approximately \$14,956 were pledged to various parties)		16,441
Securities purchased under agreements to resell		63,981
Securities borrowed		95,421
Receivables:		
Customers		11,766
Brokers, dealers and clearing organizations		7,078
Interest and dividends		573
Fees and other		450
Affiliates		30
Other assets		397
Total assets	\$	303,806
LIABILITIES AND MEMBER'S EQUITY		
Financial instruments sold, not yet purchased, at fair value	\$	24,704
Obligation to return securities received as collateral, at fair value		17,569
Securities sold under agreements to repurchase (includes \$812 at fair value)		77,944
Securities loaned		18,745
Other secured financings (includes \$105 at fair value; \$38 related to consolidated variable interest entities generally non-recourse to the Company)		2,788
Payables:		
Customers		123,479
Brokers, dealers and clearing organizations		3,871
Interest and dividends		471
Affiliates		1,106
Other liabilities and accrued expenses		3,637
Borrowings (includes \$574 at fair value)		8,171
Total liabilities		282,485
Commitments and contingent liabilities (See Note 10)		
Subordinated liabilities		13,300
Member's equity:		
Member's equity		8,552
Accumulated other comprehensive loss		(531)
Total member's equity		8,021
Total liabilities and member's equity	\$	303,806

See Notes to Consolidated Statement of Financial Condition.

MORGAN STANLEY & CO. LLC
NOTES TO CONSOLIDATED STATEMENT OF FINANCIAL CONDITION
As of December 31, 2018
(In millions of dollars, except where noted)

1. Introduction and Basis of Presentation

The Company

MS&Co., together with its subsidiaries (the “Company”), provides a wide variety of products and services to a large and diversified group of clients and customers, including corporations, governments, and financial institutions. Its businesses include securities underwriting and distribution; financial advisory services, including advice on mergers and acquisitions, restructurings, real estate and project finance; sales, trading, financing and market-making activities in equity and fixed income securities and related products, and other instruments including foreign exchange and commodities futures; and prime brokerage services. See the “Glossary of Common Acronyms” for the definition of certain acronyms used throughout the notes to the consolidated statement of financial condition.

MS&Co. and its wholly owned subsidiary, PDS, are registered with the SEC as broker-dealers. MS&Co. is also registered as a futures commission merchant and provisionally registered as a swap dealer with the CFTC.

MS&Co. is a wholly owned subsidiary of MSDHI. MSDHI is a wholly owned subsidiary of MSCM, which is a wholly owned subsidiary of Morgan Stanley (the “Ultimate Parent”).

Basis of Financial Information

The consolidated statement of financial condition is prepared in accordance with U.S. GAAP, which require the Company to make estimates and assumptions regarding the valuations of certain financial instruments, 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 subsidiary and other entities in which MS&Co. has a controlling financial interest, including certain VIEs (see Note 11).

At December 31, 2018, the Company’s consolidated subsidiaries reported \$18,038 of assets, \$17,984 of liabilities and \$54 of equity on a stand-alone basis.

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

For entities where the total equity investment at risk is sufficient to enable the entity to finance its activities without additional subordinated financial support and 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.

2. Significant Accounting Policies

Contracts with Customers

Receivables from contracts with customers are recognized in Receivables - Customers in the consolidated statement of financial condition when the underlying performance obligations have been satisfied and the Company has the right per the contract to bill the customer. Contract assets are recognized in Other assets when the Company has satisfied its performance obligations but customer payment is conditional. Contract liabilities are recognized in Other liabilities and accrued expenses when the Company has collected payment from a customer based on the terms of the contract, but the underlying performance obligations are not yet satisfied.

Fair Value of Financial Instruments

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

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

net derivative positions executed with the same counterparty under the same master netting agreement.

Fair Value Option

The Company has elected to measure certain eligible instruments at fair value, including certain Securities sold under agreements to repurchase (“repurchase agreements”), certain Securities purchased under agreements to resell (“reverse repurchase agreements”), certain borrowings, and certain other secured financings. The Company elected the fair value option for certain eligible instruments that are risk managed on a fair value basis to mitigate income statement volatility caused by measurement basis differences between the elected instruments and their associated risk management transactions or to eliminate complexities of applying certain accounting models.

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.

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, financial liabilities, and nonfinancial items accounted for as derivatives 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.

In determining fair value, the Company uses various valuation approaches and establishes a hierarchy for inputs used in measuring fair value that requires 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 fair value hierarchy is broken down into three levels based on the observability of inputs as follows, with Level 1 being the highest and Level 3 being the lowest:

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, 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.

In certain cases, the inputs used to measure fair value may fall into different levels of the fair value hierarchy. In such cases, the total fair value amount is disclosed in the level appropriate for the lowest level input that is significant to the total fair value of the asset or liability.

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 meets its 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, as well as certain borrowings for which the fair value option was elected. The Company considers the impact of changes in its own credit spreads based upon observations of the secondary bond market spreads when measuring the fair value of certain borrowings.

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 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 its 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.

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

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 (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 7, respectively.

Income Taxes

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. When performing the assessment the Company considers all types of deferred tax assets in combination with each other, regardless of the origin of the underlying temporary difference. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. If the Company subsequently determines that it would be able to realize deferred tax assets in excess of their net recorded amount, it would make an adjustment to the deferred tax asset valuation allowance.

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 settled periodically with the Ultimate Parent.

Uncertain tax positions are recorded on the basis of a two-step process, whereby (i) 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 (ii) for those tax positions that meet this threshold, the Company recognizes the largest amount of tax benefit that is more likely than not 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 ("restricted cash") includes cash segregated in compliance with federal and other regulations, and funds deposited by customers.

Collateralized Financings

Securities borrowed, reverse repurchase agreements, Securities loaned and 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 11). 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. Transfers that are not accounted for as sales are treated as Other secured financings.

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.

Deferred Compensation Plans

The Company participates in various deferred stock-based and cash-based compensation plans for the benefit of certain current and former employees. The deferred cash-based compensation plans provide a return to the plan participants based upon the performance of various referenced investments. The Company enters into a variety of derivative contracts with certain affiliates to economically hedge its obligations under the deferred cash-based compensation plans.

Accounting Standards Adopted

The Company adopted the following accounting updates in 2018.

Revenue from Contracts with Customers. On January 1, 2018 the Company adopted *Revenue from Contracts with Customers* using the modified retrospective method, which resulted in a net decrease to Member's equity of \$12, net of tax. Prior period amounts were not restated. See Note 6 for disclosures related to the adoption of this standard.

The Company's revised accounting policy in accordance with this adoption was effective January 1, 2018.

Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income. This accounting update, which the Company elected to early adopt as of January 1, 2018, allows companies to reclassify from AOCI to Member's equity the stranded tax effects associated with enactment of the Tax Act on December 22, 2017. These stranded tax effects resulted from the requirement to reflect the total amount of the remeasurement of and other adjustments to deferred tax assets and liabilities in 2017 in income before income taxes, regardless of whether the deferred taxes were originally recorded in AOCI. Accordingly, as of January 1, 2018, the Company recorded a net increase to Member's equity as a result of the reclassification of \$128 of such stranded tax effects previously recorded in AOCI, which were primarily the result of the remeasurement of deferred tax assets and liabilities associated with the change in tax rates.

Aside from the above treatment related to the Tax Act, the Company releases stranded tax effects from AOCI into earnings once the related category of instruments or transactions giving rise to these effects no longer exists.

Accounting Development Updates

The Financial Accounting Standards Board has issued certain accounting updates that apply to the Company. Accounting updates not listed below were assessed and determined to be either not applicable or are not expected to have a significant impact on the Company's consolidated statement of financial condition.

The following accounting updates were adopted on January 1, 2019:

Leases. This accounting update requires lessees to recognize in the consolidated statement of financial condition all leases with terms exceeding one year, which results in the recognition of a right of use asset and corresponding lease liability, including for those leases that the Company currently classifies as operating leases. The accounting for leases where the Company is the lessor is largely unchanged.

The right of use asset and lease liability will initially be measured using the present value of the remaining rental payments. The Company adopted this accounting update through a cumulative-effect adjustment to Member's equity.

At transition on January 1, 2019, the adoption of this standard resulted in a gross up of \$106 reflected in Other assets and Other liabilities and accrued expenses within the consolidated statement of financial condition. Additionally, there was no material impact to MS&Co.'s Net Capital.

