GOLDMAN SACHS & CO. LLC AND SUBSIDIARIES

Consolidated Statement of Financial Condition
as of June 30, 2019
(Unaudited)

INDEX

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Consolidated Statement of Financial Condition (Unaudited)

$ in millions	As of June 2019
Assets	
Cash	**$ 9,882**
Collateralized agreements:	
Securities purchased under agreements to resell (at fair value)	**73,406**
Securities borrowed (includes **$21,113** at fair value)	**158,562**
Receivables:	
Brokers, dealers and clearing organizations	**10,841**
Customers and counterparties (includes **$64** at fair value)	**19,765**
Financial instruments owned (at fair value and includes **$45,224** pledged as collateral)	**117,720**
Other assets	**2,289**
Total assets	**$392,465**
Liabilities and member's equity	
Collateralized financings:	
Securities sold under agreements to repurchase (at fair value)	**$ 78,082**
Securities loaned (includes **$17,801** at fair value)	**61,097**
Other secured financings (includes **$4,536** at fair value)	**26,529**
Payables:	
Brokers, dealers and clearing organizations	**5,720**
Customers and counterparties	**130,738**
Financial instruments sold, but not yet purchased (at fair value)	**33,111**
Unsecured short-term borrowings	**19,914**
Unsecured long-term borrowings	**25**
Other liabilities	**6,951**
Subordinated borrowings	**18,500**
Total liabilities	**380,667**
Commitments, contingencies and guarantees	
Member's equity	
Member's equity	**11,798**
Total liabilities and member's equity	**$392,465**

The accompanying notes are an integral part of this consolidated statement of financial condition.

Notes to Consolidated Statement of Financial Condition (Unaudited)

Note 1.

Description of Business

Goldman Sachs & Co. LLC (GS&Co.), a limited liability company registered as a U.S. broker-dealer and futures commission merchant, together with its consolidated subsidiaries (collectively, the firm), is a wholly-owned subsidiary of The Goldman Sachs Group, Inc. (Group Inc. and, collectively with its consolidated subsidiaries, GS Group), a Delaware corporation, except for de minimis non-voting, non-participating interests held by unaffiliated broker-dealers.

The firm conducts its activities in the following four business lines:

Investment Banking

The firm provides a broad range of investment banking services to a diverse group of corporations, financial institutions, investment funds and governments. Services include strategic advisory assignments with respect to mergers and acquisitions, divestitures, corporate defense activities, restructurings, spin-offs and risk management, and debt and equity underwriting of public offerings and private placements, including local and cross-border transactions and acquisition financing, as well as derivative transactions directly related to these activities.

Institutional Client Services

The firm facilitates client transactions and makes markets in fixed income, equity, currency and commodity products, primarily with institutional clients, such as corporations, financial institutions, investment funds and governments. The firm also makes markets in and clears client transactions on major stock, options and futures exchanges and provides financing, securities lending and other prime brokerage services to institutional clients.

Investing & Lending

The firm's investing and lending activities, which are typically longer-term in nature, include investing directly in various asset classes, primarily debt securities and loans, and public and private equity securities.

Investment Management

The firm provides investment management services and offers investment products (primarily through separately managed accounts and commingled vehicles, such as mutual funds and private investment funds) across all major asset classes to a diverse set of institutional and individual clients. The firm also offers brokerage and other transaction services to high-net-worth individuals and families.

Note 2.

Basis of Presentation

This consolidated statement of financial condition is prepared in accordance with accounting principles generally accepted in the United States (U.S. GAAP) and includes the accounts of GS&Co. and all other entities in which the firm has a controlling financial interest. Intercompany transactions and balances have been eliminated.

This consolidated statement of financial condition is unaudited and should be read in conjunction with the audited consolidated statement of financial condition and supplemental financial information as of December 31, 2018.

All references to June 2019 refer to the date June 30, 2019. Any reference to a future year refers to a year ending on December 31 of that year.

Note 3.

Significant Accounting Policies

The firm's significant accounting policies include when and how to measure the fair value of assets and liabilities and when to consolidate an entity. See Notes 5 through 8 for policies on fair value measurements and below and Note 11 for policies on consolidation accounting. All other significant accounting policies are either described below or included in the following footnotes:

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Consolidation

The firm consolidates entities in which the firm has a controlling financial interest. The firm determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity (VIE).

Voting Interest Entities. Voting interest entities are entities in which (i) the total equity investment at risk is sufficient to enable the entity to finance its activities independently and (ii) the equity holders have the power to direct the activities of the entity that most significantly impact its economic performance, the obligation to absorb the losses of the entity and the right to receive the residual returns of the entity. The usual condition for a controlling financial interest in a voting interest entity is ownership of a majority voting interest. If the firm has a controlling majority voting interest in a voting interest entity, the entity is consolidated.

Variable Interest Entities. A VIE is an entity that lacks one or more of the characteristics of a voting interest entity. The firm has a controlling financial interest in a VIE when the firm has a variable interest or interests that provide it with (i) the power to direct the activities of the VIE that most significantly impact the VIE's economic performance and (ii) the obligation to absorb losses of the VIE or the right to receive benefits from the VIE that could potentially be significant to the VIE. See Note 11 for further information about VIEs.

Equity-Method Investments. When the firm does not have a controlling financial interest in an entity but can exert significant influence over the entity's operating and financial policies, the investment is accounted for either (i) under the equity method of accounting or (ii) at fair value by electing the fair value option available under U.S. GAAP. Significant influence generally exists when the firm owns 20% to 50% of the entity's common stock or in-substance common stock.

In general, the firm accounts for investments acquired after the fair value option became available, at fair value. In certain cases, the firm applies the equity method of accounting to new investments that are strategic in nature or closely related to the firm's principal business activities, when the firm has a significant degree of involvement in the cash flows or operations of the investee or when cost-benefit considerations are less significant.

Use of Estimates

Preparation of this consolidated statement of financial condition requires management to make certain estimates and assumptions, the most important of which relate to fair value measurements, discretionary compensation accruals, provisions for losses that may arise from litigation and regulatory proceedings (including governmental investigations), and provisions for losses that may arise from tax audits. These estimates and assumptions are based on the best available information but actual results could be materially different.

