

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

**CONSOLIDATED STATEMENT OF FINANCIAL CONDITION  
AND UNCONSOLIDATED SUPPLEMENTAL SCHEDULES  
AS OF DECEMBER 31 2022  
AND  
REPORT OF INDEPENDENT REGISTERED  
PUBLIC ACCOUNTING FIRM**

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and Regulation 1.10(g) under Commodity Exchange Act  
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## **REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

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

### **Opinion on the Financial Statement**

We have audited the accompanying consolidated statement of financial condition of Morgan Stanley & Co. LLC and subsidiaries (the "Company") as of December 31, 2022, 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, 2022, 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.

### **Report on Supplemental Schedules**

The unconsolidated supplemental schedules on pages 33-35 have been subjected to audit procedures performed in conjunction with the audit of the Company's statement of financial condition. The supplemental schedules are the responsibility of the Company's management. Our audit procedures included determining whether the supplemental schedules reconcile to the financial statement or the underlying accounting and other records, as applicable, and performing procedures to test the completeness and accuracy of the information presented in the supplemental schedules. In forming our opinion on the supplemental schedules, we evaluated whether the supplemental schedules, including their form and content, are presented in compliance with Regulation 1.10 under the Commodity Exchange Act. In our opinion, such schedules are fairly stated, in all material respects, in relation to the statement of financial condition as a whole.

*Deloitte & Touche LLP*

February 24, 2023

We have served as the Company's auditor since 1997

**MORGAN STANLEY & CO. LLC**  
**CONSOLIDATED STATEMENT OF FINANCIAL CONDITION**  
**As of December 31, 2022**  
**(In millions of dollars)**

<b>ASSETS</b>		
Cash	\$	2,311
Cash deposited with clearing organizations or segregated under federal and other regulations or requirements		7,764
Financial instruments owned, at fair value (approximately \$61,845 were pledged to various parties)		91,961
Securities received as collateral, at fair value (approximately \$13,123 were pledged to various parties)		15,452
Securities purchased under agreements to resell		89,788
Securities borrowed		145,787
Receivables:		
Customers		16,706
Brokers, dealers and clearing organizations		13,700
Interest and dividends		1,934
Fees and other		566
Affiliates		93
Other assets		1,668
<b>Total assets</b>	<b>\$</b>	<b>387,730</b>
<b>LIABILITIES AND MEMBER'S EQUITY</b>		
Financial instruments sold, not yet purchased, at fair value	\$	43,628
Obligation to return securities received as collateral, at fair value		22,879
Securities sold under agreements to repurchase (includes \$861 at fair value)		123,176
Securities loaned		16,655
Other secured financings (includes \$2,405 at fair value)		3,262
Payables:		
Customers		131,898
Brokers, dealers and clearing organizations		2,996
Interest and dividends		2,165
Affiliates		612
Other liabilities and accrued expenses		5,390
Borrowings (includes \$101 at fair value)		8,496
<b>Total liabilities</b>		<b>361,157</b>
<b>Commitments and contingent liabilities (See Note 10)</b>		
Subordinated liabilities		19,000
Member's equity:		
Member's equity		8,053
Accumulated other comprehensive loss		(480)
<b>Total member's equity</b>		<b>7,573</b>
<b>Total liabilities and member's equity</b>	<b>\$</b>	<b>387,730</b>

See Notes to Consolidated Statement of Financial Condition

**MORGAN STANLEY & CO. LLC**  
**NOTES TO CONSOLIDATED STATEMENT OF FINANCIAL CONDITION**  
**As of December 31, 2022**  
**(In millions of dollars, except where noted)**

## **1. Introduction and Basis of Presentation**

### **The Company**

MS&Co., together with its subsidiary (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 and project finance; sales, trading, financing and market-making activities in the equity and fixed income businesses; and prime brokerage services. See the “Glossary of Common Terms and Acronyms” for the definition of certain terms and 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 institutional securities 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 also a member of FINRA, SIPC and various securities exchanges.

MS&Co. is a wholly owned subsidiary of MSDHI (the “Parent”) which is an indirect 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 requires the Company to make estimates and assumptions regarding the valuations of certain financial instruments, the outcome of legal and tax matters, deferred tax assets and other matters that affect its 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.

The Company has evaluated subsequent events for adjustment to or disclosure in the consolidated statement of financial condition through February 24, 2023, the date the consolidated statement of financial condition was issued, 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.

### **Consolidation**

The consolidated statement of financial condition includes the accounts of MS&Co., its wholly owned subsidiary and certain VIEs in which MS&Co. has a controlling financial interest (see Note 11).

At December 31, 2022, the Company’s consolidated subsidiary, PDS, reported \$30,325 of assets, \$30,132 of liabilities and \$193 of equity on a stand-alone basis.

All intercompany balances and transactions with its subsidiary 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.

## **2. Significant Accounting Policies**

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

Instruments within Financial instruments owned and Financial instruments sold, not yet purchased, are measured at fair value, either as required by or allowed by accounting guidance. These financial instruments primarily represent the Company’s trading positions and include both cash and derivative products.

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 borrowings, Securities received as collateral and the corresponding Obligation to return securities received as collateral and certain Other secured financings.

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

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

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, including 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 and funding in order to arrive at fair value. Adjustments for liquidity risk adjust model-derived mid-market amounts 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.

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 cash collateral against any net amount owed by the counterparty. Derivatives with enforceable master netting agreements are reported net of cash collateral received and posted.

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/or 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, see Note 5.

### **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 effect of a change in tax rates on deferred tax assets and liabilities is recognized in income tax expense (benefit) in the period that includes the enactment date.

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, which would reduce the provision for income taxes.

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

Cash represents funds deposited with financial institutions. 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, funds deposited by certain customers and the Company's initial margin deposited with clearing organizations. At December 31, 2022, total cash and restricted cash of \$10,075 consists of \$2,311 in cash and \$7,764 in restricted cash.

### **Contracts with Customers**

Receivables from contracts with customers are recognized across the various types of receivables balances 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, and 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.

For contracts with a term less than one year, incremental costs to obtain the contract are expensed as incurred. Revenues are not discounted when payment is expected within one year.

The Company presents, net within revenues, all taxes assessed by a governmental authority that are both imposed on and concurrent with a specific revenue-producing transaction and collected by the Company from a customer.



## **Collateralized Financings**

Securities borrowed, Securities purchased under agreements to resell (“reverse repurchase agreements”), Securities received as collateral, Securities loaned, repurchase agreements, and Obligation to return securities received as collateral are treated as collateralized financings. Reverse repurchase agreements and repurchase agreements are carried in 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. Securities received as collateral and Obligation to return securities received as collateral are recorded at the fair value of the collateral received and the related obligation to return the collateral.

In order to manage credit exposure arising from these transactions, in appropriate circumstances, the Company enters into master netting agreements and collateral agreements with its counterparties. These agreements provide the Company with the right to net a counterparty’s rights and obligations under the agreement and to 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/or securities delivered under repurchase agreements or securities loaned transactions (with rights of rehypothecation).

For information related to offsetting of certain collateralized transactions, see Note 7.

## **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). Transfers of financial assets are accounted for as sales when the Company has relinquished control over the transferred assets and does not consolidate the transferee. The gain or loss on sale of such financial assets depends, in part, on the previous carrying amount of the assets involved in the transfer (generally at fair value) and the sum of the proceeds and the fair value of the retained interests at the date of sale. Transfers that are not accounted for as sales are treated as Other secured financings.

## **Receivables and Payables – Customers**

Receivables from customers primarily include margin loans with prime brokerage and affiliate counterparties (net of related customer cash and short sale proceeds) and cash collateral posted on OTC derivatives. Payables to customers primarily include cash and short sale activity with prime brokerage and affiliate

counterparties (net of related customer margin loans), exchange margin requirements and cash collateral received on OTC derivatives. Collateral amounts are offset with related OTC derivatives where eligible in accordance with current accounting guidance.

Customers’ securities transactions are recorded on a settlement date basis. Securities owned by customers, including those that collateralize margin loans or derivatives, are not reflected in the consolidated statement of financial condition.

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

Receivables from and payables to brokers, dealers and clearing organizations primarily include margin requirements in connection with the Company’s trading, market making and customer facilitation activity for exchange traded and OTC derivatives, amounts on unsettled trades and amounts for securities failed to deliver by the Company to the purchaser or failed to receive by the Company from the seller by the settlement date. Receivables and payables arising from unsettled trades are reported on a net basis.

## **Deferred Compensation Plans**

Certain current and former employees of the Company and affiliates participate in various deferred stock-based and cash-based compensation plans. Compensation expense associated with these plans is recognized over the vesting period relevant to each separately vesting portion of the award.

The Company measures compensation for stock-based awards at fair value. The Company determines the fair value of Restricted Stock Units based on the grant-date fair value of the common stock of the Ultimate Parent, measured at VWAP on the date of grant. Compensation expense for certain stock-based awards is adjusted for changes in the fair value of the common stock of the Ultimate Parent or the relevant model valuation, as appropriate, until conversion, exercise or expiration of the award.

The deferred cash-based compensation plans generally provide a return to the plan participants based upon the performance of each participant’s selected referenced investments. Compensation expense for these awards is calculated based on notional value of the award granted, adjusted for changes in the fair value of the referenced investments that employees select, until distribution of the award.

The Company enters into a variety of OTC derivative contracts with affiliates to economically hedge certain obligations under the deferred cash-based compensation plans.