The following accounting update is currently being evaluated to determine the potential impact of adoption:

Financial Instruments—Credit Losses. This accounting update impacts the impairment model for certain financial assets measured at amortized cost by requiring a CECL methodology to estimate expected credit losses over the entire life of the financial asset, recorded at inception or purchase. CECL will replace the loss model currently applicable to certain financial assets measured at amortized cost. Under the update, there may be an ability to determine there are no expected credit losses in certain circumstances, e.g., based on collateral arrangements for lending and financing transactions or based on the credit quality of the borrower or issuer. Based on preliminary estimates, the adoption of this accounting guidance will not have a material impact on the Company's consolidated statement of financial condition. This update is effective as of January 1, 2020.

3. Related Party Transactions

The Company enters into transactions with the Ultimate Parent and its consolidated subsidiaries (the "Firm") in order to, among other things, manage risk, facilitate client demand, satisfy regulatory and liquidity requirements, and fund business activities. These transactions include OTC derivatives and collateralized financings, as described in Notes 5 and 7, respectively.

The Company also obtains funding from affiliates and subordinated liabilities from the Ultimate Parent as described in Notes 8 and 9, respectively.

The Company clears securities and futures transactions for affiliates with standard settlement terms, and also facilitates foreign exchange transactions for affiliates as part of the Firm's currency management function. Trading related balances associated with these transactions are recorded within Receivables from or Payables to customers, and Receivables from or Payables to brokers, dealers and clearing organizations.

The Company participates in various deferred stock-based and cash-based compensation plans for the benefit of certain current and former employees, as described in Note 2. Derivative hedges associated with the deferred cash-based compensation

plans are entered into with affiliates. Additionally, the Company has recognized liabilities to the Ultimate Parent for the deferred stock-based compensation plans in Other liabilities and accrued expenses.

The Company has agreements with affiliates for other activities, including a tax sharing agreement with the Ultimate Parent as described in Note 15, global transfer pricing policies, and other activities as described further below. Unsettled amounts for these activities are recorded within Receivables from or Payables to affiliates, are payable on demand, and bear interest at rates established by the treasury function of the Ultimate Parent. These rates are periodically reassessed and are intended to approximate the market rate of interest that the Ultimate Parent incurs in funding its business.

The Company has various agreements with an affiliated broker-dealer, MSSB, in which MSSB provides certain sales and distribution services for the Company's equities and fixed income trading activities, and the Company provides certain sales and trading services to MSSB.

On March 21, 2018, MS&Co. increased its regulatory capital by \$3,500, consisting of \$2,000 in incremental subordinated liabilities pursuant to a Subordinated Revolving Credit Agreement with the Ultimate Parent and \$1,500 of equity capital infused by the Ultimate Parent. See Note 16 for additional information.

	At December 31, 2018
Assets and receivables from affiliated companies:	
Cash	\$ 216
Financial instruments owned, at fair value	479
Reverse repurchase agreements	20,899
Securities borrowed	19,916
Receivables - Customers	924
Receivables - Brokers, dealers and clearing organizations	2,305
Receivables - Fees and other	131
Receivables - Affiliates	30
Liabilities and payables to affiliated companies:	
Financial instruments sold, not yet purchased, at fair value	\$ 225
Repurchase agreements	53,942
Securities loaned	16,280
Other secured financings	67
Payables - Customers	38,894
Payables - Brokers, dealers and clearing organizations	2,183
Payables - Affiliates	1,106
Other liabilities and accrued expenses	921
Borrowings	7,560
Subordinated liabilities	13,300

4. Fair Values

Fair Value Measurements

Valuation Techniques for Assets and Liabilities Measured at Fair Value

Asset and Liability/Valuation Technique	Valuation Hierarchy Classification
U.S. Treasury and Agency Securities <i>U.S. Treasury Securities</i> <ul style="list-style-type: none">Fair value is determined using quoted market prices. <i>U.S. Agency Securities</i> <ul style="list-style-type: none">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 a comparable to-be-announced security.CMOs are generally valued using quoted market prices and trade data adjusted by subsequent changes in related indices for comparable instruments.	<ul style="list-style-type: none">Level 1Level 1 - non-callable agency-issued debt securitiesGenerally Level 2 - callable agency-issued debt securities, agency mortgage pass-through pool securities and CMOsLevel 3 - in instances where the inputs are unobservable
Other Sovereign Government Obligations <ul style="list-style-type: none">Fair value is determined using quoted prices in active markets when available.	<ul style="list-style-type: none">Generally Level 1Level 2 - if the market is less active or prices are dispersedLevel 3 - in instances where the inputs are unobservable
State and Municipal Securities <ul style="list-style-type: none">Fair value 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.	<ul style="list-style-type: none">Generally Level 2 - if value based on observable market data for comparable instrumentsLevel 3 in instances where market data is not observable
RMBS, CMBS, ABS (collectively known as MABS) <ul style="list-style-type: none">MABS 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, 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.	<ul style="list-style-type: none">Generally Level 2 - if value based on observable market data for comparable instrumentsLevel 3 - 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 or other inputs
Loans <ul style="list-style-type: none">Fair value of mortgage loans is determined using observable prices based on transactional data or third-party pricing for 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 the Company's best available 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.	<ul style="list-style-type: none">Level 2 - if value based on observable market data for comparable instrumentsLevel 3 - in instances where prices or significant spread inputs are unobservable
Corporate and other debt <i>Corporate Bonds</i> <ul style="list-style-type: none">Fair value 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.	<ul style="list-style-type: none">Generally Level 2 - if value based on observable market data for comparable instrumentsLevel 3 - in instances where prices or significant spread inputs are unobservable

Asset and Liability/Valuation Technique	Valuation Hierarchy Classification
<p><i>CDO</i></p> <ul style="list-style-type: none"> The Company holds cash CDOs that typically reference a tranche of an underlying synthetic portfolio of single name CDS spreads collateralized by corporate bonds (CLN) or cash portfolio of ABS/loans (“asset-backed CDOs”). Credit correlation, a primary input used to determine the fair value of CLNs, 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 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 position is evaluated independently taking into consideration available comparable market levels, underlying collateral performance and pricing, deal structures and liquidity. 	<ul style="list-style-type: none"> Level 2 - when either comparable market transactions are observable or the credit correlation input is insignificant Level 3 - when either comparable market transactions are unobservable or the credit correlation input is significant
<p>Corporate Equities</p> <ul style="list-style-type: none"> 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. Unlisted equity securities are generally 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 transactions, trading multiples and changes in market outlook, among other factors. 	<ul style="list-style-type: none"> Level 1 - exchange-traded securities if actively traded Level 2 - exchange-traded securities if not actively traded or if undergoing a recent M&A event or corporate action Level 3 - unlisted equity securities and exchange-traded securities if not actively traded or if undergoing an aged M&A event or corporate action
<p>Derivative Contracts</p> <p><i>Listed Derivative Contracts</i></p> <ul style="list-style-type: none"> Listed derivatives that are actively traded are valued based on quoted prices from the exchange. Listed derivatives that are not actively traded are valued using the same approaches as those applied to OTC derivatives. <p><i>OTC Derivative Contracts</i></p> <ul style="list-style-type: none"> OTC derivative contracts include forward, swap and option contracts related to interest rates, foreign currencies, credit standing of reference entities, or equity prices. Depending on the product and the terms of the transaction, the fair value of OTC derivative products can be modeled using a series of techniques, including closed-form analytic formulas, such as the Black-Scholes option-pricing model, simulation models or a combination thereof. Many pricing models do not entail material subjectivity as 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. More complex OTC derivative products are typically less liquid and require more judgment in the implementation of the valuation technique since direct trading activity or quotes are unobservable. This includes certain types of interest rate derivatives with both volatility and correlation exposure, equity, commodity or foreign currency derivatives that are either longer-dated or include exposure to multiple underlyings, and credit derivatives, including CDS on certain mortgage- or asset backed securities and basket CDS. Where these inputs are unobservable, relationships to observable data points, based on historic and/or implied observations, may be employed as a technique to estimate the model input values. <p>For further information on the valuation techniques for OTC derivative products, see Note 2. For further information on derivative instruments and hedging activities, see Note 5.</p>	<ul style="list-style-type: none"> Level 1 - listed derivatives that are actively traded Level 2 - listed derivatives that are not actively traded Generally Level 2 - OTC derivative products valued using observable inputs, or where the unobservable input is not deemed significant. Level 3 - OTC derivative products for which the unobservable input is deemed significant
<p>Securities Received as Collateral and Obligation to Return Securities Received as Collateral</p> <ul style="list-style-type: none"> 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. Unlisted equity securities are generally 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 transactions, trading multiples and changes in market outlook, among other factors. 	<ul style="list-style-type: none"> Level 1 - exchange-traded securities if actively traded Level 2 - exchange-traded securities if not actively traded or if undergoing a recent M&A event or corporate action Level 3 - unlisted equity securities and exchange-traded securities if not actively traded or if undergoing an aged M&A event or corporate action
<p>Repurchase Agreements</p> <ul style="list-style-type: none"> Fair value is computed using a standard cash flow discounting methodology. The inputs to the valuation include contractual cash flows and collateral funding spreads, which are the incremental spread over the OIS rate for a specific collateral rate (which refers to the rate applicable to a specific type of security pledged as collateral). 	<ul style="list-style-type: none"> Generally Level 2 Level 3 - in instances where the unobservable inputs are deemed significant
<p>Other Secured Financings and Borrowings</p> <ul style="list-style-type: none"> 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 Other secured financings and Borrowings. 	<ul style="list-style-type: none"> Generally Level 2 Level 3 - in instances where the unobservable inputs are deemed significant