Financial Assets and Financial Liabilities at Fair Value

Financial instruments owned and financial instruments sold, but not yet purchased are recorded at fair value either under the fair value option or in accordance with other U.S. GAAP. In addition, the firm has elected to account for certain of its other financial assets and financial liabilities at fair value by electing the fair value option. The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs. See Notes 5 through 8 for further information about fair value measurements.

Transfers of Financial Assets

Transfers of financial assets are accounted for as sales when the firm has relinquished control over the assets transferred. For transfers of financial assets accounted for as sales, any gains or losses are recognized in net revenues. Assets or liabilities that arise from the firm's continuing involvement with transferred financial assets are initially recognized at fair value. For transfers of financial assets that are not accounted for as sales, the assets are generally included in financial instruments owned and the transfer is accounted for as a collateralized financing, with the related interest expense recognized over the life of the transaction. See Note 9 for further information about transfers of financial assets accounted for as collateralized financings and Note 10 for further information about transfers of financial assets accounted for as sales.

Cash

Cash included cash and due from banks of $4.42 billion as of June 2019. Cash also included interest-bearing deposits with banks of $5.46 billion as of June 2019.

The firm segregates cash for regulatory and other purposes related to client activity. Cash segregated for regulatory and other purposes was $6.19 billion as of June 2019. In addition, the firm segregates securities for regulatory and other purposes related to client activity. See Note 9 for further information about segregated securities.

Receivables from and Payables to Brokers, Dealers and Clearing Organizations

Receivables from and payables to brokers, dealers and clearing organizations are accounted for at cost plus accrued interest, which generally approximates fair value. As these receivables and payables are not accounted for at fair value, they are not included in the firm's fair value hierarchy in Notes 5 through 8. Had these receivables and payables been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of June 2019.

Receivables from Customers and Counterparties

Receivables from customers and counterparties generally relate to collateralized transactions. Such receivables primarily consist of customer margin loans and collateral posted in connection with certain derivative transactions.

Substantially all of these receivables are accounted for at amortized cost net of estimated uncollectible amounts. Certain of the firm's receivables from customers and counterparties are accounted for at fair value under the fair value option. See Note 8 for further information about receivables from customers and counterparties accounted for at fair value under the fair value option. As of June 2019, the carrying value of receivables not accounted for at fair value generally approximated fair value. As these receivables are not accounted for at fair value, they are not included in the firm's fair value hierarchy in Notes 5 through 8. Had these receivables been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of June 2019. Interest on receivables from customers and counterparties is recognized over the life of the transaction.

Receivables from customers and counterparties includes receivables from contracts with clients and contract assets. Contract assets represent the firm's right to receive consideration for services provided in connection with its contracts with clients for which collection is conditional and not merely subject to the passage of time. As of June 2019, the firm's receivables from contracts with clients were $558 million and there were no contract assets.

Payables to Customers and Counterparties

Payables to customers and counterparties primarily consist of customer credit balances related to the firm's prime brokerage activities. These payables are accounted for at cost plus accrued interest, which generally approximates fair value. As these payables are not accounted for at fair value, they are not included in the firm's fair value hierarchy in Notes 5 through 8. Had these payables been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of June 2019. Interest on payables to customers and counterparties is recognized over the life of the transaction.

Offsetting Assets and Liabilities

To reduce credit exposures on derivatives and securities financing transactions, the firm may enter into master netting agreements or similar arrangements (collectively, netting agreements) with counterparties that permit it to offset receivables and payables with such counterparties. A netting agreement is a contract with a counterparty that permits net settlement of multiple transactions with that counterparty, including upon the exercise of termination rights by a non-defaulting party. Upon exercise of such termination rights, all transactions governed by the netting agreement are terminated and a net settlement amount is calculated. In addition, the firm receives and posts cash and securities collateral with respect to its derivatives and securities financing transactions, subject to the terms of the related credit support agreements or similar arrangements (collectively, credit support agreements). An enforceable credit support agreement grants the non-defaulting party exercising termination rights the right to liquidate the collateral and apply the proceeds to any amounts owed. In order to assess enforceability of the firm's right of setoff under netting and credit support agreements, the firm evaluates various factors, including applicable bankruptcy laws, local statutes and regulatory provisions in the jurisdiction of the parties to the agreement.

Derivatives are reported on a net-by-counterparty basis (i.e., the net payable or receivable for derivative assets and liabilities for a given counterparty) in the consolidated statement of financial condition when a legal right of setoff exists under an enforceable netting agreement. Securities purchased under agreements to resell (resale agreements) and securities sold under agreements to repurchase (repurchase agreements) and securities borrowed and loaned transactions with the same term and currency are presented on a net-by-counterparty basis in the consolidated statement of financial condition when such transactions meet certain settlement criteria and are subject to netting agreements.

In the consolidated statement of financial condition, derivatives are reported net of cash collateral received and posted under enforceable credit support agreements, when transacted under an enforceable netting agreement. In the consolidated statement of financial condition, resale and repurchase agreements, and securities borrowed and loaned, are not reported net of the related cash and securities received or posted as collateral. See Note 9 for further information about collateral received and pledged, including rights to deliver or repledge collateral. See Notes 7 and 9 for further information about offsetting assets and liabilities.

Foreign Currency Translation

Assets and liabilities denominated in non-U.S. currencies are translated at rates of exchange prevailing on the date of the consolidated statement of financial condition and revenues and expenses are translated at average rates of exchange for the period. Foreign currency remeasurement gains or losses on transactions in nonfunctional currencies are recognized in earnings. Gains or losses on translation of the financial statements of a non-U.S. operation, when the functional currency is other than the U.S. dollar, are included, net of hedges, in member's equity.

Recent Accounting Developments

Leases (ASC 842). In February 2016, the FASB issued ASU No. 2016-02, "Leases (Topic 842)." This ASU requires that, for leases longer than one year, a lessee recognize in the statement of financial condition a right-of-use asset, representing the right to use the underlying asset for the lease term, and a lease liability, representing the liability to make lease payments. It also requires that for finance leases, a lessee recognize interest expense on the lease liability, separately from the amortization of the right-of-use asset in the statement of earnings, while for operating leases, such amounts should be recognized as a combined expense. In addition, this ASU requires expanded disclosures about the nature and terms of lease agreements.