## **Accounting Updates Adopted in 2022**

The Company has adopted the Reference Rate Reform accounting update, which extends the period of time entities can utilize the reference rate reform relief guidance from December

31, 2022 to December 31, 2024. The relief provides optional expedients and exceptions for applying generally accepted accounting principles to contracts or other transactions that reference LIBOR or other interest rate benchmarks for which the referenced rate is expected to be discontinued or replaced. The Company is applying the accounting relief as relevant contract modifications are made during the course of the reference rate reform transition period. There was no impact to the Company's financial condition upon initial adoption.

### Accounting Development Updates

The FASB has issued certain accounting updates that apply to the Company. The following accounting update was adopted on January 1, 2023:

*Financial Instruments - Credit Losses:* This accounting update eliminates the accounting guidance for Troubled Debt Restructurings ("TDRs") and requires new disclosures regarding certain modifications of financing receivables (i.e., principal forgiveness, interest rate reductions, other-than-insignificant payment delays and term extensions) to borrowers experiencing financial difficulty. The update also requires disclosure of current period gross charge-offs by year of origination for financing receivables measured at amortized cost. The Company has adopted this update on a prospective basis and noted no impact on its financial condition or results of operation upon adoption.

The Company is currently evaluating the following accounting update, however, the Company does not expect a material impact on its financial condition or results of operations upon adoption:

*Fair Value Measurement:* This accounting update clarifies, consistent with our current accounting policy, that a contractual restriction on the sale of an equity security is not considered part of the unit of account of the equity security and, therefore, is not considered in measuring fair value. The update also requires additional disclosures including the fair value of equity securities subject to contractual sale restrictions, the nature and remaining duration of the restriction and circumstances that could cause the restriction to lapse. The ASU is effective January 1, 2024 with early adoption permitted.

### 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 and subordinated liabilities from the Parent as described in Notes 8 and 9, respectively.

The Company clears securities, futures, and derivative transactions on various exchanges for affiliates with standard

settlement terms, finances securities transactions for affiliates, and facilitates foreign exchange transactions for affiliates as part of the Firm's currency management function. Trading and margin 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 makes markets in debt issued by the Firm. Financial instruments owned primarily includes such issuances of \$377 as of December 31, 2022.

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 Notes 2 and 13, as well as employee benefit plans as described in Note 14. The Company enters into OTC derivative contracts with affiliates to economically hedge certain obligations under the deferred cash-based compensation plans. See Note 5 for additional disclosures on fair value and notional amounts related to the derivatives associated with these deferred compensation plans, included within equity contracts. Additionally, the Company has recognized liabilities to the Ultimate Parent for the deferred stock-based compensation plans which are recorded in Other liabilities and accrued expenses in the consolidated statement of financial condition.

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 and are payable on demand.

The Company applies global transfer pricing policies among affiliates. These policies are consistent with 2017 OECD Transfer Pricing Guidelines for Multinational Enterprises and Tax Administrations. The Firm has also engaged in negotiations of Advanced Pricing Agreements with selected tax authorities in respect of its key transfer pricing methodologies.

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.

The Company has agreements with two affiliates, MSBNA and MSSF, who charge the Company for issuing loans and lending commitments to clients of the Company.

The Company has an agreement with an affiliated service entity, MSSG, in which MSSG agrees to provide the Company with certain services including infrastructure group support, healthcare and life insurance benefits for the employees of the Company, information processing, communications and occupancy and equipment.



The Company is the primary employing entity for business activities undertaken by the Company and certain U.S. affiliates. The Company shares certain non-interest expenses with these affiliates based on the level of business activity transacted on the affiliates relative to the Company.

Certain employees of the Company provide services for business activities conducted on two affiliates, MSBNA and MSPBNA. The Company is reimbursed by these affiliates for expenses related to these services.

	At December 31, 2022
<b>Assets and receivables from affiliated companies:</b>	
Cash	\$ 89
Financial instruments owned, at fair value	782
Reverse repurchase agreements	61,481
Securities borrowed	32,093
Receivables - Customers	5,542
Receivables - Brokers, dealers and clearing organizations	4,731
Receivables - Interest and dividends	9
Receivables - Fees and other	144
Receivables - Affiliates	93
<b>Liabilities and payables to affiliated companies:</b>	
Financial instruments sold, not yet purchased, at fair value	110
Repurchase agreements	99,212
Securities loaned	15,036
Other secured financings	306
Payables - Customers	33,042
Payables - Brokers, dealers and clearing organizations	1,271
Payables - Interest and dividends	409
Payables - Affiliates	612
Other liabilities and accrued expenses	1,579
Borrowings	8,395
Subordinated liabilities	19,000

## 4. Fair Values

### Fair Value Measurement

#### Assets and Liabilities Measured at Fair Value

	At December 31, 2022				
	Level 1	Level 2	Level 3	Netting <sup>1</sup>	Total
<b>Assets at fair value<sup>4</sup></b>					
Financial instruments owned:					
U.S. Treasury and agency securities	\$ 25,082	\$ 42,263	\$ 16	\$ —	\$ 67,361
Other sovereign government obligations	2,128	216	33	—	2,377
State and municipal securities	—	1,519	16	—	1,535
MABS	—	1,175	141	—	1,316
Loans <sup>2</sup>	—	—	1	—	1
Corporate and other debt	—	5,361	431	—	5,792
Corporate equities <sup>3</sup>	11,230	227	66	—	11,523
Derivative contracts:					
Interest rate	3,453	1,413	1	—	4,867
Credit	—	269	111	—	380
Foreign exchange	—	12,392	35	—	12,427
Equity	2,306	25,752	291	—	28,349
Netting <sup>1</sup>	(4,237)	(36,433)	(277)	(3,020)	(43,967)
Total derivative contracts	1,522	3,393	161	(3,020)	2,056
Total financial instruments owned	\$ 39,962	\$ 54,154	\$ 865	\$ (3,020)	\$ 91,961
Securities received as collateral	\$ 15,412	\$ 38	\$ 2	\$ —	\$ 15,452

	At December 31, 2022				
	Level 1	Level 2	Level 3	Netting <sup>1</sup>	Total
<b>Liabilities at fair value<sup>4</sup></b>					
Financial instruments sold, not yet purchased:					
U.S. Treasury and agency securities	\$ 25,321	\$ 228	\$ —	\$ —	\$ 25,549
Other sovereign government obligations	331	126	1	—	458
Corporate and other debt	—	4,337	10	—	4,347
Corporate equities <sup>3</sup>	9,364	406	2	—	9,772
Derivative contracts:					
Interest rate	3,006	1,142	9	—	4,157
Credit	—	258	46	—	304
Foreign exchange	—	12,334	39	—	12,373
Equity	2,675	28,634	693	—	32,002
Netting <sup>1</sup>	(4,237)	(36,433)	(277)	(4,387)	(45,334)
Total derivative contracts	1,444	5,935	510	(4,387)	3,502
Total financial instruments sold, not yet purchased	\$ 36,460	\$ 11,032	\$ 523	\$ (4,387)	\$ 43,628
Obligation to return securities received as collateral	\$ 22,762	\$ 115	\$ 2	\$ —	\$ 22,879
Repurchase agreements	—	349	512	—	861
Other secured financings	—	2,405	—	—	2,405
Borrowings	—	101	—	—	101

- 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.
- The Company consolidates loans underlying MABS as a part of its involvement with VIEs. For further information, see Note 11.
- For trading purposes, the Company holds or sells short equity securities issued by entities in diverse industries and of varying size.
- Amounts exclude the unsettled fair value of futures contracts of \$535 included in Receivable - Brokers, dealers and clearing organizations and \$86 included in Payables - 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.

## Valuation Techniques for Assets and Liabilities Measured at Fair Value

Asset and Liability/Valuation Technique	Valuation Hierarchy Classification
<p>U.S. Treasury and Agency Securities</p> <p><i>U.S. Treasury Securities</i></p> <ul style="list-style-type: none"> <li>Fair value is determined using quoted market prices.</li> </ul>	<ul style="list-style-type: none"> <li>Level 1 – as inputs are observable and in an active market</li> </ul>
<p><i>U.S. Agency Securities</i></p> <ul style="list-style-type: none"> <li>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.</li> <li>The fair value of agency mortgage pass-through pool securities is model-driven based on spreads of comparable to-be-announced securities.</li> <li>CMOs are generally valued using quoted market prices and trade data adjusted by subsequent changes in related indices for comparable instruments.</li> </ul>	<ul style="list-style-type: none"> <li>Level 1 – on-the-run agency issued debt securities if actively traded and inputs are observable</li> <li>Level 2 – all other agency issued debt securities, agency mortgage pass-through pool securities and CMOs if actively traded and inputs are observable</li> <li>Level 3 - in instances where the trading activity is limited or inputs are unobservable</li> </ul>
<p>Other Sovereign Government Obligations</p> <ul style="list-style-type: none"> <li>Fair value is determined using quoted prices in active markets when available. When not available, quoted prices in less-active markets are used. In the absence of position-specific quoted prices, fair value may be determined through benchmarking from comparable instruments.</li> </ul>	<ul style="list-style-type: none"> <li>Level 1 – if actively traded and inputs are observable</li> <li>Level 2 - if the market is less active or prices are dispersed</li> <li>Level 3 - in instances where the prices are unobservable</li> </ul>
<p>State and Municipal Securities</p> <ul style="list-style-type: none"> <li>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, adjusted for any basis difference between cash and derivative instruments.</li> </ul>	<ul style="list-style-type: none"> <li>Level 2 - if value based on observable market data for comparable instruments</li> <li>Level 3 - in instances where market data are not observable.</li> </ul>
<p>RMBS, CMBS, ABS (collectively known as MABS)</p> <ul style="list-style-type: none"> <li>MABS may be valued based on price or spread data obtained from observed transactions or independent external parties such as vendors or brokers.</li> <li>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.</li> <li>Market standard cash flow models may be utilized 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.</li> <li>Valuation levels of RMBS and CMBS indices are used as an additional data point for benchmarking purposes or to price outright index positions.</li> </ul>	<ul style="list-style-type: none"> <li>Level 2 - if value based on observable market data for comparable instruments</li> <li>Level 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</li> </ul>
<p>Loans</p> <ul style="list-style-type: none"> <li>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.</li> </ul>	<ul style="list-style-type: none"> <li>Level 3 - in instances where prices or significant spread inputs are unobservable</li> </ul>