Assets and Liabilities Measured at Fair Value

	At December 31, 2018				
	Level 1	Level 2	Level 3	Netting ¹	Total
Assets at fair value					
Financial instruments owned:					
U.S. Treasury and agency securities	\$ 27,034	\$ 29,458	\$ 54	\$ -	\$ 56,546
Other sovereign government obligations	2,356	363	3	-	2,722
State and municipal securities	-	2,915	45	-	2,960
MABS	-	1,694	244	-	1,938
Loans ²	-	-	59	-	59
Corporate and other debt	-	5,613	220	-	5,833
Corporate equities ³	21,784	252	31	-	22,067
Derivative contracts:					
Interest rate	2,048	3,261	6	-	5,315
Credit	-	59	-	-	59
Foreign exchange	30	8,791	-	-	8,821
Equity	325	11,697	96	-	12,118
Netting ¹	(1,997)	(21,249)	(95)	(1,272)	(24,613)
Total derivative contracts	406	2,559	7	(1,272)	1,700
Investments	-	-	7	-	7
Total financial instruments owned ⁴	\$ 51,580	\$ 42,854	\$ 670	\$ (1,272)	\$ 93,832
Securities received as collateral	\$ 16,441	\$ -	\$ -	\$ -	\$ 16,441

	At December 31, 2018				
	Level 1	Level 2	Level 3	Netting ¹	Total
Liabilities at fair value					
Financial instruments sold, not yet purchased:					
U.S. Treasury and agency securities	\$ 11,811	\$ 543	\$ -	\$ -	\$ 12,354
Other sovereign government obligations	830	97	-	-	927
Corporate and other debt	-	4,144	1	-	4,145
Corporate equities ³	3,804	136	1	-	3,941
Derivative contracts:					
Interest rate	2,253	4,032	-	-	6,285
Credit	-	24	-	-	24
Foreign exchange	33	8,983	-	-	9,016
Equity	385	12,670	838	-	13,893
Netting ¹	(1,997)	(21,249)	(95)	(2,540)	(25,881)
Total derivative contracts	674	4,460	743	(2,540)	3,337
Total financial instruments sold, not yet purchased ⁴	\$ 17,119	\$ 9,380	\$ 745	\$ (2,540)	\$ 24,704
Obligation to return securities received as collateral	\$ 17,569	\$ -	\$ -	\$ -	\$ 17,569
Repurchase agreements	-	812	-	-	812
Other secured financings	-	105	-	-	105
Borrowings	-	574	-	-	574

1. 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 "Netting". Positions classified within the same level that are with the same counterparty are netted within that level. For further information on derivative instruments, see Note 5.

2. The Company consolidates loans underlying MABS as a part of its involvement with VIEs. For further information, see Note 11.

3. For trading purposes, the Company holds or sells short equity securities issued by entities in diverse industries and of varying size.

4. Amounts exclude the unsettled fair value on long futures contracts of \$43 included in Receivables - Brokers, dealers and clearing organizations in the consolidated statement of financial condition. These contracts are primarily classified as Level 1, actively traded and valued based on quoted prices from the exchange.

Significant Unobservable Inputs Used in Recurring Level 3 Fair Value Measurements

The following disclosures provide information on the valuation techniques, significant unobservable inputs, and their ranges and averages for each major category of assets and liabilities measured at fair value 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. 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.

Valuation Techniques and Sensitivity of Unobservable Inputs Used in Level 3 Fair Value Measurements

Recurring Fair Value Measurement

	Balance / Range (Average ¹) At December 31, 2018
Assets at fair value	
Financial instruments owned:	
U.S. Treasury and agency securities	\$ 54
Comparable pricing:	
Bond price	100 to 104 points (100 points)
State and municipal securities	45
Comparable pricing:	
Bond price	100 points (100 points)
MABS	244
Comparable pricing:	
Bond price	0 to 72 points (30 points)
Loans	59
Comparable pricing:	
Loan price	75 to 100 points (93 points)
Corporate and other debt	220
Comparable pricing:	
Bond price	10 to 82 points (28 points)
Option model:	
At the money volatility	20% to 67% (45%)
Corporate equities	31
Comparable pricing:	
Equity price	100%
Net derivative contracts:	
Equity	(742)
Option model:	
At the money volatility	26% to 63% (45%)
Volatility skew	-2% to 0% (-1%)

Points—Percentage of par

1. Amounts represent weighted averages except where simple averages and the median of the inputs are more relevant.

Significant Unobservable Inputs – Description and Sensitivity

An increase (decrease) to the following inputs would generally result in a higher (lower) fair value.

- **Comparable bond or loan 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 or loan, then adjusting that yield (or spread) to derive a value for the bond or loan. The adjustment to yield (or spread) should account for relevant differences in the bonds or loans such as maturity or credit quality. Alternatively, a price-to-price basis can be assumed between the comparable instrument and the bond or loan being valued in order to establish the value of the bond or loan.
- **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.

An increase (decrease) to the following inputs would generally 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.

- **Volatility:** The measure of 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, the tenor and the strike price of the option.
- **Volatility skew:** The measure of the difference in implied volatility for options with identical underliers and expiry dates but with different strikes.

Financial Instruments Not Measured at Fair Value

At December 31, 2018

	Carrying Value	Fair Value			Total
		Level 1	Level 2	Level 3	
Financial assets					
Cash	\$ 2,185	\$ 2,185	\$ -	\$ -	\$ 2,185
Restricted cash	11,652	11,652	-	-	11,652
Reverse repurchase agreements	63,981	-	63,912	15	63,927
Securities borrowed	95,421	-	95,421	-	95,421
Receivables ¹ :					
Customers	11,766	-	11,766	-	11,766
Brokers, dealers and clearing organizations	7,035	-	7,035	-	7,035
Fees and other	450	-	450	-	450
Affiliates	30	-	30	-	30
Other assets ²	85	-	85	-	85
Financial liabilities					
Repurchase agreements	\$ 77,132	\$ -	\$ 76,574	\$ 525	\$ 77,099
Securities loaned	18,745	-	18,745	-	18,745
Other secured financings	2,683	-	2,686	-	2,686
Payables ¹ :					
Customers	123,479	-	123,479	-	123,479
Brokers, dealers and clearing organizations	3,871	-	3,871	-	3,871
Affiliates	1,106	-	1,106	-	1,106
Other liabilities and accrued expenses ²	1,154	-	1,154	-	1,154
Borrowings	7,597	-	7,641	24	7,665
Subordinated liabilities	13,300	-	14,104	-	14,104

1. Accrued interest and dividend receivables and payables where carrying value approximates fair value have been excluded.

2. 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.