The firm adopted this ASU in January 2019 under a modified retrospective approach. Upon adoption, in accordance with the ASU, the firm elected to not reassess the lease classification or initial direct costs of existing leases, and to not reassess whether existing contracts contain a lease. In addition, the firm has elected to account for each contract's lease and non-lease components as a single lease component. Adoption of the ASU did not have a material impact on the firm's consolidated statement of financial condition.

Measurement of Credit Losses on Financial Instruments (ASC 326). In June 2016, the FASB issued ASU No. 2016-13, "Financial Instruments — Credit Losses (Topic 326) — Measurement of Credit Losses on Financial Instruments." This ASU amends several aspects of the measurement of credit losses on financial instruments, including replacing the existing incurred credit loss model and other models with the Current Expected Credit Losses (CECL) model.

Under CECL, the allowance for losses for financial assets that are measured at amortized cost reflects management's estimate of credit losses over the remaining expected life of such assets. Expected credit losses for newly recognized financial assets, as well as changes to expected credit losses during the period, would be recognized in earnings.

The ASU is effective for the firm in January 2020 under a modified retrospective approach with early adoption permitted. The firm plans to adopt this ASU on January 1, 2020 and does not currently expect adoption of the ASU will have a material impact on its consolidated statement of financial condition.

Note 4.

Financial Instruments Owned and Financial Instruments Sold, But Not Yet Purchased

Financial instruments owned and financial instruments sold, but not yet purchased are accounted for at fair value either under the fair value option or in accordance with other U.S. GAAP. See Note 6 for information about cash instruments, Note 7 for information about derivatives, and Note 8 for information about other financial assets and financial liabilities at fair value.

The table below presents financial instruments owned and financial instruments sold, but not yet purchased.

	As of June 2019	
$ in millions	Financial Instruments Owned	Financial Instruments Sold, But Not Yet Purchased
Money market instruments	$ 752	$ –
Government and agency obligations:		
U.S.	72,429	11,079
Non-U.S.	354	328
Loans and securities backed by:		
Commercial real estate	663	32
Residential real estate	622	–
Corporate debt instruments	10,112	4,130
State and municipal obligations	742	–
Other debt obligations	464	–
Equity securities	29,035	11,036
Total cash instruments	115,173	26,605
Derivatives	2,547	6,506
Total	**$ 117,720**	**$ 33,111**

Note 5.

Fair Value Measurements

The fair value of a financial instrument is the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Financial assets are marked to bid prices and financial liabilities are marked to offer prices. Fair value measurements do not include transaction costs. The firm measures certain financial assets and financial liabilities as a portfolio (i.e., based on its net exposure to market and/or credit risks).

The best evidence of fair value is a quoted price in an active market. If quoted prices in active markets are not available, fair value is determined by reference to prices for similar instruments, quoted prices or recent transactions in less active markets, or internally developed models that primarily use market-based or independently sourced inputs, including, but not limited to, interest rates, volatilities, equity or debt prices, foreign exchange rates, commodity prices, credit spreads and funding spreads (i.e., the spread or difference between the interest rate at which a borrower could finance a given financial instrument relative to a benchmark interest rate).

U.S. GAAP has a three-level hierarchy for disclosure of fair value measurements. This hierarchy prioritizes inputs to the valuation techniques used to measure fair value, giving the highest priority to level 1 inputs and the lowest priority to level 3 inputs. A financial instrument's level in this hierarchy is based on the lowest level of input that is significant to its fair value measurement. In evaluating the significance of a valuation input, the firm considers, among other factors, a portfolio's net risk exposure to that input. The fair value hierarchy is as follows:

Level 1. Inputs are unadjusted quoted prices in active markets to which the firm had access at the measurement date for identical, unrestricted assets or liabilities.

Level 2. Inputs to valuation techniques are observable, either directly or indirectly.

Level 3. One or more inputs to valuation techniques are significant and unobservable.

The fair values for substantially all of the firm's financial assets and financial liabilities are based on observable prices and inputs and are classified in levels 1 and 2 of the fair value hierarchy. Certain level 2 and level 3 financial assets and financial liabilities may require appropriate valuation adjustments that a market participant would require to arrive at fair value for factors, such as counterparty and the firm's credit quality, funding risk, transfer restrictions, liquidity and bid/offer spreads. Valuation adjustments are generally based on market evidence.

See Notes 6 through 8 for further information about fair value measurements of cash instruments, derivatives and other financial assets and financial liabilities at fair value.

The table below presents financial assets and financial liabilities accounted for at fair value under the fair value option or in accordance with other U.S. GAAP.

$ in millions	As of June 2019
Total level 1 financial assets	$ 80,051
Total level 2 financial assets	130,432
Total level 3 financial assets	2,398
Counterparty and cash collateral netting	(578)
Total financial assets at fair value	**$ 212,303**
Total assets	$ 392,465
Total level 3 financial assets divided by:	
Total assets	0.6%
Total financial assets at fair value	1.1%
Total level 1 financial liabilities	$ 22,274
Total level 2 financial liabilities	117,984
Total level 3 financial liabilities	1,007
Counterparty and cash collateral netting	(7,735)
Total financial liabilities at fair value	**$ 133,530**
Total level 3 financial liabilities divided by total financial liabilities at fair value	**0.8%**

In the table above:

- Counterparty netting among positions classified in the same level is included in that level.
- Counterparty and cash collateral netting represents the impact on derivatives of netting across levels of the fair value hierarchy.

The table below presents a summary of level 3 financial assets.

$ in millions	As of June 2019
Cash instruments	$ 2,014
Derivatives	384
Total	**$ 2,398**

See Notes 6 through 8 for further information about level 3 financial assets (including information about transfers in and out of level 3).

Note 6.