**Asset and Liability/Valuation Technique****Valuation Hierarchy Classification****Corporate and Other Debt***Corporate Bonds*

- Fair value is determined using recently executed transactions, market price quotations, bond spreads and CDS spreads 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 comparable issuers 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 or loss given default as significant inputs.
  - Corporate and other debt includes contracts that are not classified as OTC derivatives because they fail net investment criteria. See the Derivative Contracts section below for a description of the valuation technique applied to such contracts.
- Level 2 - if value based on observable market data for comparable instruments
  - Level 3 - in instances where prices or significant spread inputs are unobservable

**CDO**

- 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.
- 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

**Corporate Equities**

- Exchange-traded equity securities are generally valued based on quoted prices from the exchange.
  - Unlisted equity securities are generally valued based on an assessment of each 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.
- Level 1 – actively traded exchange-traded securities
  - Level 2 – if not actively traded, inputs are observable, or undergoing a recent M&A event or corporate action
  - Level 3 – if not actively traded, inputs are unobservable, or if undergoing an aged M&A event or corporate action

**Derivative Contracts***Exchange-Traded Derivative Contracts*

- Exchange-traded derivatives that are actively traded are valued based on quoted prices from the exchange.
  - Exchange-traded derivatives that are not actively traded are valued using the same techniques as those applied to OTC derivatives.
- Level 1 - when actively traded
  - Level 2 – when not actively traded

**OTC Derivative Contracts**

- OTC derivative contracts include forward, swap and option contracts related to interest rates, foreign currencies, credit standing of reference entities, or equity prices.
  - Depending on the product and the terms of the transaction, the fair value of OTC derivative products can be modeled using a series of techniques, including closed-form analytic formulas, such as the Black-Scholes option-pricing model, simulation models or a combination thereof. Many pricing models do not entail material subjectivity 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 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 required inputs are unobservable, relationships to observable data points, based on historical and/or implied observations, may be employed as a technique to estimate the model input values.
- Level 2 – when valued using observable inputs supported by market liquidity, or where the unobservable input is not deemed significant.
  - Level 3 – when valued using observable inputs with limited market liquidity or if an unobservable input is deemed significant

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

Asset and Liability/Valuation Technique	Valuation Hierarchy Classification
Securities Received as Collateral and Obligation to Return Securities Received as Collateral	<ul style="list-style-type: none"> <li>• 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.</li> <li>• 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.</li> </ul>
Repurchase Agreements	<ul style="list-style-type: none"> <li>• Level 1 - actively traded exchange-traded securities</li> <li>• Level 2 - if not actively traded, inputs are observable, or undergoing a recent M&amp;A event or corporate action</li> <li>• Level 3 – if not actively traded, inputs are unobservable, or if undergoing an aged M&amp;A event or corporate action</li> </ul>
Other Secured Financings and Borrowings	<ul style="list-style-type: none"> <li>• Fair value is computed using a standard cash flow discounting methodology.</li> <li>• 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).</li> </ul>
	<ul style="list-style-type: none"> <li>• Level 2 – when the valuation inputs are observable</li> <li>• Level 3 – in instances where an unobservable input is deemed significant</li> </ul>
	<ul style="list-style-type: none"> <li>• Other Secured financings primarily include contracts that are not repurchase or securities lending transactions. Borrowings include contracts that are not classified as OTC derivatives because they fail net investment criteria. See the Derivative Contracts section above for a description of the valuation technique applied to the Company's Other secured financings and Borrowings.</li> </ul>
	<ul style="list-style-type: none"> <li>• Level 2 – when valued using observable inputs, or where the unobservable input is not deemed significant</li> </ul>

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

### Valuation Techniques and Unobservable Inputs

	Balance / Range (Average <sup>1</sup> )
	At December 31, 2022
<b>Assets at fair value</b>	
<b>Financial instruments owned:</b>	
<b>Other sovereign government obligations</b>	\$ 33
Comparable pricing:	
Bond price	98 points (98 points)
<b>MABS</b>	141
Comparable pricing:	
Bond price	40 to 101 points (75 points)
<b>Corporate and other debt</b>	431
Comparable pricing:	
Bond price	61 to 103 points (86 points)
<b>Corporate equities</b>	66
Comparable pricing:	
Equity price	100 %
<b>Net derivative contracts:</b>	
<b>Credit</b>	65
Credit default swap model:	
Funding Spread	15 to 84 bps (47 bps)
<b>Equity</b>	(402)
Option model:	
Equity volatility	15% to 85% (34%)
Equity volatility skew	-5% to 0% (-1%)
<b>Liabilities at fair value</b>	
<b>Repurchase agreements:</b>	512
Discounted Cash Flow:	
Funding Spread	96 to 165 bps (131 bps)

Points—Percentage of par

1. A single amount is disclosed for range and average when there is no significant difference between the minimum, maximum, and average. Amounts represent weighted averages except where simple averages and the median of the inputs are more relevant.

The previous table provides information on the valuation techniques, significant unobservable inputs, and the 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 of financial instruments. 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. Generally, there are no predictable relationships between multiple significant unobservable inputs attributable to a given valuation technique.

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

- Funding Spread: The cost of borrowing defined as 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).

An increase (decrease) to the following significant unobservable 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, 2022						
	Carrying Value	Fair Value				
		Level 1	Level 2	Level 3	Total	
<b>Financial assets</b>						
Cash	\$ 2,311	\$ 2,311	\$ —	\$ —	\$ 2,311	
Restricted cash	7,764	7,764	—	—	7,764	
Reverse repurchase agreements	89,788	—	89,748	—	89,748	
Securities borrowed	145,787	—	145,787	—	145,787	
Receivables:						
Customers	16,706	—	16,706	—	16,706	
Brokers, dealers and clearing organizations	13,165	—	13,165	—	13,165	
Interest and Dividends	1,934	—	1,934	—	1,934	
Fees and other	566	—	566	—	566	
Affiliates	93	—	93	—	93	
Other assets	50	—	50	—	50	
<b>Financial liabilities</b>						
Repurchase agreements	\$ 122,315	\$ —	\$ 122,290	\$ —	\$ 122,290	
Securities loaned	16,655	—	16,655	—	16,655	
Other secured financings	857	—	854	—	854	
Payables:						
Customers	131,898	—	131,898	—	131,898	
Brokers, dealers and clearing organizations	2,910	—	2,910	—	2,910	
Interest and Dividends	2,165	—	2,165	—	2,165	
Affiliates	612	—	612	—	612	
Other liabilities and accrued expenses	288	—	288	—	288	
Borrowings	8,395	—	8,423	—	8,423	
Subordinated liabilities	19,000	—	17,584	—	17,584	

The previous table excludes certain financial instruments such as deferred compensation arrangements.

## 5. Derivative Instruments

The Company trades and makes markets globally in exchange-traded futures and options, as well as 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, managing foreign currency and credit exposure, 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 at December 31, 2022**

	Fair Value <sup>3</sup>				Notional <sup>4</sup>			
	Bilateral OTC	Cleared OTC	Exchange-Traded	Total	Bilateral OTC	Cleared OTC	Exchange-Traded	Total
<b>Derivative contracts</b>								
Interest rate	\$ 3,415	\$ 1,448	\$ 4	\$ 4,867	\$ 361,553	\$ 162,859	\$ 14,685	\$ 539,097
Credit	380	—	—	380	4,557	—	—	4,557
Foreign exchange	12,415	—	12	12,427	445,132	—	2,912	448,044
Equity	14,473	—	13,876	28,349	218,280	—	212,111	430,391
<b>Total gross derivative contracts</b>	<b>30,683</b>	<b>1,448</b>	<b>13,892</b>	<b>46,023</b>	<b>1,029,522</b>	<b>162,859</b>	<b>229,708</b>	<b>1,422,089</b>
<b>Amounts offset</b>								
Cash collateral netting	(2,137)	—	—	(2,137)				
Counterparty netting	(26,499)	(1,447)	(13,884)	(41,830)				
<b>Total derivative assets</b>	<b>2,047</b>	<b>1</b>	<b>8</b>	<b>2,056</b>				
<b>Amounts not offset<sup>1</sup></b>								
Financial instruments collateral	(350)	—	—	(350)				
<b>Net amounts</b>	<b>\$ 1,697</b>	<b>\$ 1</b>	<b>\$ 8</b>	<b>\$ 1,706</b>				
Net amounts for which master netting or collateral agreements are not in place or may not be legally enforceable				<b>\$ 498</b>				