5. Derivative Instruments

The Company may trade and make markets globally in listed futures, OTC swaps, forwards, options and other derivatives referencing, among other things, interest rates, equities, currencies, bonds, credit indices, and MABS. 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

Derivative Assets at December 31, 2018

	Fair Value				Notional ³			
	Bilateral OTC	Cleared OTC	Exchange-Traded	Total	Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Derivatives contracts								
Interest rate contracts	\$ 3,904	\$ 1,409	\$ 2	\$ 5,315	\$ 217,653	\$ 198,819	\$ 39,386	\$ 455,858
Credit contracts	59	-	-	59	851	-	-	851
Foreign exchange contracts	8,760	-	61	8,821	446,416	-	6,042	452,458
Equity contracts	4,605	-	7,513	12,118	81,923	-	157,555	239,478
Total gross derivatives contracts	17,328	1,409	7,576	26,313	\$ 746,843	\$ 198,819	\$ 202,983	\$ 1,148,645
Amounts offset								
Cash collateral netting	(1,272)	-	-	(1,272)				
Counterparty netting	(14,964)	(1,330)	(7,047)	(23,341)				
Total derivative assets	1,092	79	529	1,700				
Amounts not offset¹								
Financial instruments collateral	(849)	-	-	(849)				
Net amounts	\$ 243	\$ 79	\$ 529	\$ 851				
Net amounts for which master netting or collateral agreements are not in place or may not be legally enforceable				\$ 317				

Derivative Liabilities at December 31, 2018

	Fair Value				Notional ³			
	Bilateral OTC	Cleared OTC	Exchange-Traded	Total	Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Derivatives contracts								
Interest rate contracts	\$ 4,948	\$ 1,337	\$ -	\$ 6,285	\$ 218,335	\$ 188,387	\$ 34,905	\$ 441,627
Credit contracts	24	-	-	24	425	-	-	425
Foreign exchange contracts	8,970	-	46	9,016	450,990	-	12,898	463,888
Equity contracts	6,877	-	7,016	13,893	95,410	-	199,821	295,231
Other ²	-	-	-	-	518	-	-	518
Total gross derivatives contracts	20,819	1,337	7,062	29,218	\$ 765,678	\$ 188,387	\$ 247,624	\$ 1,201,689
Amounts offset								
Cash collateral netting	(2,540)	-	-	(2,540)				
Counterparty netting	(14,964)	(1,330)	(7,047)	(23,341)				
Total derivative liabilities	3,315	7	15	3,337				
Amounts not offset¹								
Financial instruments collateral	(59)	-	-	(59)				
Other cash collateral	(27)	-	-	(27)				
Net amounts	\$ 3,229	\$ 7	\$ 15	\$ 3,251				
Net amounts for which master netting or collateral agreements are not in place or may not be legally enforceable				\$ 2,636				

1. 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.

2. Other represents liquidity arrangements which are accounted for as options as they guarantee debt issued by affiliates.

3. The Company believes that the notional amounts of derivative contracts generally overstate its exposure. In most circumstances, notional amounts are only used as a reference point from which to calculate amounts owed between the parties to the contract. Furthermore, notional amounts do not reflect the benefit of legally enforceable netting arrangements or risk mitigating transactions.

See Note 4 for information related to the unsettled fair value of futures contracts not designated as accounting hedges, which are excluded from the previous tables.

Credit Risk-Related Contingencies

Net Derivative Liabilities and Collateral Posted

	At December 31, 2018
Net derivative liabilities with credit risk-related contingent features	\$ 312
Collateral posted	196

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

The Company enters into agreements 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. 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 S&P Global Ratings ("S&P"). At December 31, 2018, 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 downgrade scenarios based on the relevant contractual downgrade triggers was \$1.

Credit Derivatives and Other Credit Contracts

The Company enters into credit derivatives, principally CDS, 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.

Credit Protection Sold¹

	Years to Maturity at December 31, 2018					Fair Value (Asset)/ Liability
	< 1	1-3	3-5	Over 5	Total	
Index and basket CDS						
Non-investment grade	\$ -	\$ -	\$ 5	\$ 425	\$ 430	\$ 24
Total CDS sold	-	-	5	425	430	24
Other credit contracts	-	-	-	93	93	(3)
Total credit protection sold	\$ -	\$ -	\$ 5	\$ 518	\$ 523	\$ 21
CDS protection sold with identical protection purchased				\$ 425		

1. Non-investment grade determination is based on the internal credit rating of the reference obligation.

The fair value amounts as shown in the previous table are prior to cash collateral or counterparty netting. Internal credit ratings serve as CRM'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.

Protection Purchased with CDS

	At December 31, 2018	
	Fair Value (Asset)/Liability	Notional
Index and basket	\$ (59)	\$ 846

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 CDS where credit protection was sold.

Index and Basket CDS. Index and basket CDS are products where credit protection is provided on a portfolio of single name CDS. 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 CDS.

The Company also enters into tranched index and basket CDS 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.

Other Credit Contracts. The Company has invested in 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.

6. Revenues from Contracts with Customers

This disclosure is made in accordance with the adoption of the accounting update *Revenue from Contracts with Customers*.

Receivables from Contracts with Customers

	At December 31, 2018
Customer and other receivables	\$ 268

Receivables from contracts with customers, which are included within Receivables on the Company's consolidated statement of financial condition, arise when the Company has both recorded revenues and has the right per the contract to bill customers.

7. 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, accommodate customers' needs and finance its 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 financings in a manner that reduces the potential refinancing risk of secured financings of less liquid assets. The Company considers the quality of collateral when negotiating collateral eligibility with counterparties, as defined by its fundability criteria. The Company utilizes shorter-term secured financing for highly liquid assets and has established longer tenor limits for less liquid assets, for which funding may be at risk in the event of a market disruption.

Offsetting of Certain Collateralized Transactions

At December 31, 2018					
	Gross Amounts	Amounts Offset	Net Amounts Presented	Amounts Not Offset ¹	Net Amounts
Assets					
Reverse repurchase agreements	\$ 141,738	\$ (77,757)	\$ 63,981	\$ (58,796)	\$ 5,185
Securities borrowed	95,421	-	95,421	(92,749)	2,672
Liabilities					
Repurchase agreements	\$ 155,701	\$ (77,757)	\$ 77,944	\$ (72,676)	\$ 5,268
Securities loaned	18,745	-	18,745	(18,692)	53
Net amounts for which master netting agreements are not in place or may not be legally enforceable					
Reverse repurchase agreements					\$ 4,781
Securities borrowed					130
Repurchase agreements					4,894
Securities loaned					8

1. 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.

Gross Secured Financing Balances by Remaining Contractual Maturity

At December 31, 2018					
	Overnight and Open	Less than 30 Days	30-90 Days	Over 90 Days	Total
Repurchase agreements	\$ 67,847	\$ 46,234	\$ 19,965	\$ 21,655	\$ 155,701
Securities loaned	14,694	1,620	1,314	1,117	18,745
Total included in the offsetting disclosure	82,541	47,854	21,279	22,772	174,446
Obligation to return securities received as collateral	17,569	-	-	-	17,569
Total	\$ 100,110	\$ 47,854	\$ 21,279	\$ 22,772	\$ 192,015

Gross Secured Financing Balances by Class of Collateral Pledged

	At December 31, 2018
Repurchase agreements	
U.S. government and agency securities	\$ 129,154
Other sovereign government obligations	10,321
State and municipal securities	1,580
ABS	1,836
Corporate and other debt	4,327
Corporate equities	8,257
Other	226
Total repurchase agreements	155,701
Securities loaned	
U.S. government and agency securities	222
Other sovereign government obligations	652
ABS	8
Corporate and other debt	910
Corporate equities	16,935
Other	18
Total securities loaned	18,745
Total included in the offsetting disclosure	174,446
Obligation to return securities received as collateral	
Corporate equities	17,569
Total	\$ 192,015

Carrying Value of Assets Loaned or Pledged without Counterparty Right to Sell or Repledge

	At December 31, 2018
Financial instruments owned	\$ 24,037
Securities received as collateral	656

The Company pledges its financial instruments owned and securities received as collateral to collateralize repurchase agreements, securities loaned, other secured financings and derivatives and to cover customer short sales. Counterparties may or may not have the right to sell or repledge the collateral.

Pledged assets that can be sold or repledged by the secured party are identified as Financial instruments owned (pledged to various parties) and Securities received as collateral (pledged to various parties) in the Company's consolidated statement of financial condition.

Fair Value of Collateral Received with Right to Sell or Repledge

	At December 31, 2018
Collateral received with right to sell or repledge	\$ 379,956
Collateral that was sold or repledged ¹	327,434

1. Does not include securities segregated under federal and other regulations or requirements.

Restricted Cash and Segregated Securities

	At December 31, 2018
Restricted cash	\$ 11,652
Segregated securities ¹	23,136

1. 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

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, it reports the fair value of the collateral received and the related obligation to return the collateral on the consolidated statement of financial condition. Securities-for-securities transactions where the Company is the borrower are not included in the consolidated statement of financial condition.