Cash Instruments

Cash instruments include U.S. government and agency obligations, non-U.S. government and agency obligations, mortgage-backed loans and securities, corporate debt instruments, equity securities, and other non-derivative financial instruments owned and financial instruments sold, but not yet purchased. See below for the types of cash instruments included in each level of the fair value hierarchy and the valuation techniques and significant inputs used to determine their fair values. See Note 5 for an overview of the firm's fair value measurement policies.

Level 1 Cash Instruments

Level 1 cash instruments include certain money market instruments, U.S. government obligations, most non-U.S. government obligations, certain government agency obligations, certain corporate debt instruments and actively traded listed equities. These instruments are valued using quoted prices for identical unrestricted instruments in active markets.

The firm defines active markets for equity instruments based on the average daily trading volume both in absolute terms and relative to the market capitalization for the instrument. The firm defines active markets for debt instruments based on both the average daily trading volume and the number of days with trading activity.

Level 2 Cash Instruments

Level 2 cash instruments include most money market instruments, most government agency obligations, certain non-U.S. government obligations, most mortgage-backed loans and securities, most corporate debt instruments, most state and municipal obligations, most other debt obligations and certain restricted or less liquid listed equities.

Valuations of level 2 cash instruments can be verified to quoted prices, recent trading activity for identical or similar instruments, broker or dealer quotations or alternative pricing sources with reasonable levels of price transparency. Consideration is given to the nature of the quotations (e.g., indicative or firm) and the relationship of recent market activity to the prices provided from alternative pricing sources.

Valuation adjustments are typically made to level 2 cash instruments (i) if the cash instrument is subject to transfer restrictions and/or (ii) for other premiums and liquidity discounts that a market participant would require to arrive at fair value. Valuation adjustments are generally based on market evidence.

Level 3 Cash Instruments

Level 3 cash instruments have one or more significant valuation inputs that are not observable. Absent evidence to the contrary, level 3 cash instruments are initially valued at transaction price, which is considered to be the best initial estimate of fair value. Subsequently, the firm uses other methodologies to determine fair value, which vary based on the type of instrument. Valuation inputs and assumptions are changed when corroborated by substantive observable evidence, including values realized on sales.

Valuation Techniques and Significant Inputs of Level 3 Cash Instruments

Valuation techniques of level 3 cash instruments vary by instrument, but are generally based on discounted cash flow techniques. The valuation techniques and the nature of significant inputs used to determine the fair values of each type of level 3 cash instrument are described below:

Loans and Securities Backed by Commercial Real Estate. Loans and securities backed by commercial real estate are directly or indirectly collateralized by a single commercial real estate property or a portfolio of properties, and may include tranches of varying levels of subordination. Significant inputs are generally determined based on relative value analyses and include:

- Market yields implied by transactions of similar or related assets and/or current levels and changes in market indices, such as the CMBX (an index that tracks the performance of commercial mortgage bonds);
- Transaction prices in both the underlying collateral and instruments with the same or similar underlying collateral;
- A measure of expected future cash flows in a default scenario (recovery rates) implied by the value of the underlying collateral, which is mainly driven by current performance of the underlying collateral, capitalization rates and multiples. Recovery rates are expressed as a percentage of notional or face value of the instrument and reflect the benefit of credit enhancements on certain instruments; and
- Timing of expected future cash flows (duration) which, in certain cases, may incorporate the impact of other unobservable inputs (e.g., prepayment speeds).

Loans and Securities Backed by Residential Real Estate. Loans and securities backed by residential real estate are directly or indirectly collateralized by portfolios of residential real estate and may include tranches of varying levels of subordination. Significant inputs are generally determined based on relative value analyses, which incorporate comparisons to instruments with similar collateral and risk profiles. Significant inputs include:

- Market yields implied by transactions of similar or related assets;
- Transaction prices in both the underlying collateral and instruments with the same or similar underlying collateral;
- Cumulative loss expectations, driven by default rates, home price projections, residential property liquidation timelines, related costs and subsequent recoveries; and
- Duration, driven by underlying loan prepayment speeds and residential property liquidation timelines.

Corporate Debt Instruments. Corporate debt instruments includes corporate loans and debt securities. Significant inputs for corporate debt instruments are generally determined based on relative value analyses, which incorporate comparisons both to prices of credit default swaps that reference the same or similar underlying instrument or entity and to other debt instruments for the same issuer for which observable prices or broker quotations are available. Significant inputs include:

- Market yields implied by transactions of similar or related assets and/or current levels and trends of market indices, such as the CDX (an index that tracks the performance of corporate credit);
- Current performance and recovery assumptions and, where the firm uses credit default swaps to value the related cash instrument, the cost of borrowing the underlying reference obligation; and
- Duration.

Equity Securities. Equity securities includes private equity securities and convertible debentures. Recent third-party completed or pending transactions (e.g., merger proposals, tender offers, debt restructurings) are considered to be the best evidence for any change in fair value. When these are not available, the following valuation methodologies are used, as appropriate:

- Industry multiples (primarily EBITDA multiples) and public comparables;
- Transactions in similar instruments;

- Discounted cash flow techniques; and
- Third-party appraisals.

The firm also considers changes in the outlook for the relevant industry and financial performance of the issuer as compared to projected performance. Significant inputs include:

- Market and transaction multiples;
- Discount rates; and
- For equity securities with debt-like features, market yields implied by transactions of similar or related assets, current performance and recovery assumptions, and duration.

Other Cash Instruments. Other cash instruments includes U.S. government and agency obligations, non-U.S. government and agency obligations, state and municipal obligations, and other debt obligations. Significant inputs are generally determined based on relative value analyses, which incorporate comparisons both to prices of credit default swaps that reference the same or similar underlying instrument or entity and to other debt instruments for the same issuer for which observable prices or broker quotations are available.

Fair Value of Cash Instruments by Level

The table below presents cash instrument assets and liabilities at fair value by level within the fair value hierarchy.