**Derivative Liabilities at December 31, 2022**

	Fair Value <sup>3</sup>				Notional <sup>4</sup>			
	Bilateral OTC	Cleared OTC	Exchange-Traded	Total	Bilateral OTC	Cleared OTC	Exchange-Traded	Total
<b>Derivative contracts</b>								
Interest rate	\$ 2,640	\$ 1,517	\$ —	\$ 4,157	\$ 258,162	\$ 167,363	\$ 14,765	\$ 440,290
Credit	304	—	—	304	4,667	—	—	4,667
Foreign exchange	12,361	—	12	12,373	448,798	—	1,931	450,729
Equity	16,633	—	15,369	32,002	243,362	—	250,969	494,331
Other <sup>2</sup>	—	—	—	—	1,340	—	—	1,340
<b>Total gross derivative contracts</b>	<b>31,938</b>	<b>1,517</b>	<b>15,381</b>	<b>48,836</b>	<b>956,329</b>	<b>167,363</b>	<b>267,665</b>	<b>1,391,357</b>
<b>Amounts offset</b>								
Cash collateral netting	(3,504)	—	—	(3,504)				
Counterparty netting	(26,499)	(1,447)	(13,884)	(41,830)				
<b>Total derivative liabilities</b>	<b>1,935</b>	<b>70</b>	<b>1,497</b>	<b>3,502</b>				
<b>Amounts not offset<sup>1</sup></b>								
Financial instruments collateral	(81)	—	(1,139)	(1,220)				
<b>Net amounts</b>	<b>\$ 1,854</b>	<b>\$ 70</b>	<b>\$ 358</b>	<b>\$ 2,282</b>				
Net amounts for which master netting or collateral agreements are not in place or may not be legally enforceable				<b>\$ 1,373</b>				

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 obligations with affiliates, accounted for as options, to support secondary market trading of debt and warrants issued by affiliates.
3. See Note 4 for information related to the unsettled fair value of futures contracts, which are excluded from the previous tables.
4. The Company believes that the notional amounts of derivative contracts generally overstate its exposure. In most circumstances, notional amounts are used only 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.

## Net Derivative Liabilities and Collateral Posted

At December 31,  
2022

Net derivative liabilities with credit risk-related contingent features	\$	51
Collateral posted		37

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.

## Maximum Potential Payout/Notional of Credit Protection Sold<sup>1</sup>

	Years to Maturity at December 31, 2022					Fair Value Asset/(Liability)
	< 1	1-3	3-5	Over 5	Total	
<b>Index and basket CDS</b>						
Investment grade	\$ —	\$ —	\$ 1	\$ —	\$ 1	\$ —
Non-investment Grade	—	486	468	3,294	4,248	(283)
<b>Total CDS sold</b>	—	486	469	3,294	4,249	(283)
Other credit contracts	—	—	—	82	82	—
<b>Total credit protection</b>	\$ —	\$ 486	\$ 469	\$ 3,376	\$ 4,331	\$ (283)
CDS protection sold with identical protection					\$4,247	

1. Investment grade/Non-investment grade determination is based on the internal credit rating of the reference obligation. Internal credit ratings serve as the 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, 2022	
	Fair Value Asset	Notional
Index and basket	\$ 359	\$ 4,976

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. The Company's counterparties for these derivatives are affiliates.

The fair value amounts as shown in the previous tables are prior to cash collateral or counterparty netting.

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. 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 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. Receivables from Contracts with Customers

Receivables from contracts with customers, which are included across the various types of Receivables balances in 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. At January 1, 2022 and December 31, 2022, the balance related to Receivables from contracts with customers were \$374 and \$228 respectively.

## 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' and affiliates' needs, finance its inventory positions, and meet liquidity and regulatory requirements.

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

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

The Company actively manages its secured financing payables in a manner that reduces the potential refinancing risk of secured

financing payables of less liquid assets and also considers the quality of collateral when negotiating collateral eligibility with counterparties. The Company utilizes shorter-term secured financing payables for highly liquid assets and establishes 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, 2022					
	Gross Amounts	Amounts Offset	Net Amounts Presented	Amounts Not Offset <sup>1</sup>	Net Amounts
<b>Assets</b>					
Reverse repurchase agreements	\$163,064	\$(73,276)	\$ 89,788	\$ (88,338)	\$ 1,450
Securities	173,535	(27,748)	145,787	(141,641)	4,146
<b>Liabilities</b>					
Repurchase agreements	\$196,452	\$(73,276)	\$123,176	\$(117,976)	\$ 5,200
Securities loaned	44,403	(27,748)	16,655	(16,347)	308
<b>Net amounts for which master netting agreements are not in place or may not be legally enforceable</b>					
Reverse repurchase agreements					\$ 533
Securities borrowed					437
Repurchase agreements					4,015
Securities loaned					140

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 Payables by Remaining Contractual Maturity

At December 31, 2022					
	Overnight and Open	Less than 30 Days	30-90 Days	Over 90 Days	Total
Repurchase agreements	\$ 145,288	\$ 23,830	\$ 9,575	\$17,759	\$196,452
Securities loaned	44,152	251	—	—	44,403
Total included in the offsetting disclosure	189,440	24,081	9,575	17,759	240,855
Obligation to Return the securities received as collateral	22,879	—	—	—	22,879
Total	\$ 212,319	\$ 24,081	\$ 9,575	\$17,759	\$263,734

#### Gross Secured Financing Payables by Class of Collateral Pledged

At December 31, 2022	
<b>Repurchase agreements</b>	
U.S. Treasury and agency securities	\$ 159,846
Other sovereign government obligations	17,419
Corporate equities	10,988
Corporate and other debt	5,069
Other	3,130
Total	196,452
<b>Securities loaned</b>	
Corporate equities	43,007
Other	1,396
Total	44,403
Total included in the offsetting disclosure	240,855
<b>Obligation to return securities received as collateral</b>	
Corporate equities	22,569
Other	310
Total	22,879
Total	\$ 263,734

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

At December 31, 2022	
Financial instruments owned	\$ 12,808
Securities received as collateral	1,063

The Company pledges its financial instruments owned to collateralize repurchase agreements, securities loaned, other secured financings, and derivatives, as well as for delivery to counterparties to cover short positions held by the Company and by customers. Counterparties may or may not have the right to sell or repledge the collateral.

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

In instances where the Company is the lender in securities-for-securities transactions 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 in the consolidated statement of financial condition, with pledged securities that can be sold or repledged by the secured party identified as Securities received as collateral (pledged to various parties) in the Company's 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.

## Fair Value of Collateral Received with Right to Sell or Repledge

	At December 31, 2022
Collateral received with right to sell or repledge	\$ 453,277
Collateral that was sold or repledged <sup>1</sup>	398,450

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

The Company receives collateral in the form of securities in connection with reverse repurchase agreements, securities borrowed, securities-for-securities transactions, derivatives, 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 collateralize repurchase agreements, securities loaned, and derivatives, as well as for delivery to counterparties to cover short positions held by the Company and by customers, including affiliates.

## Securities Segregated for Regulatory Purposes

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. At December 31, 2022, the amount of segregated securities sourced from reverse repurchase agreements and Financial instruments owned was \$24,627.

## Customer Margin Lending

The Company provides margin lending arrangements which allow customers, including affiliates, to borrow against the value of qualifying securities. Receivables from these arrangements are included within Receivables - Customers in the Company's consolidated statement of financial condition. Under these arrangements, the Company receives collateral, including U.S. Treasury and agency securities, other sovereign government obligations, corporate and other debt, and corporate equities. Margin loans 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 the amount of collateral, as well as 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, 2022, the balance related to customer receivables representing margin loans (net of related customer cash and short sale proceeds) was \$12,814

## 8. Borrowings and Other Secured Financings

### Borrowings

	Variable Rate At December 31, 2022
<b>Original maturities of one year or less:</b>	
Next 12 months	\$ 6,754
<b>Original maturities greater than one year:</b>	
2023	24
2024	1,706
2025	12
2026	—
<b>Total</b>	<b>\$ 1,742</b>
<b>Total borrowings</b>	<b>\$ 8,496</b>
Weighted average coupon rate at period-end <sup>2</sup>	5.75 %
Weighted average stated maturity, in years <sup>1</sup>	1.1

1. Weighted average maturity includes borrowings with original maturities greater than one year.
2. Weighted average coupon is calculated on borrowings with original maturities greater than one year and excludes financial instruments for which the fair value option was elected

Borrowings with original maturities of one year or less consist of unsecured borrowings from the Parent that mature in less than 12 months.

Borrowings with original maturities greater than one year consist of unsecured borrowings from the Parent and contracts which are not classified as OTC derivatives because they fail net investment criteria. Unsecured borrowings from the Parent are callable with maturities of 13 months or more from when it is called.

The interest rates for unsecured borrowings from the Parent are established by the treasury function of the Firm. These rates reflect the rate of interest that the Firm incurs in funding its business (the "Firm proxy rate").

## Other Secured Financings

	At December 31, 2022		
	Fixed Rate	Variable Rate <sup>1</sup>	Total
<b>Original maturities:</b>			
One year or less	\$ —	\$ 500	\$ 500
Greater than one year			
2023	—	2,641	2,641
2024	—	22	22
2025	—	92	92
Thereafter	7	—	7
<b>Total</b>	<b>\$ 7</b>	<b>\$ 2,755</b>	<b>\$ 2,762</b>
<b>Total Other Secured Financing</b>	<b>\$ 7</b>	<b>\$ 3,255</b>	<b>\$ 3,262</b>
Weighted average coupon rate at period-end <sup>2</sup>	6.59 %	4.86 %	4.89 %

1. Variable rate other secured financings bear interest based on a variety of indices. Amounts include borrowings linked to equity 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.