Customer Margin Lending

The Company provides margin lending arrangements which allow customers, including affiliates, to borrow against the value of qualifying securities. Receivables under margin lending arrangements are included within Receivables - Customers in the Company's consolidated statement of financial condition. Under these agreements and transactions, the Company receives 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 generally 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 an 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 its credit exposure in the event of a customer default. The Company may request additional margin collateral from customers, if appropriate, and, if necessary, may sell securities that have not been paid for or purchase securities sold but not delivered from customers. At December 31, 2018, the balance related to net customer receivables representing margin loans was \$8,663.

8. Borrowings and Other Secured Financings

Maturities and Terms of Borrowings

	Fixed Rate	Variable Rate	At December 31, 2018
Original maturities of one year or less:			
Next 12 months	\$ -	\$ 5,042	\$ 5,042
Original maturities greater than one year:			
Due in 2019	\$ -	\$ 20	\$ 20
Due in 2020	42	3,034	3,076
Due in 2021	4	-	4
Due in 2022	29	-	29
Due in 2023	-	-	-
Thereafter	-	-	-
Total	\$ 75	\$ 3,054	\$ 3,129
Total borrowings	\$ 75	\$ 8,096	\$ 8,171
Weighted average coupon rate at period-end ¹	5.99%	4.25%	4.25%
Weighted average stated maturity, in years ¹			1.1

1. Includes only borrowings with original maturities greater than one year. Weighted average coupon was calculated utilizing U.S. dollar interest rates and excludes financial instruments for which the fair value option was elected.

Borrowings with original maturities greater than one year primarily consist of unsecured borrowings from affiliates and hybrid financial instruments with embedded derivatives. These unsecured borrowings from affiliates are callable with maturities of 13 months or more from when it is called. Hybrid instruments with embedded derivatives are carried at fair value under the fair value option (see Note 4).

Borrowings with original maturities of one year or less primarily consist of unsecured borrowings from the Ultimate Parent that mature in less than 12 months. Other borrowings with original maturities of one year or less consist of cash overdrafts and hybrid financial instruments with embedded derivatives. Hybrid instruments with embedded derivatives are carried at fair value under the fair value option (see Note 4).

Interest on Borrowings

The interest rates for the borrowings from affiliates are established by the treasury function of the Ultimate Parent, are periodically reassessed and are intended to approximate the market rate of interest that the Ultimate Parent incurs in funding its business.

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 11 for further information on other secured financings related to VIEs and securitization activities.

Maturities and Terms of Other Secured Financings

	At December 31, 2018		
	Fixed Rate	Variable Rate ¹	Total
Original maturities of one year or less:			
Next 12 months	\$ -	\$ -	\$ -
Original maturities greater than one year:			
Due in 2019	51	2,675	2,726
Due in 2020	-	-	-
Due in 2021	-	-	-
Due in 2022	-	-	-
Due in 2023	-	-	-
Thereafter	40	22	62
Total Other secured financings	\$ 91	\$ 2,697	\$ 2,788
Weighted average coupon rate at period-end ²	5.51%	3.03%	3.22%

1. Variable rate borrowings bear interest based on a variety of indices, including LIBOR. Amounts include borrowings linked to equity, credit or other indices.

2. Includes only Other secured financings with original maturities greater than one year. Weighted average coupon is calculated utilizing U.S. dollar interest rates and excludes secured financings that are linked to non-interest indices and for which the fair value option was elected.

9. Subordinated Liabilities

Subordinated liabilities consist of a Cash Subordination Agreement and a \$12,000 subordinated revolving credit agreement with the Ultimate Parent at December 31, 2018. The interest rate on the drawn balance of the subordinated revolving credit agreement is three-month LIBOR plus 300 basis points. The maturity dates, interest rates and book value of the subordinated notes at December 31, 2018 are as follows:

Subordinated Notes	Maturity Date	Interest Rate	Book Value
Cash Subordination Agreement	April 30, 2026	4.70%	\$ 2,500
Subordinated Revolving Credit Agreement	April 30, 2026	5.54%	10,800
Total			\$ 13,300

10. Commitments, Guarantees and Contingencies

Commitments

	Years to Maturity at December 31, 2018				Total
	Less than 1	1-3	3-5	Over 5	
Forward-starting secured financing receivables	\$ 10,397	\$ -	\$ -	\$ 3,668	\$ 14,065
Forward-starting secured financing receivables settled within three business days					\$ 9,150

Since commitments associated with these instruments may expire unused, the amounts shown do not necessarily reflect the actual future cash funding requirements.

Types of Commitments

Forward-Starting Secured Financing Receivables. This amount includes reverse repurchase agreements and securities borrowed that the Company has entered into prior to the date of the consolidated statement of financial condition that will settle after December 31, 2018. Also included are commitments to enter into reverse repurchase agreements that are provided to certain clearinghouses or associated depositories of which the Company is a member and are contingent upon the default of a clearinghouse member or other stress event. These transactions are primarily secured by collateral from U.S. government agency securities and other sovereign government obligations when they are funded.

Premises and Equipment. The Company has non-cancelable operating leases covering premises and equipment. Future minimum rental commitments under such leases (net of sublease commitments, principally on office rentals) were as follows:

Operating Premises Leases

Fiscal Year	At December 31, 2018
2019	\$ 24
2020	23
2021	23
2022	23
2023	19
Thereafter	25
Total	\$ 137
Total minimum rental income to be received in the future under non-cancelable operating subleases	\$ 6

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.

Guarantees

Obligations under Guarantee Arrangements at December 31, 2018

	Maximum Potential Payout/Notional				Total	Carrying Amount (Asset)/Liability ¹
	Years to Maturity					
	Less than 1	1 - 3	3 - 5	Over 5		
Credit derivative contracts	\$ -	\$ -	\$ 5	\$ 425	\$ 430	\$ 24
Other credit contracts	-	-	-	93	93	(3)
Non-credit derivative contracts	136,597	12,167	531	1,020	150,315	7,714

1. 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.

Types of Guarantees

Derivative Contracts. Certain derivative contracts meet the accounting definition of a guarantee, including certain written options, contingent forward contracts and CDS (see Note 5 regarding credit derivatives in which the Company has sold credit protection to the counterparty). All derivative contracts that could meet this accounting definition of a guarantee are included in the previous table, with the notional amount used 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 could 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.

Other Guarantees

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.

Contingencies

Legal. In addition to the matters described below, 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. 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 government 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.

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 CDS 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 CDS with CDIB. The complaint seeks compensatory damages related to the approximately \$228 that CDIB alleges it has already lost under the CDS, 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. On December 21, 2018, the court denied the Company's motion for summary judgment and granted in part the Company's motion for sanctions related to the spoliation of evidence. 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 January 18, 2019, CDIB filed a motion to clarify and resettle the portion of the court's December 21, 2018 order granting spoliation sanctions. On January 24, 2019, CDIB filed a notice of appeal from the court's December 21, 2018 order, and on January 25, 2019, the Company filed a notice of appeal from the same order.

On May 17, 2013, plaintiff in *IKB International S.A. in Liquidation, et al. v. Morgan Stanley, et al.* filed a complaint against the Company and certain affiliates in the Supreme Court of NY. The complaint alleges that defendants made material misrepresentations and omissions in the sale to plaintiff of certain mortgage pass-through certificates backed by securitization trusts containing residential mortgage loans. The total amount of certificates allegedly sponsored, underwritten and/or sold by the Company to plaintiff was approximately \$133. The complaint alleges causes of action against the Company for common law fraud, fraudulent concealment, aiding and abetting fraud, and negligent misrepresentation, and seeks, among other things, compensatory and punitive damages. On October 29, 2014, the court granted in part and denied in part the Company's motion to dismiss. All claims regarding four certificates were dismissed. After these dismissals, the remaining amount of certificates allegedly issued by the Company or sold to plaintiff by the Company was approximately \$116. On August 11, 2016, the Appellate Division, First Department affirmed the trial court's order denying in part the Company's motion to dismiss the complaint. At December 25, 2018, the current unpaid balance of the remaining mortgage pass-through certificates at issue in this action was approximately \$23, 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 \$23 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 April 1, 2016, the California Attorney General’s Office filed an action against the Company 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 Company made misrepresentations and omissions regarding RMBS 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 Company’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 Company’s demurrer with respect to the amended complaint.