	As of June 2019			
$ in millions	Level 1	Level 2	Level 3	Total
Assets				
Money market instruments	$ 25	$ 727	$ –	$ 752
Government and agency obligations:				
U.S.	52,923	19,482	24	72,429
Non-U.S.	37	315	2	354
Loans and securities backed by:				
Commercial real estate	–	482	181	663
Residential real estate	–	428	194	622
Corporate debt instruments	322	8,893	897	10,112
State and municipal obligations	–	741	1	742
Other debt obligations	–	449	15	464
Equity securities	26,739	1,596	700	29,035
Total cash instrument assets	$ 80,046	$33,113	$ 2,014	$115,173
Liabilities				
Government and agency obligations:				
U.S.	$ (11,076)	$ (3)	$ –	$ (11,079)
Non-U.S.	(165)	(163)	–	(328)
Loans and securities backed by commercial real estate	–	(32)	–	(32)
Corporate debt instruments	(26)	(4,095)	(9)	(4,130)
Equity securities	(11,000)	(35)	(1)	(11,036)
Total cash instrument liabilities	$ (22,267)	$ (4,328)	$ (10)	$ (26,605)

In the table above:

- Cash instrument assets are included in financial instruments owned and cash instrument liabilities are included in financial instruments sold, but not yet purchased.
- Cash instrument assets are shown as positive amounts and cash instrument liabilities are shown as negative amounts.
- Money market instruments includes commercial paper and certificates of deposit, substantially all of which have a maturity of less than one year.
- Corporate debt instruments includes corporate loans and debt securities.
- Equity securities includes public and private equities, exchange-traded funds and convertible debentures. Such securities include investments accounted for at fair value under the fair value option where the firm would otherwise apply the equity method of accounting of $156 million as of June 2019. As of June 2019, level 3 equity securities primarily consisted of private equity securities.

Significant Unobservable Inputs

The table below presents the amount of level 3 assets, and ranges and weighted averages of significant unobservable inputs used to value substantially all level 3 cash instruments.

$ in millions	Level 3 Assets and Range of Significant Unobservable Inputs (Weighted Average) as of June 2019
Loans and securities backed by commercial real estate	
Level 3 assets	$181
Yield	8.2% to 20.2% (14.6%)
Recovery rate	11.0% to 77.0% (59.4%)
Duration (years)	1.1 to 6.7 (3.3)
Loans and securities backed by residential real estate	
Level 3 assets	$194
Yield	4.3% to 12.0% (5.6%)
Cumulative loss rate	3.0% to 34.6% (14.7%)
Duration (years)	3.1 to 14.2 (10.8)
Corporate debt instruments	
Level 3 assets	$897
Yield	6.7% to 18.6% (10.4%)
Recovery rate	0.0% to 69.7% (62.8%)
Duration (years)	1.9 to 4.7 (3.5)
Equity securities	
Level 3 assets	$700
Multiples	1.9x to 10.1x (6.3x)
Capitalization rate	6.5% to 15.0% (12.7%)

In the table above:

- Ranges represent the significant unobservable inputs that were used in the valuation of each type of cash instrument.
- Weighted averages are calculated by weighting each input by the relative fair value of the cash instruments.

- The ranges and weighted averages of these inputs are not representative of the appropriate inputs to use when calculating the fair value of any one cash instrument. For example, the highest multiple for private equity securities is appropriate for valuing a specific private equity security but may not be appropriate for valuing any other private equity security. Accordingly, the ranges of inputs do not represent uncertainty in, or possible ranges of, fair value measurements of level 3 cash instruments.

- Increases in yield, duration or cumulative loss rate used in the valuation of level 3 cash instruments would have resulted in a lower fair value measurement, while increases in recovery rate or multiples would have resulted in a higher fair value measurement as of June 2019. Due to the distinctive nature of each level 3 cash instrument, the interrelationship of inputs is not necessarily uniform within each product type.

- Loans and securities backed by commercial and residential real estate, corporate debt instruments and other cash instruments are valued using discounted cash flows, and equity securities are valued using market comparables and discounted cash flows.

- The fair value of any one instrument may be determined using multiple valuation techniques. For example, market comparables and discounted cash flows may be used together to determine fair value. Therefore, the level 3 balance encompasses both of these techniques.

Level 3 Transfers

Transfers between levels of the fair value hierarchy are reported at the beginning of the reporting period in which they occur.

Transfers into level 3 during the six months ended June 2019 were $470 million of assets, primarily reflecting transfers of certain private equity securities and corporate debt instruments from level 2, principally due to reduced price transparency as a result of a lack of market evidence, including fewer market transactions in these instruments.

Transfers out of level 3 during the six months ended June 2019 were $84 million of assets, primarily reflecting transfers of certain corporate debt instruments to level 2, principally due to increased price transparency as a result of market evidence, including market transactions in these instruments.

Note 7.

Derivatives and Hedging Activities

Derivative Activities

Derivatives are instruments that derive their value from underlying asset prices, indices, reference rates and other inputs, or a combination of these factors. Derivatives may be traded on an exchange (exchange-traded) or they may be privately negotiated contracts, which are usually referred to as over-the-counter (OTC) derivatives. Certain of the firm's OTC derivatives are cleared and settled through central clearing counterparties (OTC-cleared), while others are bilateral contracts between two counterparties (bilateral OTC).

Market Making. As a market maker, the firm enters into derivative transactions to provide liquidity to clients and to facilitate the transfer and hedging of their risks. In this role, the firm typically acts as principal and is required to commit capital to provide execution, and maintains inventory in response to, or in anticipation of, client demand.

Risk Management. The firm also enters into derivatives to actively manage risk exposures that arise from its market-making and investing and lending activities in derivative and cash instruments. The firm's holdings and exposures are hedged, in many cases, on either a portfolio or risk-specific basis, as opposed to an instrument-by-instrument basis.

The firm enters into various types of derivatives, including:

- **Futures and Forwards.** Contracts that commit counterparties to purchase or sell financial instruments, commodities or currencies in the future.

- **Swaps.** Contracts that require counterparties to exchange cash flows, such as currency or interest payment streams. The amounts exchanged are based on the specific terms of the contract with reference to specified rates, financial instruments, commodities, currencies or indices.

- **Options.** Contracts in which the option purchaser has the right, but not the obligation, to purchase from or sell to the option writer financial instruments, commodities or currencies within a defined time period for a specified price.