Other secured financings primarily include liabilities related to secured funding trades that are not repurchase or securities lending transactions. 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.

## 9. Subordinated Liabilities

On January 24, 2022 the Company fully settled \$8,000 owed under its Cash Subordination Agreement with the Parent and simultaneously entered into a \$13,000 Cash Subordination Agreement with the Parent, all of which was drawn.

On December 8, 2022, the Company terminated existing agreement and fully settled \$6,000 owed under its Subordinated Revolving Credit agreement with the Parent and simultaneously entered into a \$11,000 Subordinated Revolving Credit agreement with the Parent, of which \$6,000 was drawn.

The interest rates for the agreements are in line with the Firm proxy rate, with the Subordinated Revolving Credit Agreement subject to a cap.

The maturity dates, interest rates and book value of the subordinated notes at December 31, 2022 are as follows:

Subordinated Notes	Maturity Date	Interest Rate	Book Value
Cash Subordination Agreement	January 24, 2032	5.75 %	\$ 13,000
Subordinated Revolving Credit Agreement	December 8, 2032	5.75 %	6,000
<b>Total</b>			<b>\$ 19,000</b>

## 10. Commitments, Leases, Guarantees and Contingencies

### Commitments

	Years to Maturity at December 31, 2022				
	Less than 1	1 - 3	3 - 5	Over 5	Total
Forward-starting secured financing receivables <sup>1</sup>	\$22,442	\$ —	\$ —	\$ —	\$ 22,442
Central Counterparty	—	—	—	2,990	2,990
Underwriting	350	—	—	—	350
Letters of credit and other financial guarantees	1	—	—	—	1
<b>Total</b>	<b>\$22,793</b>	<b>\$ —</b>	<b>\$ —</b>	<b>\$ 2,990</b>	<b>\$ 25,783</b>

1. Forward-starting secured financing receivables are generally settled within three business days.

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 that the Company has entered into prior to the date of the consolidated statement of financial condition that will settle after December 31, 2022. These transactions are primarily secured by collateral from U.S. government agency securities and other sovereign government obligations when they are funded.

*Central Counterparty.* These commitments relate to the Company's membership in certain clearinghouses and are contingent upon the default of a clearinghouse member or other stress events.

*Underwriting Commitments.* The Company provides underwriting commitments in connection with its capital raising sources to a diverse group of corporate and other institutional clients.

*Letters of Credit.* The Company has outstanding letters of credit issued by third-party banks to certain of the Company's counterparties.

### Leases

The Company's leases are principally non-cancelable operating real estate leases.



## Statement of Financial Condition Amounts Related to Leases

	At December 31, 2022
Other assets—ROU assets	\$ 77
Other liabilities and accrued expenses—	
Lease liabilities	92
Weighted-average for operating leases:	
Remaining lease term, in years	4.8
Discount rate	4.7 %

## Leases Liabilities

	At December 31, 2022
2023	\$ 20
2024	22
2025	22
2026	16
Thereafter	24
<b>Total undiscounted cash flows</b>	104
Imputed interest	(12)
Amount on statement of financial condition	\$ 92

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

### Maximum Potential Payout/Notional of Obligations under Guarantee Arrangements

	Years to Maturity at December 31, 2022				
Non-credit derivatives <sup>1,2</sup>	\$142,903	\$ 40,966	\$ 23,537	\$ 4,583	\$(11,972)
Client clearing guarantees	40	—	—	—	—

1. Non-credit derivatives primarily consists of equity contracts.

2. The carrying amounts of derivative contracts that meet the accounting definition of a guarantee are shown on a gross basis. 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 which are excluded from the previous table). Non-credit derivative contracts that 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. The Company evaluates collateral requirements for all derivatives, including derivatives

that do not meet the accounting definition of a guarantee. For the effects of cash collateral and counterparty netting, see Note 5.

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.

*Client Clearing Guarantees.* The Company is a sponsoring member of the Government Securities Division of FICC's Sponsored Clearing Model. Clients of the Company, as sponsored members, can transact in overnight and term securities repurchase and reverse repurchase agreements, which are cleared through the FICC. As sponsoring member, the Company guarantees to the FICC the prompt and full payment and performance of its clients' obligations.

The Company could be responsible for liquidation of a sponsored member's account and guarantees any resulting loss to the FICC in the event the sponsored member fails to fully pay any net liquidation amount due from the sponsored member to the FICC. Accordingly, the Company's maximum potential payout amount as of December 31, 2022 reflects the total of the estimated net liquidation amounts for sponsored member accounts. The Company minimizes credit exposure under this guarantee by obtaining a security interest in its sponsored member clients' collateral and their contractual rights under sponsored member transactions. Therefore, the Company's exposure is estimated to be an amount substantially lower than the maximum potential payout amount. The collateral amount in which the Company has a security interest is approximately equal to the maximum potential payout amount of the guarantee.

## Other Guarantees

*Exchange/Clearinghouse Member Guarantees.* The Company is a member of various 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.

*Indemnities.* The Company provides indemnities to two affiliates, MSBNA and MSPBNA, related to services that certain employees and vendors of the Company provide for business activities conducted by these affiliates. MSBNA and MSPBNA have the right to seek indemnification from the Company for losses arising out of the provision of such services by the Company, its employees or its vendors, including for any operational losses caused by human error, failed process management, information technology malfunctions/limitations, fraud, or violations of legal or regulatory requirements. The maximum potential amount of future payment that the Company could be required to make under these indemnities cannot be estimated. The Company has not recorded any contingent liability in its consolidated statement of financial condition for these indemnities.

## **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 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.

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, trading, financing, prime brokerage, market-making activities, investment banking advisory services, capital market activities, financial products or offerings sponsored, underwritten or sold by the Company, wealth and investment management services, and accounting and operational matters, certain of which may result in adverse judgments, settlements, fines, penalties, injunctions, limitations on our ability to conduct certain business, or other relief.

While the Company has identified below any individual proceedings or investigations where the Company believes a material loss to be reasonably possible and reasonably estimable, there can be no assurance that additional material losses will not

be incurred from claims that have not yet been asserted or those where potential losses have not yet been determined to be probable or possible and reasonably estimable.

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 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 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 before a loss or additional loss, or range of loss or additional range of loss, can be reasonably estimated for a proceeding or investigation, 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 consideration of novel or unsettled legal questions relevant to the proceedings or investigations in question.

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 could have a material adverse effect on the consolidated statement of financial condition of the Company as a whole, other than the matters referred to in the following paragraphs.

The Company has been responding to subpoenas and other requests for information from the Enforcement Division of the U.S. Securities and Exchange Commission and the United States Attorney's Office for the Southern District of New York in connection with their investigations into various aspects of the Company's blocks business, certain related sales and trading practices, and applicable controls (the "Investigations"). The Investigations are focused on whether the Company and/or its employees shared and/or used information regarding impending block transactions in violation of federal securities laws and regulations. The Company is continuing to cooperate with the Investigations and is responding to the requests. The Company also faces potential civil liability arising from claims that have been or may be asserted by, among others, block transaction participants who contend they were harmed or disadvantaged including, among other things, as a result of a share price decline allegedly caused by the activities of the Company and/or its employees, or as a result of the Company's and/or its employees'

failure to adhere to applicable laws and regulations. In addition, the Company has responded to demands from shareholders under Section 220 of the Delaware General Corporation Law for books and records concerning the Investigations.

On August 18, 2009, Relators Roger Hayes and C. Talbot Heppenstall, Jr., filed a qui tam action in New Jersey state court styled *State of New Jersey ex. rel. Hayes v. Bank of America Corp., et al.* The complaint, filed under seal pursuant to the New Jersey False Claims Act, alleged that the Company and several other underwriters of municipal bonds had defrauded New Jersey issuers by misrepresenting that they would achieve the best price or lowest cost of capital in connection with certain municipal bond issuances. On March 17, 2016, the court entered an order unsealing the complaint. On November 17, 2017, Relators filed an amended complaint to allege the Company mispriced certain bonds issued in twenty-three bond offerings between 2008 and 2017, having a total par amount of \$6,946. The complaint seeks, among other relief, treble damages. On February 22, 2018, the Company moved to dismiss the amended complaint, and on July 17, 2018, the court denied the Company's motion. On October 13, 2021, following a series of voluntary and involuntary dismissals, Relators limited their claims to certain bonds issued in five offerings the Company underwrote between 2008 and 2011, having a total par amount of \$3,856.

On May 17, 2013, the 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 the State of New York ("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. On July 15, 2022, the Company filed a motion for summary judgment. At December 25, 2019, the current unpaid balance of the remaining mortgage pass-through certificates at issue in this action was approximately \$22, 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 \$22 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.

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 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. Plaintiffs' motion for class certification was referred by the District Court to a magistrate judge who, on June 30, 2022, issued a report and recommendation that the District Court certify a class. The motion for class certification and the parties' objections to the report and recommendation are pending before the District Court.