In August of 2017, the Company was named as a defendant in a purported antitrust class action in the United States District Court for the United States District Court for the Southern District of New York styled *Iowa Public Employees’ Retirement System et al. v. Bank of America Corporation et al.* Plaintiffs allege, inter alia, that the Company, together with a number of other financial institution defendants, violated U.S. antitrust laws and New York state law in connection with their alleged efforts to prevent the development of electronic exchange-based platforms for securities lending. The class action complaint was filed on behalf of a purported class of borrowers and lenders who entered into stock loan transactions with the defendants. The class action complaint seeks, among other relief, certification of the class of plaintiffs and treble damages. On September 27, 2018, the court denied the defendants’ motion to dismiss the class action complaint.

11. Variable Interest Entities and Securitization Activities

Overview

The Company is involved with various 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. 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.

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 in the VIE.

For many transactions, such as re-securitization transactions, 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. 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 based upon 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 focused its control decision on any right held by the Company or investors related to the termination of the VIE. Most re-securitization transactions have no such termination rights.

Consolidated VIEs

Assets and Liabilities by Type of Activity

	At December 31, 2018	
	VIE Assets	VIE Liabilities
MABS ¹	\$ 59	\$ 38

1. Amounts include transactions backed by commercial mortgage loans. The value of assets is determined based on the fair value of the liabilities and the interests owned by the Firm in such VIEs as the fair values for the liabilities and interests owned are more observable.

Consolidated VIE assets and liabilities are presented in the previous table after intercompany eliminations. All assets owned by consolidated VIEs cannot be removed unilaterally by the Company and are not generally available to the Company. All related liabilities issued by consolidated VIEs are non-recourse to the Company. The Company accounts for the assets held by the entities in Financial instruments owned and the liabilities of the entities as Other secured financings in the consolidated statement of financial condition.

In general, the Company's exposure to loss in consolidated VIEs is limited to losses that would be absorbed on the VIE net assets recognized in its statement of financial condition, net of amounts absorbed by third-party variable interest holders.

Non-consolidated VIEs

	At December 31, 2018		
	MABS	CDO	Other
VIE assets (UPB)	\$ 25,958	\$ 1,514	\$ -
Total maximum exposure to loss and carrying value of exposure to loss			
Debt and equity interests	\$ 2,183	\$ 26	\$ -
Additional VIE assets owned ¹			\$ 2,585

1. Additional VIE assets owned represents the carrying value of total exposure to non-consolidated VIEs for which the maximum exposure to loss is less than specific thresholds, primarily interests issued by securitization SPEs. The Company's primary risk exposure is to the most subordinate class of beneficial interest and maximum exposure to loss generally equals the fair value of the assets owned. These assets are primarily included in Financial instruments owned and are measured at fair value (see Note 4). The Company does not provide additional support in these transactions through contractual facilities, guarantees or similar derivatives.

The majority of the VIEs included in the previous table are sponsored by unrelated parties; the Company's involvement generally is the result of its secondary market-making activities.

The Company's maximum exposure to loss in the previous table does not include the offsetting benefit of hedges or any reductions associated with 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.

Liabilities issued by VIEs generally are non-recourse to the Company.

Mortgage- and Asset-Backed Securitization Assets

	At December 31, 2018	
	UPB	Debt and Equity Interests
Residential mortgages	\$ 1,461	\$ 225
Commercial mortgages	19,512	434
U.S. agency collateralized mortgage obligations	3,451	1,420
Other consumer or commercial loans	1,534	104
Total	\$ 25,958	\$ 2,183

Securitization Activities

In a securitization transaction, the Company or an affiliate transfers assets (generally commercial or residential mortgage loans 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.

In many securitization transactions involving commercial mortgage loans, the Company or an affiliate transfers a portion of the assets to the SPE with unrelated parties transferring the remaining assets.

In some of these transactions, primarily involving residential mortgage loans in the U.S., an affiliate of the Company serves as servicer for some or all of the transferred loans. In many securitizations, particularly involving residential mortgage loans, the Company or an affiliate also enters into derivative transactions, primarily interest rate swaps or interest rate caps, with the SPE.

Although not obligated, the Company generally makes a market in the securities issued by SPEs in securitization 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; these beneficial interests generally are included in Financial instruments owned- Corporate and other debt and are measured at fair value.

An affiliate of 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.

Collateralized Loan and Debt Obligations

CLOs and CDOs are SPEs that purchase a pool of assets consisting of corporate loans, corporate bonds, ABS 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. Although not obligated, the Company generally makes a market in the securities issued by SPEs in these transactions and may retain unsold securities. These beneficial interests are included in Financial instruments owned and are measured at fair value.

Transfers of Assets with Continuing Involvement

	At December 31, 2018		
	CML	U.S. Agency CMO	Other
SPE assets (UPB) ¹	\$ 1,228	\$ 16,594	\$ 2
Retained interests (fair value)			
Investment grade	\$ -	\$ 1,573	-
Non-investment grade	67	-	2
Total	\$ 67	\$ 1,573	2
Interests purchased in the secondary market (fair value)			
Investment grade	\$ 10	\$ 102	-
Total	\$ 10	\$ 102	-

1. Amounts include assets transferred by unrelated transferors.

	Fair Value at December 31, 2018		
	Level 2	Level 3	Total
Retained interests			
Investment grade	\$ 1,573	\$ -	\$ 1,573
Non-investment grade	-	69	69
Total	\$ 1,573	\$ 69	\$ 1,642
Interests purchased in the secondary market			
Investment grade	\$ 112	\$ -	\$ 112
Total	\$ 112	\$ -	\$ 112

The previous table includes transactions with SPEs in which the Company, acting as principal, transferred financial assets with continuing involvement and received sales treatment.

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.

12. Risk Management

The Company has an established risk management governance structure and framework. This framework includes policies and procedures in place to identify, measure, monitor, advise, challenge and control the principal risks involved in the activities of the Institutional Securities business segment, as well as at the Company level. The Company's risk management policies and related procedures are aligned with those of the Firm. These policies and related procedures are administered on a coordinated global and legal entity basis with consideration given to 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. 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 principal risks involved in the Company's business activities include market, credit, operational, model, liquidity, compliance, strategic and reputational risk.

The cornerstone of the Company's risk management philosophy is the pursuit of risk-adjusted returns through prudent risk-taking in order to protect the Company's capital base and franchise. This is implemented utilizing five key principles: 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 the Company to maintain a risk management culture that is incisive, knowledgeable about specialized products and markets, and subject to ongoing review and enhancement.

The Company's risk appetite defines the types of risk that the Company is willing to accept, taking into account market, credit, operational, model, liquidity, compliance, strategic and reputational risk. This risk appetite and the related Board of Directors ("Board") level risk limit framework and risk tolerance statements are reviewed and approved by the Board annually.

Risk Governance Structure

Risk management at the Company requires independent Company-level oversight, accountability of the Company's businesses, and effective communication of risk matters across the Company, to senior management and ultimately to the Board. The Company's risk governance structure is composed of the Board; the Risk and Asset and Liability Committee ("RC"); senior management oversight; the Internal Audit Department of the Ultimate Parent ("Internal Audit Department"); and risk managers and groups within and across businesses.

Board of Directors. The Company's Board has oversight of the risk governance framework, approves the risk limit frameworks and certain risk limits, and is responsible for helping to ensure that the Company's risks are managed in a sound manner. The Board has authorized the RC to help facilitate the Company's risk oversight responsibilities.

Risk and Asset and Liability Committee. The RC is a management committee chaired by the Company's Chief Risk Officer to execute the risk governance framework. The RC is composed of the Chief Risk Officer, Chief Financial Officer, Treasurer, Chief Market Risk Officer, Chief Credit Risk Officer, Chief Operational Risk Officer, Chief Liquidity Risk Officer, Chief Compliance Officer, Chief Auditor and members of the trading business unit's risk management group. The RC's responsibilities include oversight of the Company's risk management policies, procedures and limits, and the monitoring of capital levels and material market, credit, operational, model, liquidity, legal, compliance, strategic and reputational risk matters, and other risks, as appropriate, and the steps management has taken to monitor and manage such risks. Among the risk limits presented to the RC by the Independent Risk Management Functions are stress scenarios designed to ensure that the magnitude of potential losses in severe market

and liquidity scenarios are appropriate relative to the Company's capitalization and liquidity.