Derivatives are reported on a net-by-counterparty basis (i.e., the net payable or receivable for derivative assets and liabilities for a given counterparty) when a legal right of setoff exists under an enforceable netting agreement (counterparty netting). Derivatives are accounted for at fair value, net of cash collateral received or posted under enforceable credit support agreements (cash collateral netting). Derivative assets are included in financial instruments owned and derivative liabilities are included in financial instruments sold, but not yet purchased.

The tables below present the gross fair value and the notional amounts of derivative contracts by major product type, the amounts of counterparty and cash collateral netting in the consolidated statement of financial condition, as well as cash and securities collateral posted and received under enforceable credit support agreements that do not meet the criteria for netting under U.S. GAAP.

	As of June 2019	
$ in millions	Derivative Assets	Derivative Liabilities
Not accounted for as hedges		
Exchange-traded	$ 78	$ 45
OTC-cleared	765	691
Bilateral OTC	14,981	15,566
Total interest rates	15,824	16,302
Bilateral OTC	4,720	5,177
Total credit	4,720	5,177
Bilateral OTC	3,656	4,255
Total currencies	3,656	4,255
Bilateral OTC	17	32
Total commodities	17	32
Exchange-traded	4,350	5,122
Bilateral OTC	16,066	24,861
Total equities	20,416	29,983
Total gross fair value	$ 44,633	$ 55,749
Offset in consolidated statement of financial condition		
Exchange-traded	$ (4,337)	$ (4,337)
OTC-cleared	(690)	(690)
Bilateral OTC	(36,541)	(36,541)
Counterparty netting	(41,568)	(41,568)
Bilateral OTC	(518)	(7,675)
Cash collateral	(518)	(7,675)
Total amounts offset	$ (42,086)	$ (49,243)
Included in consolidated statement of financial condition		
Exchange-traded	$ 91	$ 830
OTC-cleared	75	1
Bilateral OTC	2,381	5,675
Total	$ 2,547	$ 6,506
Not offset in consolidated statement of financial condition		
Cash collateral	$ (126)	$ (100)
Securities collateral	(6)	(38)
Total	$ 2,415	$ 6,368

$ in millions	Notional Amounts as of June 2019
Not accounted for as hedges	
Exchange-traded	$ 93,713
OTC-cleared	426,991
Bilateral OTC	1,646,311
Total interest rates	2,167,015
Bilateral OTC	199,938
Total credit	199,938
Exchange-traded	51
Bilateral OTC	735,558
Total currencies	735,609
Exchange-traded	478
Bilateral OTC	500
Total commodities	978
Exchange-traded	321,667
Bilateral OTC	925,682
Total equities	1,247,349
Total notional amounts	$ 4,350,889

In the tables above:

- Gross fair values exclude the effects of both counterparty netting and collateral, and therefore are not representative of the firm's exposure.
- Where the firm has received or posted collateral under credit support agreements, but has not yet determined such agreements are enforceable, the related collateral has not been netted.
- Notional amounts, which represent the sum of gross long and short derivative contracts, provide an indication of the volume of the firm's derivative activity and do not represent anticipated losses.
- Total gross fair value of derivatives included derivative assets of $2.14 billion and derivative liabilities of $5.51 billion, which are not subject to an enforceable netting agreement or are subject to a netting agreement that the firm has not yet determined to be enforceable.

Valuation Techniques for Derivatives

The firm's level 2 and level 3 derivatives are valued using derivative pricing models (e.g., discounted cash flow models, correlation models, and models that incorporate option pricing methodologies, such as Monte Carlo simulations). Price transparency of derivatives can generally be characterized by product type, as described below.

- **Interest Rate.** In general, the key inputs used to value interest rate derivatives are transparent, even for most long-dated contracts. Interest rate swaps and options denominated in the currencies of leading industrialized nations are characterized by high trading volumes and tight bid/offer spreads. Interest rate derivatives that reference indices, such as an inflation index, or the shape of the yield curve (e.g., 10-year swap rate vs. 2-year swap rate) are more complex, but the key inputs are generally observable.

- **Credit.** Price transparency for credit default swaps, including both single names and baskets of credits, varies by market and underlying reference entity or obligation. Credit default swaps that reference indices, large corporates and major sovereigns generally exhibit the most price transparency. For credit default swaps with other underliers, price transparency varies based on credit rating, the cost of borrowing the underlying reference obligations, and the availability of the underlying reference obligations for delivery upon the default of the issuer. Credit default swaps that reference loans, asset-backed securities and emerging market debt instruments tend to have less price transparency than those that reference corporate bonds. In addition, more complex credit derivatives, such as those sensitive to the correlation between two or more underlying reference obligations, generally have less price transparency.

- **Currency.** Prices for currency derivatives based on the exchange rates of leading industrialized nations, including those with longer tenors, are generally transparent. The primary difference between the price transparency of developed and emerging market currency derivatives is that emerging markets tend to be observable for contracts with shorter tenors.

- **Commodity.** Commodity derivatives include transactions referenced to energy (e.g., oil and natural gas), metals (e.g., precious and base) and soft commodities (e.g., agricultural). Price transparency varies based on the underlying commodity, delivery location, tenor and product quality (e.g., diesel fuel compared to unleaded gasoline). In general, price transparency for commodity derivatives is greater for contracts with shorter tenors and contracts that are more closely aligned with major and/or benchmark commodity indices.

- **Equity.** Price transparency for equity derivatives varies by market and underlier. Options on indices and the common stock of corporates included in major equity indices exhibit the most price transparency. Equity derivatives generally have observable market prices, except for contracts with long tenors or reference prices that differ significantly from current market prices. More complex equity derivatives, such as those sensitive to the correlation between two or more individual stocks, generally have less price transparency.

Liquidity is essential to observability of all product types. If transaction volumes decline, previously transparent prices and other inputs may become unobservable. Conversely, even highly structured products may at times have trading volumes large enough to provide observability of prices and other inputs. See Note 5 for an overview of the firm's fair value measurement policies.

Level 1 Derivatives

Level 1 derivatives include short-term contracts for future delivery of securities when the underlying security is a level 1 instrument, and exchange-traded derivatives if they are actively traded and are valued at their quoted market price.