On August 13, 2021, the plaintiff in *Camelot Event Driven Fund, a Series of Frank Funds Trust v. Morgan Stanley & Co. LLC, et al.* filed in the Supreme Court of NY a purported class action complaint alleging violations of the federal securities laws against ViacomCBS ("Viacom"), certain of its officers and directors, and the underwriters, including the Company, of two March 2021 Viacom offerings: a \$1,700 Viacom Class B Common Stock offering and a \$1,000 offering of 5.75% Series A Mandatory Convertible Preferred Stock (collectively, the "Offerings"). The complaint alleges, inter alia, that the Viacom offering documents for both issuances contained material omissions because they did not disclose that certain of the underwriters, including the Company, had prime brokerage relationships and served as counterparties to certain derivative transactions with Archegos Capital Management LP, ("Archegos"), a fund with significant exposure to Viacom securities across multiple prime brokers. The complaint, which seeks, among other things, unspecified compensatory damages, alleges that the offering documents did not adequately disclose the risks associated with Archegos's concentrated Viacom positions at the various prime brokers, including that the unwind of those positions could have a deleterious impact on the stock price of Viacom. On November 5, 2021, the complaint was amended to add allegations that defendants failed to disclose that certain underwriters, including the Company, had intended to unwind Archegos's Viacom positions while simultaneously distributing the Offerings. On February 6, 2023, the court issued a decision denying the motions to dismiss as to the Company and the other underwriters, but granted the motion to dismiss as to Viacom and the Viacom individual defendants. On February 15,

2023, the underwriters, including the Firm, filed their Notices of Appeal of the denial of their motions to dismiss.

## 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.

At December 31, 2022, the Company had \$1 in consolidated VIE assets. Consolidated 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 Company in such VIEs as the fair values for the liabilities and interests owned are more observable.

Generally, most assets owned by consolidated VIEs cannot be removed unilaterally by the Company and are not available to the Company while the 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 consolidated statement of financial condition, net of amounts absorbed by third-party variable interest holders.

### Non-consolidated VIEs

At December 31, 2022	At December 31, 2022	
	MABS	CDO
VIE assets (UPB)	\$ 32,308	\$ 2,836
<b>Maximum exposure to loss</b>		
Debt interests	\$ 304	\$ 114
<b>Carrying value of exposure to loss — Assets</b>		
Debt interests	\$ 304	\$ 114

The Company owns additional VIE assets of \$2,386 representing 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 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; examples of the Company's involvement with these VIEs include its securitization and 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.

#### Detail of Mortgage- and Asset-Backed Securitization Assets

	At December 31, 2022	
	UPB	Debt and Equity Interests
Residential mortgages	\$ 7,296	\$ 187
Commercial mortgages	25,012	117
<b>Total</b>	<b>\$ 32,308</b>	<b>\$ 304</b>

#### Securitization Activities

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

Although not obligated, the Company generally makes a market in the securities issued by SPEs in 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.

#### 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.

#### Transferred Assets with Continuing Involvement

	At December 31, 2022		
	U.S. Agency CMO	Non-Agency CMBS	Non-Agency RMBS
SPE assets (UPB) <sup>1</sup>	\$ 6,448	\$ 3,743	\$ 49
<b>Retained interests</b>			
Investment grade	\$ 367	\$ 2	\$ —
Non-investment grade	11	3	—
<b>Total</b>	<b>\$ 378</b>	<b>\$ 5</b>	<b>\$ —</b>
<b>Interests purchased in the secondary market<sup>2</sup></b>			
Investment grade	\$ 10	\$ —	\$ —
Non-investment grade	—	4	—
<b>Total</b>	<b>\$ 10</b>	<b>\$ 4</b>	<b>\$ —</b>

1. Amounts include assets transferred by unrelated transferors.

2. Amounts are only included for transactions where the Company also holds retained interests as part of the transfer.

	Fair Value at December 31, 2022		
	Level 2	Level 3	Total
<b>Retained interests</b>			
Investment grade	\$ 369	\$ —	\$ 369
Non-investment grade	13	1	14
<b>Total</b>	<b>\$ 382</b>	<b>\$ 1</b>	<b>\$ 383</b>
<b>Interests purchased in the secondary market<sup>2</sup></b>			
Investment grade	\$ 9	\$ 1	\$ 10
Non-investment grade	4	—	4
<b>Total</b>	<b>\$ 13</b>	<b>\$ 1</b>	<b>\$ 14</b>

The previous tables include 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. Fair value for these interests is measured using techniques that are consistent with the valuation techniques applied to the Company's major categories of assets and liabilities as described in Notes 2 and 4. Further, as permitted by applicable guidance, certain transfers of assets where the Firm's only continuing involvement is a derivative are only reported in the following Assets Sold with Retained Exposure table.

#### Proceeds from New Securitization Transactions

	2022
New transactions	\$ 14,130
Retained interests	4,776

## Assets Sold With Retained Exposure

	At December 31, 2022
Gross cash proceeds from sale of assets <sup>1</sup>	\$ 9,328
<b>Fair Value</b>	
Assets Sold	9,305
Derivative assets recognized in the statement of financial condition	19
Derivative liabilities recognized in the statement of financial condition	42

1. The carrying value of assets at the time of sale approximates gross cash proceeds.

The Company enters into transactions in which it sells securities, primarily equities, and certain affiliates of the Company contemporaneously enter into bilateral OTC derivatives with the purchasers of the securities. The Company then enters into bilateral OTC derivatives with the affiliates, through which it retains exposure to the sold securities.

## 12. Risk Management

Risk is an inherent part of the Company's business activities. Management believes effective risk management is vital to the success of the Company's business activities. Accordingly, the Company has an established risk management governance structure and framework 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 principal risks involved in the Company's business activities include market, credit, operational, model, compliance, cybersecurity, liquidity, strategic and reputational risk.

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.

The cornerstone of the Company's risk management philosophy is the pursuit of risk-adjusted returns through prudent risk-taking that protects 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, legal and compliance,

cybersecurity, strategic, reputational and conduct 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.

The Firm is monitoring the war in Ukraine and its impact on both the Ukrainian and Russian economies, as well as related impacts on other world economies and the financial markets. The Company has limited exposure to Russia and Ukraine. The Company will continue to monitor for any exposures associated with Russia and Ukraine, including any impact to its counterparties.

### *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 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 co-chaired by the Company's Chief Risk Officer and Chief Financial Officer to execute the risk governance framework. The RC composition includes 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, the monitoring of capital levels as well as material market, credit, operational, model, liquidity, legal, compliance, cybersecurity, strategic, reputational and conduct 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,



cybersecurity, compliance, strategic, reputational and conduct 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," "Liquidity Risk" and "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 RC and is set by the Board, and more granular risk-taking decisions and activities. Risk limits and associated limit frameworks are reviewed and updated on at least an annual basis, 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.

The Company has exposures to a wide range of interest rates, equity prices, and foreign exchange rates – and the associated implied volatilities and spreads – related to the global markets in which the Company conducts its trading 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: by use of statistics (including VaR); 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. Credit risk includes Country Risk, which is the risk that the events in, or that affect a foreign country (any country other than the U.S.) might adversely affect 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; posting margin and/or collateral to clearinghouses, clearing agencies, exchanges, banks, securities firms and other financial counterparties; placing funds on deposit at other financial institutions to support its clearing and settlement obligations; and investing or trading in securities and loan pools, whereby the value of these assets may fluctuate based on realized or expected defaults on the underlying obligations or loans. 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 establishes practices to evaluate, monitor and control credit risk exposure both within and across its business activities. The Company's credit risk exposure is actively managed by credit professionals and the RC who monitor risk exposures, including margin loans and credit sensitive, higher-risk transactions. The Company is responsible for ensuring timely and transparent communication of material credit risks, ensuring compliance with established limits, approving material

extensions of credit, and escalating of risk concentrations to appropriate senior management.

### **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 Company and to respond to the changing regulatory and business environment.

### **Cybersecurity**

The Firm's cybersecurity and information security policies, procedures, and technologies are designed to protect the Company's own, client and employee data against unauthorized disclosure, modification or misuse and are also designed to address regulatory requirements. These policies and procedures cover a broad range of areas, including: identification of internal and external threats, access control, data security, protective controls, detection of malicious or unauthorized activity, incident response and recovery planning.

### **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 Firm Risk Management responsible for the oversight of model risk. MRM establishes a model risk tolerance in line with the 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 defined as 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. Treasury and agency securities and other sovereign government obligations, which, in the aggregate, represented approximately 18% of the Company's total assets at December 31, 2022. In addition, substantially all of the collateral held by the Company for reverse repurchase agreements or bonds borrowed, which together represented approximately 29% of the Company's total assets at December 31, 2022, consist of securities issued by the

U.S. government, federal agencies or other sovereign governments.

### **Customer Activities**

The Company's customer activities involve the execution, settlement and financing of various securities transactions on behalf of customers, including affiliates. 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.

### **London Interbank Offered Rate and Other Interest Rate Benchmarks**

Central banks around the world, including the Federal Reserve, have sponsored committees and working groups of market participants and official sector representatives to replace LIBOR and replace or reform other interest rate benchmarks (collectively, the "IBORs"). A transition away from use of the IBORs to alternative rates and other potential interest rate benchmark reforms is a multi-year initiative that will continue over the course of the next few years.

The publication of most non-U.S. dollar LIBOR rates ceased as of the end of December 2021. While we have made substantial progress in the transition away from the IBORs, we nonetheless currently remain party to a significant number of U.S. dollar LIBOR-linked contracts. For the limited number of U.S. dollar LIBOR linked contracts without a current market standard fallback, or to which the federal legislation does not apply, we are actively developing appropriate transition plans in light of the planned June 30, 2023 cessation date for the remaining U.S. dollar LIBOR tenors.

The IBOR transition plan is overseen by a global steering committee of the Firm, with senior management oversight. The Company continues to execute against the Firm-wide IBOR transition plan to complete the transition to alternative reference rates

## **13. Employee Stock-Based Compensation Plans**

Certain current and former employees of the Company and affiliates participate in the Ultimate Parent's stock-based compensation plans. These plans include RSUs and PSUs, the details of which are further outlined below. The compensation expense is recognized over the vesting period relevant to each separately vesting portion of the award.