Chief Risk Officer. The Chief Risk Officer, who is independent of business units, reports to the Board. The Chief Risk Officer oversees compliance with the Company's risk limits; approves exceptions to the Company's risk limits; independently reviews material market, credit, operational, model, liquidity, legal, compliance, strategic and reputational risks; and reviews results of risk management processes with the Board and the RC, as appropriate.

Independent Risk Management Functions. The Company's risk management functions (Market Risk, Credit Risk, Operational Risk and Liquidity Risk Management departments) are independent of the Company's business units and report to the Chief Risk Officer. These functions assist senior management and the RC in monitoring and controlling the Company's risk. The Independent Risk Management Functions assess a variety of stress scenarios and calibrate limits that are informed by the Company's liquidity and loss-absorbing capacity. Further discussion about the responsibilities of the risk management functions may be found under "Market Risk," "Credit Risk," "Operational Risk," and "Liquidity Risk." The Company leverages the Ultimate Parent's Model Risk function, which is independent of the Company's business units and reports to the Ultimate Parent's CRO. Further discussion may be found under "Model Risk."

Internal Audit Department. The Internal Audit Department reviews and tests the Company's compliance with internal guidelines set for risk management and risk monitoring, as well as external rules and regulations governing the Company.

Risk Management Process

The following is a discussion of the Company's risk management policies and procedures for the Company's primary risks.

Risk Limits Framework

Risk limits and quantitative metrics provide the basis for monitoring risk taking activity and avoiding outsized risk-taking. The Company's highest-level risk limits incorporate stress scenarios, and are informed by the Company's capitalization and levels of liquidity. Additionally, the Company maintains risk limits and quantitative metrics to support and implement the Company's risk appetite statement. The Company's risk limit frameworks support linkages between the overall risk appetite, which is reviewed by the Company's Risk Committee and is set by the Board, and more granular risk-taking decisions and activities. Risk limits and associated limit frameworks are reviewed and updated annually, with more frequent updates as necessary. Board-level risk limits and approved frameworks address the most important Company-wide aggregations of risk, including, but not limited to, stressed market, credit and liquidity risks. Additional risk limits approved by the RC address more specific types of risk and are bound by the higher-level Board risk limits.

Market Risk

Market risk refers to the risk that a change in the level of one or more market prices, rates, indices, volatilities, 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.

Sound market risk management is an integral part of the Company's culture. The various business units and trading desks are responsible for ensuring that market risk exposures are well-managed and prudent. The control groups help ensure that these risks are measured and closely monitored and are made transparent to senior management. Market Risk professionals are responsible for ensuring transparency of material market risks, monitoring compliance with established limits and escalating risk concentrations to appropriate senior management. 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 to the Company. 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 swap or derivative contracts under which counterparties may have obligations to make payments to the Company; extending credit to clients; providing short- or long-term funding that is secured by physical or financial collateral whose value may at times be insufficient to fully 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 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 the RC who monitor risk exposures, including margin loans and credit sensitive, higher-risk transactions.

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, from 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).

The Company's operational risk framework is established to identify, measure, monitor and control risk. Effective operational risk management is essential to reducing the impact of operational risk incidents and mitigating legal, regulatory and reputational risks. The framework is continually evolving to account for changes in the Firm and to respond to the changing regulatory and business environment.

Model Risk

Model risk refers to the potential for adverse consequences from decisions based on incorrect or misused model outputs. Model risk can lead to financial loss, poor business and strategic decision making or damage to the Company's reputation. The risk inherent in a model is a function of the materiality, complexity and uncertainty around inputs and assumptions. Model risk is generated from the use of models impacting financial statements, regulatory filings capital adequacy assessments and the formulation of strategy.

Sound model risk management is an integral part of the Company's Risk Management Framework. MRM is a distinct department in Risk Management responsible for the oversight of model risk. MRM establishes a model risk tolerance in line with Ultimate Parent's risk appetite. The tolerance is based on an assessment of the materiality of the risk of financial loss or reputational damage due to errors in design, implementation and/or inappropriate use of models. The tolerance is monitored through model-specific and aggregate business-level assessments, which are based upon qualitative and quantitative factors.

A guiding principle for managing model risk is the "effective challenge" of models. The effective challenge of models is represented by the critical analysis by objective, informed parties who can identify model limitations and assumptions and drive appropriate changes. MRM provides effective challenge of models, independently validates and approves models for use, annually recertifies models, identifies and tracks remediation plans for model limitations and reports on model risk metrics. The department also oversees the development of controls to support a complete and accurate Firm-wide model inventory.

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 (or perceived ability) to

meet its financial obligations without experiencing significant business disruption or reputational damage that may threaten its viability as a going concern. Generally the Company incurs liquidity and funding risk as a result of its trading, investing and client facilitation activities.

The Company's Liquidity Risk Management Framework is critical to help ensure that the Company maintains sufficient liquidity reserves and durable funding sources to meet the Company's daily obligations and to withstand unanticipated stress events.

The Liquidity Risk Department ensures transparency of material liquidity and funding risks, compliance with established risk limits and escalation of risk concentrations to appropriate senior management. To execute these responsibilities, the Liquidity Risk Department establishes limits in line with its risk appetite, identifies and analyzes emerging liquidity and funding risks to ensure such risks are appropriately mitigated, monitors and reports risk exposures against metrics and limits, and reviews the methodologies and assumptions underpinning its Liquidity Stress tests to ensure sufficient liquidity and funding under a range of adverse scenarios.

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 19% of the Company's total assets at December 31, 2018. In addition, substantially all of the collateral held by the Company for reverse repurchase agreements or bonds borrowed, which together represented approximately 27% of the Company's total assets at December 31, 2018, consist of securities issued by the U.S. government, federal agencies or other sovereign government obligations.

Customer Activities

The Company's customer activities involve the execution, settlement and financing of various securities transactions on behalf of customers. Customer securities activities are transacted on either a cash or 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.

13. Employee Stock-Based Compensation Plans

Eligible employees of the Company participate in several of the Ultimate Parent's stock-based compensation plans. The Ultimate Parent determines the fair value of stock-based awards based on the grant-date fair value of its common stock.

Restricted Stock Units

RSUs are generally subject to vesting over time, generally three years from the date of award, 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, if the awards vest. 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

PSUs will vest and convert to shares of common stock only if the Ultimate Parent satisfies predetermined performance and market-based conditions over a three-year performance period. The number of PSUs that will actually vest ranges from 0% to 150% of the target award based on the extent to which the Ultimate Parent achieves the specified performance goals. 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.

14. Employee Benefit Plans

MSDHI sponsors various retirement and postretirement benefit plans for eligible U.S. employees of the Company and affiliates. The total assets and liabilities of these plans are recorded in Other assets and Other liabilities and accrued expenses.

Pension and Other Postretirement Plans

Certain U.S. employees of the Company and affiliates 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 ("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, 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 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.

An unfunded postretirement benefit plan provides medical and life insurance for eligible U.S. retirees and medical insurance for eligible dependents.

The accounting for pension and postretirement plans involves certain assumptions and estimates. The expected long-term rate of return for the Qualified Plan was estimated by computing a weighted average of the underlying long-term expected returns based on the investment managers' target allocations.

Benefit Obligation and Funded Status

Rollforward of the Benefit Obligation and Fair Value of Plan Assets

	Pension Plans	Other Post- Retirement Plan
Rollforward of benefit obligation		
Benefit obligation at December 31, 2017	\$ 3,473	\$ 86
Service cost	-	1
Interest cost	124	3
Actuarial gain ¹	(324)	(13)
Benefits paid	(183)	(6)
Benefit obligation at December 31, 2018	\$ 3,090	\$ 71
Rollforward of fair value of plan assets		
Fair value of plan assets at December 31, 2017	\$ 3,029	\$ -
Actual return on plan assets	(67)	-
Employer contributions	20	6
Benefits paid	(183)	(6)
Fair value of plan assets at December 31, 2018	2,799	-
Funded (unfunded) status at December 31, 2018		
	\$ (291)	\$ (71)
Amounts recognized in the consolidated statement of financial condition		
Assets	\$ 76	\$ -
Liabilities	(367)	(71)
Net amount recognized	\$ (291)	\$ (71)

1. Pension amount primarily reflects impact of year-over-year discount rate fluctuations.

Pension Plans with Benefit Obligations in Excess of the Fair Value of Plan Assets

Projected benefit obligation	\$ 367
Accumulated benefit obligation	367
Fair value of plan assets	-

Weighted Average Assumptions Used to Determine Benefit Obligation

	Pension Plans	Other Postretirement Plan
Discount rate	4.25%	4.07%

The discount rates used to determine the benefit obligation for the pension and postretirement plans were selected by the Firm in consultation with its independent actuary, using a pension

discount yield curve based on the characteristics of the plans, each determined independently. The pension discount yield curve represents spot discount yields based on duration implicit in a representative broad-based Aa-rated corporate bond universe of high-quality fixed income investments.