Level 2 Derivatives

Level 2 derivatives include OTC derivatives for which all significant valuation inputs are corroborated by market evidence and exchange-traded derivatives that are not actively traded and/or that are valued using models that calibrate to market-clearing levels of OTC derivatives.

The selection of a particular model to value a derivative depends on the contractual terms of and specific risks inherent in the instrument, as well as the availability of pricing information in the market. For derivatives that trade in liquid markets, model selection does not involve significant management judgment because outputs of models can be calibrated to market-clearing levels.

Valuation models require a variety of inputs, such as contractual terms, market prices, yield curves, discount rates (including those derived from interest rates on collateral received and posted as specified in credit support agreements for collateralized derivatives), credit curves, measures of volatility, prepayment rates, loss severity rates and correlations of such inputs. Significant inputs to the valuations of level 2 derivatives can be verified to market transactions, broker or dealer quotations or other alternative pricing sources with reasonable levels of price transparency. Consideration is given to the nature of the quotations (e.g., indicative or firm) and the relationship of recent market activity to the prices provided from alternative pricing sources.

Level 3 Derivatives

Level 3 derivatives are valued using models which utilize observable level 1 and/or level 2 inputs, as well as unobservable level 3 inputs. The significant unobservable inputs used to value substantially all of the firm's level 3 derivatives are described below.

- For level 3 credit derivatives, significant unobservable inputs include illiquid credit spreads and upfront credit points, which are unique to specific reference obligations and reference entities, and recovery rates.

- For level 3 equity derivatives, significant unobservable inputs generally include equity volatility inputs for options that are long-dated and/or have strike prices that differ significantly from current market prices. In addition, the valuation of certain structured trades requires the use of level 3 correlation inputs, such as the correlation of the price performance of two or more individual stocks or the correlation of the price performance for a basket of stocks to another asset class, such as commodities.

Subsequent to the initial valuation of a level 3 derivative, the firm updates the level 1 and level 2 inputs to reflect observable market changes and any resulting gains and losses are classified in level 3. Level 3 inputs are changed when corroborated by evidence, such as similar market transactions, third-party pricing services and/or broker or dealer quotations or other empirical market data. In circumstances where the firm cannot verify the model value by reference to market transactions, it is possible that a different valuation model could produce a materially different estimate of fair value. See below for further information about significant unobservable inputs used in the valuation of level 3 derivatives.

Valuation Adjustments

Valuation adjustments are integral to determining the fair value of derivative portfolios and are used to adjust the mid-market valuations produced by derivative pricing models to the appropriate exit price valuation. These adjustments incorporate bid/offer spreads, the cost of liquidity, credit valuation adjustments and funding valuation adjustments, which account for the credit and funding risk inherent in the uncollateralized portion of derivative portfolios. The firm also makes funding valuation adjustments to collateralized derivatives where the terms of the agreement do not permit the firm to deliver or repledge collateral received. Market-based inputs are generally used when calibrating valuation adjustments to market-clearing levels.

In addition, for derivatives that include significant unobservable inputs, the firm makes model or exit price adjustments to account for the valuation uncertainty present in the transaction.

Fair Value of Derivatives by Level

The table below presents the fair value of derivatives on a gross basis by level and major product type, as well as the impact of netting.

	As of June 2019			
$ in millions	**Level 1**	**Level 2**	**Level 3**	**Total**
Assets				
Interest rates	**$ 4**	**$ 15,808**	**$ 12**	**$ 15,824**
Credit	**–**	**4,397**	**323**	**4,720**
Currencies	**–**	**3,647**	**9**	**3,656**
Commodities	**–**	**17**	**–**	**17**
Equities	**1**	**19,921**	**494**	**20,416**
Gross fair value	**5**	**43,790**	**838**	**44,633**
Counterparty netting in levels	**–**	**(41,054)**	**(454)**	**(41,508)**
Subtotal	**$ 5**	**$ 2,736**	**$ 384**	**$ 3,125**
Cross-level counterparty netting				**(60)**
Cash collateral netting				**(518)**
Net fair value				**$ 2,547**
Liabilities				
Interest rates	**$ (6)**	**$ (16,288)**	**$ (8)**	**$ (16,302)**
Credit	**–**	**(4,772)**	**(405)**	**(5,177)**
Currencies	**–**	**(4,254)**	**(1)**	**(4,255)**
Commodities	**–**	**(32)**	**–**	**(32)**
Equities	**(1)**	**(29,120)**	**(862)**	**(29,983)**
Gross fair value	**(7)**	**(54,466)**	**(1,276)**	**(55,749)**
Counterparty netting in levels	**–**	**41,054**	**454**	**41,508**
Subtotal	**$ (7)**	**$ (13,412)**	**$ (822)**	**$ (14,241)**
Cross-level counterparty netting				**60**
Cash collateral netting				**7,675**
Net fair value				**$ (6,506)**

In the table above:

- The gross fair values exclude the effects of both counterparty netting and collateral netting, and therefore are not representative of the firm's exposure.

- Counterparty netting is reflected in each level to the extent that receivable and payable balances are netted within the same level and is included in counterparty netting in levels. Where the counterparty netting is across levels, the netting is included in cross-level counterparty netting.

- Derivative assets are shown as positive amounts and derivative liabilities are shown as negative amounts.

Significant Unobservable Inputs

The table below presents the amount of level 3 assets (liabilities), and ranges, averages and medians of significant unobservable inputs used to value substantially all level 3 derivatives.