### **Restricted Stock Units**

RSUs are subject to vesting over time, generally one to 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 forfeited if employment is terminated before the end of the relevant vesting period or canceled 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 at VWAP on the date of grant. Certain awards provide the Ultimate Parent discretion to claw back or 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 Firm satisfies predetermined performance and market-based conditions over a three-year performance period. The number of PSUs that will vest ranges from 0% to 150% of the target award based on the extent to which the Firm achieves the specified performance goals. PSUs have vesting, restriction, forfeiture and cancellation provisions that are generally similar to those of RSUs. The Firm determines the fair value of PSUs with non-market performance conditions based on the grant-date fair value of its common stock, measured at VWAP on the date of grant. PSUs that contain market-based conditions are valued using a Monte Carlo valuation model.

## **14. Employee Benefit Plans**

Certain current and former U.S. employees of the Company and affiliates participate in various pension and post retirement benefit plans sponsored by the Parent. The funded and unfunded status of these plans are recorded in Other assets and Other liabilities and accrued expenses, respectively, for each plan, in the consolidated statement of financial condition.

### **Pension and Other Post retirement Plans**

Certain current and former 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 SREP, 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 health care and life insurance for eligible U.S. retirees and health care insurance for their eligible dependents.

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

#### Weighted Average Assumptions

	Pension Plans	Other Postretirement Plan
Discount rate	2.99 %	2.85 %
Expected long-term rate of return on plan assets	1.75 %	N/A

N/A - Not applicable.

#### Benefit Obligation and Funded Status

##### Rollforward of the Benefit Obligation and Fair Value of Plan Assets

	Pension Plans	Other Post-Retirement Plan
<b>Rollforward of projected benefit obligation</b>		
Benefit obligation at December 31, 2021	\$ 3,488	\$ 51
Interest cost	103	1
Actuarial (gain) <sup>1</sup>	(877)	(11)
Benefits paid	(180)	(4)
Other	9	—
Benefit obligation at December 31, 2022	\$ 2,543	\$ 37

##### Rollforward of fair value of plan assets

Fair value of plan assets at December 31, 2021	\$ 3,094	\$ —
Actual return on plan assets	(822)	—
Employer contributions	23	4
Benefits paid	(180)	(4)

##### Fair value of plan assets at December 31, 2022

	2,115	—
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##### Unfunded status at December 31, 2022

	\$ (428)	\$ (37)
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##### Amounts recognized in the consolidated statement of financial condition

Liabilities	(428)	(37)
<b>Net amount recognized</b>	<b>\$ (428)</b>	<b>\$ (37)</b>

1. Primarily reflects the impact of year-over-year discount fluctuations

All plans have obligations in excess of the fair value of plan assets.

#### Weighted Average Assumptions Used to Determine Benefit Obligation

	Pension Plans	Other Postretirement Plan
Discount rate	5.08 %	5.06 %

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

<b>Health care cost trend rate assumed for next year:</b>	
Medical	6.13 %
Prescription	7.50 %
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	2032

#### 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 with 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 the respective derivative product. This includes percentage allocations and credit quality. Derivatives are used solely for the purpose of enhancing investment returns 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 and total return 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
<b>Assets</b>				
U.S. Treasury and agency securities	\$ 1,788	\$ —	\$ —	\$ 1,788
U.S. agency securities	—	267	—	267
Total U.S. Treasury and agency securities	1,788	267	—	2,055
Derivative contracts	—	(2)	—	(2)
Other receivables <sup>1</sup>	—	21	—	21
<b>Total</b>	<b>\$ 1,788</b>	<b>\$ 286</b>	<b>\$ —</b>	<b>\$ 2,074</b>
<b>Assets Measured at NAV</b>				
Commingled trust funds:				
Money market				44
<b>Liabilities</b>				
Other payables <sup>1</sup>	—	(3)	—	(3)
<b>Total liabilities</b>	<b>—</b>	<b>(3)</b>	<b>—</b>	<b>(3)</b>
<b>Fair value of plan assets</b>	<b>\$ 2,115</b>			

<sup>1</sup>Other receivables and other payables are valued at their carrying value, which approximates fair value.

#### Expected Contributions

The Company's policy is to fund at least the amount sufficient to meet minimum funding requirements under applicable employee benefit and tax laws. At December 31, 2022, the Company expected to contribute approximately \$27 to the pension and postretirement plans in 2023 based upon the plans' current funded status and expected asset return assumptions for 2023.

#### Expected Future Benefit Payments

	Pension Plans	Other Postretirement Plan
2023	\$ 133	\$ 4
2024	136	4
2025	141	3
2026	145	3
2027	150	3
2028-2032	795	11

#### Morgan Stanley 401(k) Plan

The Company's employees meeting certain eligibility requirements may participate in the Morgan Stanley 401(k) Plan sponsored by the Parent. Eligible employees receive discretionary 401(k) matching cash contributions as determined annually by the Firm. In 2022 and 2021, the Company matched eligible employee contributions up to the IRS limit at 4%, or 5% up to a certain compensation level. Eligible employees with eligible pay less than or equal to \$100,000 also received a fixed contribution equal to 2% of eligible pay.

#### 15. Income Taxes

The Company is a single-member limited liability company that is treated as a disregarded entity for federal income tax purposes, but has elected to continue to include its allocated amount of current and deferred taxes in the consolidated statement of financial condition. As such, the Company has a Tax Sharing Agreement with the Ultimate Parent in order to record its related current and deferred federal, state and local taxes. 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. 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, current taxes (federal, combined and unitary states) are settled periodically with the Ultimate Parent, who pays these taxes on behalf of the Company.

#### Net Deferred Tax Assets

	At December 31, 2022
Employee compensation and benefit plans	\$ 790
Allowance for credit losses and other reserves	62
Valuation of net trading inventory, investments & receivables	42
Other	6
<b>Total deferred tax assets</b>	<b>\$ 900</b>
Deferred tax assets valuation allowance	(2)
<b>Net deferred tax assets after valuation allowance</b>	<b>\$ 898</b>

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. The Company's net deferred tax assets are included in Other assets within the consolidated statement of financial condition.

The Company believes the recognized net deferred tax assets (after valuation allowance) of \$898 at December 31, 2022 is

more likely than not to be realized based on expectations as to future taxable income in the jurisdictions in which it operates.

The earnings of certain foreign investments are indefinitely reinvested due to regulatory and other capital requirements in foreign jurisdictions. As of December 31, 2022, the unrecognized deferred tax liability attributable to indefinitely reinvested earnings is \$246.

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 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.

#### Rollforward of Unrecognized Tax Benefits

Balance at December 31, 2021	\$	83
Increases based on tax positions related to the current period		1
Increases based on tax positions related to prior periods		1
<b>Balance at December 31, 2022</b>	<b>\$</b>	<b>85</b>
Net unrecognized tax benefits <sup>1</sup>	<b>\$</b>	<b>65</b>

1. Represent ending unrecognized tax benefits adjusted for the impact of the federal benefit of state issues. If recognized, these net benefits would favorably impact the effective tax rate in future periods.

It is reasonably possible that significant changes in the balance of unrecognized tax benefits may occur within the next 12 months. 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.

Interest and penalties related to unrecognized tax benefits are recognized as a component of the provision for income taxes. There were no accrued penalties related to unrecognized tax benefits.

#### Earliest Tax Year Subject to Examination in Major Tax Jurisdictions

Jurisdiction	Tax Year
United States	2017
New York State and City	2010

The Company, through its inclusion in the return of the Ultimate Parent, is routinely under continuous examination by the IRS and other tax authorities in certain states and localities in which the Company has significant business operations, such as New York.

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

## 16. Regulatory Requirements

### MS&Co. Regulatory Capital

MS&Co. is registered as a broker-dealer and a futures commission merchant with the SEC and CFTC, respectively, and provisionally registered as a swap dealer with the CFTC. Accordingly, the Company is subject to the minimum net capital requirements of the SEC and the CFTC.

Under these rules, MS&Co. is required to maintain minimum Net Capital, as defined under SEA Rule 15c3-1, of not less than the greater of (1) 2% of aggregate debit items arising from customer transactions, plus excess margin collateral on reverse repurchase agreements and 2% of the risk margin amount, or (2) the CFTC risk-based requirement representing the sum of 8% of customer risk maintenance margin requirement, 8% of non-customer risk maintenance margin requirement and 2% of uncleared swap margin amount, as defined. At December 31, 2022, MS&Co.'s Net Capital was \$17,224 which exceeded the CFTC greater minimum requirement of \$4,363 by \$12,861.

MS&Co. is required to hold tentative net capital in excess of \$5,000 and Net Capital in excess of \$1,000 in accordance with the market and credit risk standards of Appendix E of SEA 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, 2022, MS&Co. had tentative net capital in excess of the minimum and notification requirements.

### MS&Co. Customer Protection & Segregation

As a registered U.S. broker dealer, MS&Co. is subject to the customer protection provisions under SEA Rule 15c3-3, which requires MS&Co. to compute a reserve requirement for customers and deposit cash or securities into a special reserve bank account for the exclusive benefit of customers. As of December 31, 2022, MS&Co. had \$15,557 in the special reserve bank account for the exclusive benefit of customers consisting of \$15,557 in qualified U.S. Government securities. These qualified securities are sourced from reverse repurchase agreements and



Financial instruments owned in the Company's consolidated statement of financial condition.