Assumed Health Care Cost Trend Rates Used to Determine the Postretirement Benefit Obligation

Health care cost trend rate assumed for next year:	
Medical	5.66%
Prescription	7.66%
Rate to which the cost trend rate is assumed to decline (ultimate trend rate)	4.50%
Year that the rate reaches the ultimate trend rate	2038

Qualified Plan Assets

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

Derivative instruments are permitted in the Qualified Plan's investment portfolio only to the extent that they comply with all of the plan's investment policy guidelines and are consistent with the plan's risk and return objectives.

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

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

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

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

Fair Value of Plan Assets

	Level 1	Level 2	Level 3	Total
Assets				
Investments				
U.S. government and agency securities:				
U.S. Treasury securities	\$ 2,197	\$ -	\$ -	\$ 2,197
U.S. agency securities	-	317	-	317
Total U.S. government and agency securities	2,197	317	-	2,514
Corporate and other debt - Collateralized debt obligations				
	-	11	-	11
Derivative contracts	-	22	-	22
Total	\$ 2,197	\$ 350	\$ -	\$ 2,547
Assets Measured at NAV				
Commingled trust funds:				
Money market				252
Fair value of plan assets				\$ 2,799

Morgan Stanley 401(k) Plan

The Company's U.S. employees meeting certain eligibility requirements may participate in the Morgan Stanley 401(k) Plan sponsored by MSDHI. Eligible employees receive discretionary 401(k) matching cash contributions as determined annually by the Company. For 2018, the Company matched employee contributions up to 4% of eligible pay, up to the IRS limit. Matching contributions were invested among available funds according to each participant's investment direction on file. Eligible employees with eligible pay less than or equal to one hundred thousand dollars also received a fixed contribution under the 401(k) Plan equal to 2% of eligible pay. Transition contributions relating to frozen plans are allocated to certain eligible employees.

15. 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 modified 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 settled periodically with the Ultimate Parent.

Deferred Tax Assets and Liabilities

Deferred income taxes reflect the net tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities and are measured using the applicable enacted tax rates and laws that will be in effect when such differences are expected to reverse. In absence of the tax sharing agreement with the Ultimate Parent, the Company's net deferred tax asset at December 31, 2018 would be \$626, which is primarily attributable to employee compensation, benefit plan payables, and valuation and liability allowances.

Unrecognized Tax Benefits

The Company is subject to the income and indirect tax laws of the U.S., its states and municipalities in which the Company has significant business operations. These tax laws are complex and subject to different interpretations by the taxpayer and the relevant governmental taxing authorities. The Company must make judgments and interpretations about the application of these inherently complex tax laws when determining the provision for income taxes and the expense for indirect taxes and must also make estimates about when certain items affect taxable income in the various tax jurisdictions. Disputes over interpretations of the tax laws may be settled with the taxing authority upon examination or audit. The Company periodically evaluates the likelihood of assessments in each taxing jurisdiction resulting from current and subsequent years' examinations, and unrecognized tax benefits related to potential losses that may arise from tax audits are established in accordance with the relevant accounting guidance. Once established, unrecognized tax benefits are adjusted when there is more information available or when an event occurs requiring a change.

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 establishes a liability for unrecognized tax benefits, and associated interest, if applicable ("tax liabilities"), that it believes is adequate in relation to the potential for additional assessments. Once established, the Company adjusts such tax liabilities only when new information is available or when an event occurs necessitating a change.

The Company believes that the resolution of these tax matters will not have a material effect on the consolidated statement of financial condition.

It is reasonably possible that significant changes in the balance of unrecognized tax benefits 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.

Major Tax Jurisdictions in which the Company and its Affiliates Operate and the Earliest Tax Year Subject to Examination

Jurisdiction	Tax Year
United States	2013
New York State and City	2007

16. Regulatory Requirements

MS&Co. Regulatory Capital

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. PDS is a separately registered U.S. broker-dealer with the SEC and is subject to separate minimum net capital requirements of the SEC.

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 risk-based requirement representing the sum of 8% of customer risk maintenance margin requirement and 8% of non customer risk maintenance margin requirement, as defined. At December 31, 2018, MS&Co.'s Net Capital was \$13,797 which exceeded the CFTC minimum requirement by \$11,333.

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

MS&Co. is required to hold tentative net capital in excess of \$1,000 and Net Capital in excess of \$500 in accordance with the market and credit risk standards of Appendix E of Rule 15c3-1. MS&Co. is also required to notify the SEC in the event that its tentative net capital is less than \$5,000. At December 31, 2018, MS&Co. had tentative net capital in excess of the minimum and 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.

In March 2018, MS&Co. voluntarily adopted the Basel 2.5 market risk model framework, which is broadly consistent with regulations promulgated by the Board of Governors of the Federal Reserve System and specific requirements reviewed with the staff of the SEC. MS&Co. incurred increased market risk capital charges resulting from the adoption. In anticipation of the adoption, MS&Co. increased its regulatory capital by \$3,500, consisting of \$2,000 in incremental borrowings pursuant to a Subordinated Revolving Credit Agreement with the Ultimate Parent and \$1,500 of equity capital infused by the Ultimate Parent.

Other

As of December 31, 2018, 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, which requires MS&Co. to generate at least 50% of its revenues from customer related activities.

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"). MS&Co. is provisionally registered with the CFTC as a swap dealer per current requirements and anticipates registering with the SEC as a security-based swap dealer once SEC rulemaking is finalized.

17. 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 the consolidated statement of financial condition or the notes thereto, except for the below.

Effective January 2019 the Company amended its tax sharing agreement with the Ultimate Parent such that the Company will no longer periodically settle its non-current tax with the Ultimate Parent and will settle with the Ultimate Parent when current taxes are due to be paid. As a result, MS&Co will include deferred tax assets as part of its computation of Net Capital. MS&Co will continue to maintain Net Capital in excess of its minimum requirements.

Glossary of Common Acronyms

ABS – Asset-backed securities	MRM – Model Risk Management department
AOCI – Accumulated other comprehensive income (loss)	MS&Co. – Morgan Stanley & Co. LLC
CDO – Collateralized debt obligations	MSCM – Morgan Stanley Capital Management, LLC
CDS – Credit default swap	MSDHI – Morgan Stanley Domestic Holdings, Inc.
CECL – Current expected credit loss	MSSB – Morgan Stanley Smith Barney, LLC
CFTC – Commodity Futures Trading Commission	MSSG – Morgan Stanley Services Group Inc.
CLN – Credit-linked note	NAV – Net Asset Value
CLO – Collateralized loan obligations	OIS – Overnight indexed swap
CMBS – Commercial mortgage-backed securities	OTC – Over-the-counter
CML – Commercial Mortgage Loans	PDS – Prime Dealer Services Corp.
CMO – Collateralized Mortgage Obligation	PSU – Performance-based stock units
CRM—Credit Risk Management Department	RMBS – Residential mortgage-backed securities
CRO – Chief Risk Officer of the Ultimate Parent and its consolidated subsidiaries	RSU – Restricted stock unit
FICO – Fair Isaac Corporation	SEC – U.S. Securities and Exchange Commission
FINRA – Financial Industry Regulatory Authority, Inc.	SPE – Special purpose entities
IRS – Internal Revenue Service	UPB – Unpaid principal balance
LIBOR – London Inter-bank Offered Rate	U.S. GAAP – Accounting principles generally accepted in the United States of America
M&A – Merger, acquisition and restructuring transaction	VIE – Variable interest entity
MABS – Mortgage- and Asset-Backed Securities	

A copy of our December 31, 2018 consolidated statement of financial condition filed pursuant to Rule 17a-5 of the Securities Exchange Act of 1934 is available for examination at the New York Office of the Securities and Exchange Commission or at our principal office at 1585 Broadway, New York, N.Y. 10036.

A copy of this Morgan Stanley & Co. LLC Consolidated Statement of Financial Condition can be viewed online at the Morgan Stanley website at: https://www.morganstanley.com/about-us-ir/shareholder/morganstanley_co_llc.pdf