As a clearing and carrying broker dealer, MS&Co. is also required to compute a reserve requirement for PABs under SEA Rule 15c3-3. As of December 31, 2022, MS&Co. held \$247 in qualified U.S. Government securities in a special bank account for PABs. These qualified securities are sourced from reverse repurchase agreements and Financial instruments owned in the Company's consolidated statement of financial condition.

As a registered futures commission merchant, MS&Co. is subject to the customer segregation provisions under CEA Section 4d(2) and CFTC Regulation 30.7, which requires MS&Co. to compute separate customer segregation and secured requirements for both domestic and foreign origin where assets in cash and securities collateral are segregated into separate accounts exclusively for the benefit of those customers. As of December 31, 2022, total segregated assets of \$27,677 meeting requirements under Section 4d(2) consists of \$17,551 in cash and \$10,126 in securities. Additionally, total segregated assets of \$9,882 meeting the requirements under Regulation 30.7 calculation consists of \$6,676 in cash and \$3,206 in securities. Cash is reflected in Restricted cash and Receivables from brokers, dealers and

clearing organizations. For certain customers, cash amounts are not reflected in the consolidated statement of financial condition. Securities are sourced from Financial instruments owned in the Company's consolidated statement of financial condition and from securities owned by customers, which are not reflected in the Company's consolidated statement of financial condition.

MS&Co. is also subject to the customer segregation provisions under CEA Section 4d(f), which requires MS&Co. to compute customer cleared swap requirements where cash and securities assets are segregated into separate accounts exclusively for the benefit of those customers. As of December 31, 2022, total segregated assets of \$26,457 meeting the requirements under Section 4d(f) consists of \$18,007 in cash and \$8,450 in securities. Cash is reflected in Restricted cash. For certain customers, cash amounts are not reflected in the consolidated statement of financial condition. Securities are sourced from Financial instruments owned in the Company's consolidated statement of financial condition and from securities owned by customers, which are not reflected in the Company's consolidated statement of financial condition.

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## Glossary of Common Terms and Acronyms

ABS	Asset-backed securities	MSSB	Morgan Stanley Smith Barney LLC
CDO	Collateralized debt obligation(s)	MSSF	Morgan Stanley Senior Funding, Inc.
CDS	Credit default swap(s)	MSSG	Morgan Stanley Services Group Inc.
CEA	Commodity Exchange Act	OECD	Organization for Economic Cooperation and Development
CFTC	Commodity Futures Trading Commission	OIS	Overnight indexed swap
CLN	Credit-linked note(s)	OTC	Over-the-counter
CLO	Collateralized loan obligation(s)	PAB	Proprietary Accounts of Broker Dealers
CMBS	Commercial mortgage-backed securities	PDS	Prime Dealer Services Corp.
CMO	Collateralized Mortgage Obligation(s)	PSU	Performance-based stock units
CRM	Credit Risk Management Department	RMBS	Residential mortgage-backed securities
FASB	Financial Accounting Standards Board	ROU	Right of use
FICC	Fixed Income Clearing Corporation	RSU	Restricted stock units
FICO	Fair Isaac Corporation	SEA	U.S. Securities and Exchange Act
FINRA	Financial Industry Regulatory Authority, Inc.	SEC	U.S. Securities and Exchange Commission
IRS	Internal Revenue Service	SIPC	Securities Investor Protection Corporation
LIBOR	London Inter-bank Offered Rate	SPE	Special purpose entities
M&A	Merger, acquisition and restructuring transaction	SREP	Supplemental Executive Retirement and Excess Plan
MABS	Mortgage- and Asset-Backed Securities	UPB	Unpaid principal balance
MRM	Model Risk Management department	U.S.	United States of America, which includes the District of Columbia, Puerto Rico, and the U.S. territories and possessions
MS&Co.	Morgan Stanley & Co. LLC	U.S. GAAP	Accounting principles generally accepted in the United States of America
MSBNA	Morgan Stanley Bank, N.A.	VaR	Value at Risk
MSDHI	Morgan Stanley Domestic Holdings, Inc.	VIE	Variable interest entity
MSPBNA	Morgan Stanley Private Bank, National Association	VWAP	Volume-weighted average price

A copy of our December 31, 2022 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](https://www.morganstanley.com/about-us-ir/shareholder/morganstanley_co_llc.pdf)

**MORGAN STANLEY & CO. LLC**  
**(UNCONSOLIDATED)**  
**STATEMENT OF AGGREGATION REQUIREMENTS AND FUNDS IN SEGREGATION**  
**FOR CUSTOMERS TRADING ON U.S. COMMODITY EXCHANGES**  
**December 31, 2022**  
**(In millions of dollars)**

**Segregation Requirements (Section 4d(2) of the CEAct):**

<b>Net ledger balance</b>		
Cash	\$	17,630
Securities (at market)		10,076
Net unrealized profit in open futures contracts traded on a contract market		(461)
Exchange traded options		
Add market value of open option contracts purchased on a contract market		551
Deduct market value of open option contracts sold on a contract market		(514)
<b>Net equity</b>		<b>27,282</b>
Accounts liquidating to a deficit and accounts with debit balances		
- gross amount	\$	311
Less: amount offset by customer owned securities		(310)
		1
<b>Amount required to be segregated</b>		<b>27,283</b>
<b>Funds in Segregated Accounts</b>		
Deposited in segregated funds bank accounts		
Cash		2,939
Securities held for particular customers or option customers in lieu of cash		
(at market)		2,465
Margins on deposit with derivatives clearing organizations of contract markets		
Cash		14,154
Securities held for particular customers or options customers in lieu of cash		
(at market)		7,611
Net settlement to derivatives clearing organizations of contract markets		458
Exchange traded options		
Value of open long option contracts		551
Value of open short option contracts		(514)
Net equities with other futures commission merchants - Net liquidating equity		13
Segregated funds on hand		—
<b>Total amount in segregation</b>		<b>27,677</b>
<b>Excess funds in segregation</b>	<b>\$</b>	<b>394</b>
Management Target Amount for Excess funds in segregation	\$	235
<b>Excess funds in segregation over Management Target Amount Excess</b>	<b>\$</b>	<b>159</b>

Note: There were no material differences between the above computation and MS&Co.'s corresponding unaudited FOCUS Report filed on January 26, 2023

**MORGAN STANLEY & CO. LLC**  
**(UNCONSOLIDATED)**  
**STATEMENT OF SECURED AMOUNTS AND FUNDS HELD IN**  
**SEPARATE ACCOUNTS PURSUANT TO COMMISSION REGULATION 30.7**  
**December 31, 2022**  
**(In millions of dollars)**

**Funds Deposited in Separate Regulation 30.7 Accounts**

<b>Cash in banks</b>	
Banks located in the United States	\$ 66
Other banks qualified under Regulation 30.7	227
<b>Securities</b>	
In safekeeping with banks located in the United States	850
In safekeeping with other banks qualified under Regulation 30.7	148
<b>Equities with registered futures commission merchants</b>	
Cash	29
Unrealized gain on open futures contracts	(1)
<b>Amounts held by members of foreign boards of trade</b>	
Cash	6,353
Securities	2,267
Unrealized gain on open futures contracts	(68)
Value of long option contracts	24
Value of short option contracts	(13)
<b>Total funds in separate section 30.7 accounts</b>	<b>9,882</b>
Amount required to be set aside in separate section 30.7 accounts	9,633
<b>Excess set Aside Funds for Secured Amount</b>	<b>\$ 249</b>
Management Target Amount for Excess funds in separate section 30.7 accounts	\$ 140
<b>Excess funds in separate 30.7 accounts over Management Target</b>	<b>\$ 109</b>

Note: There were no material differences between the above computation and MS&Co.'s corresponding unaudited FOCUS Report filed on January 26, 2023

**MORGAN STANLEY & CO. LLC**  
**(UNCONSOLIDATED)**

**STATEMENT OF CLEARED SWAPS CUSTOMER SEGREGATION REQUIREMENTS AND FUNDS IN  
CLEARED SWAPS CUSTOMER ACCOUNTS UNDER 4D(F) OF THE CEA**

**December 31, 2022**

**(In millions of dollars)**

<b>Cleared Swaps Customer Requirements</b>	
Net ledger balance:	
Cash	\$ 1,411
Securities (at market)	8,449
Net unrealized loss in open cleared swaps	16,189
<b>Net equity</b>	<b>26,049</b>
Accounts liquidating to a deficit and accounts with debit balances - gross amount	43
Less: amount offset by customer owned securities	(31)
<b>Amount required to be segregated for cleared swaps customers</b>	<b>26,061</b>
<b>Funds in Cleared Swaps Customer Segregated Accounts</b>	
Deposited in cleared swaps customer segregated accounts at banks	
Cash	3,524
Securities held for particular cleared swaps customers in lieu of cash (at market)	21
Margins on deposit with derivatives clearing organizations in cleared swaps customer segregated accounts	
Cash	14,267
Securities held for particular cleared swaps customers in lieu of cash (at market)	8,429
Net settlement to derivatives clearing organizations	216
<b>Total amount in cleared swaps customer segregation</b>	<b>26,457</b>
<b>Excess funds in cleared swaps customer segregation</b>	<b>\$ 396</b>
Management Target Amount for Excess funds in cleared swaps segregated accounts	\$ 92
<b>Excess funds in cleared swaps customer segregated accounts over Management</b>	
<b>Target Excess</b>	<b>\$ 304</b>

Note: There were no material differences between the above computation and MS&Co.'s corresponding unaudited FOCUS Report filed on January 26, 2023