$ in millions	Level 3 Assets (Liabilities) and Range of Significant Unobservable Inputs (Average/Median) as of June 2019
Credit, net	**$(82)**
Credit spreads (bps)	**1 to 385 (28/10)**
Upfront credit points	**2 to 99 (46/43)**
Recovery rates	**40% to 70% (66%/70%)**
Equities, net	**$(368)**
Correlation	**(10)% to 97% (56%/54%)**
Volatility	**9% to 97% (31%/27%)**

In the table above:

- Derivative assets are shown as positive amounts and derivative liabilities are shown as negative amounts.
- Ranges represent the significant unobservable inputs that were used in the valuation of each type of derivative.
- Averages represent the arithmetic average of the inputs and are not weighted by the relative fair value or notional of the respective financial instruments. An average greater than the median indicates that the majority of inputs are below the average. For example, the difference between the average and the median for volatility inputs indicates that the majority of the inputs fall in the lower end of the range.
- The ranges, averages and medians of these inputs are not representative of the appropriate inputs to use when calculating the fair value of any one derivative. For example, the highest correlation for equity derivatives is appropriate for valuing a specific equity derivative but may not be appropriate for valuing any other equity derivative. Accordingly, the ranges of inputs do not represent uncertainty in, or possible ranges of, fair value measurements of level 3 derivatives.
- Equities derivatives are valued using option pricing models, and credit derivatives are valued using option pricing and discounted cash flow models.
- The fair value of any one instrument may be determined using multiple valuation techniques. For example, option pricing models and discounted cash flows models are typically used together to determine fair value. Therefore, the level 3 balance encompasses both of these techniques.
- Correlation within equities includes cross-product type correlation.

Range of Significant Unobservable Inputs

The following is information about the ranges of significant unobservable inputs used to value the firm's level 3 derivative instruments:

- **Correlation.** Ranges for correlation cover a variety of underliers both within one product type (e.g., equity index and equity single stock names) and across product types (e.g., correlation of an equity and a currency), as well as across regions. Generally, cross-product type correlation inputs are used to value more complex instruments and are lower than correlation inputs on assets within the same derivative product type.
- **Volatility.** Ranges for volatility cover numerous underliers across a variety of markets, maturities and strike prices. For example, volatility of equity indices is generally lower than volatility of single stocks.
- **Credit spreads, upfront credit points and recovery rates.** The ranges for credit spreads, upfront credit points and recovery rates cover a variety of underliers (index and single names), regions, sectors, maturities and credit qualities (high-yield and investment-grade). The broad range of this population gives rise to the width of the ranges of significant unobservable inputs.

Sensitivity of Fair Value Measurement to Changes in Significant Unobservable Inputs

The following is a description of the directional sensitivity of the firm's level 3 fair value measurements as of June 2019 to changes in significant unobservable inputs, in isolation:

- **Correlation.** In general, for contracts where the holder benefits from the convergence of the underlying asset or index prices (e.g., interest rates, credit spreads, foreign exchange rates, inflation rates and equity prices), an increase in correlation results in a higher fair value measurement.
- **Volatility.** In general, for purchased options, an increase in volatility results in a higher fair value measurement.
- **Credit spreads, upfront credit points and recovery rates.** In general, the fair value of purchased credit protection increases as credit spreads or upfront credit points increase or recovery rates decrease. Credit spreads, upfront credit points and recovery rates are strongly related to distinctive risk factors of the underlying reference obligations, which include reference entity-specific factors, such as leverage, volatility and industry, market-based risk factors, such as borrowing costs or liquidity of the underlying reference obligation, and macroeconomic conditions.

Due to the distinctive nature of each of the firm's level 3 derivatives, the interrelationship of inputs is not necessarily uniform within each product type.

Level 3 Transfers

Transfers between levels of the fair value hierarchy are reported at the beginning of the reporting period in which they occur.

Transfers into level 3 derivatives during the six months ended June 2019 were $56 million, primarily reflecting transfers of certain equity derivative liabilities from level 2. The individual drivers of the transfers into level 3 derivatives were not material.

Transfers out of level 3 derivatives during the six months ended June 2019 were $38 million, primarily reflecting transfers of certain equity derivative liabilities to level 2. The individual drivers of the transfers out of level 3 derivatives were not material.

Credit Derivatives

The firm enters into a broad array of credit derivatives in locations around the world to facilitate client transactions and to manage the credit risk associated with market-making and investing and lending activities. Credit derivatives are actively managed based on the firm's net risk position.

Credit derivatives are generally individually negotiated contracts and can have various settlement and payment conventions. Credit events include failure to pay, bankruptcy, acceleration of indebtedness, restructuring, repudiation and dissolution of the reference entity.

The firm enters into the following types of credit derivatives:

- **Credit Default Swaps.** Single-name credit default swaps protect the buyer against the loss of principal on one or more bonds, loans or mortgages (reference obligations) in the event the issuer of the reference obligations suffers a credit event. The buyer of protection pays an initial or periodic premium to the seller and receives protection for the period of the contract. If there is no credit event, as defined in the contract, the seller of protection makes no payments to the buyer. If a credit event occurs, the seller of protection is required to make a payment to the buyer, calculated according to the terms of the contract.

- **Credit Options.** In a credit option, the option writer assumes the obligation to purchase or sell a reference obligation at a specified price or credit spread. The option purchaser buys the right, but does not assume the obligation, to sell the reference obligation to, or purchase it from, the option writer. The payments on credit options depend either on a particular credit spread or the price of the reference obligation.

- **Credit Indices, Baskets and Tranches.** Credit derivatives may reference a basket of single-name credit default swaps or a broad-based index. If a credit event occurs in one of the underlying reference obligations, the protection seller pays the protection buyer. The payment is typically a pro-rata portion of the transaction's total notional amount based on the underlying defaulted reference obligation. In certain transactions, the credit risk of a basket or index is separated into various portions (tranches), each having different levels of subordination. The most junior tranches cover initial defaults and once losses exceed the notional amount of these junior tranches, any excess loss is covered by the next most senior tranche.

- **Total Return Swaps.** A total return swap transfers the risks relating to economic performance of a reference obligation from the protection buyer to the protection seller. Typically, the protection buyer receives a floating rate of interest and protection against any reduction in fair value of the reference obligation, and the protection seller receives the cash flows associated with the reference obligation, plus any increase in the fair value of the reference obligation.

The firm economically hedges its exposure to written credit derivatives primarily by entering into offsetting purchased credit derivatives with identical underliers. Substantially all of the firm's purchased credit derivative transactions are with financial institutions and are subject to stringent collateral thresholds. In addition, upon the occurrence of a specified trigger event, the firm may take possession of the reference obligations underlying a particular written credit derivative, and consequently may, upon liquidation of the reference obligations, recover amounts on the underlying reference obligations in the event of default.

As of June 2019, written credit derivatives had a total gross notional amount of $99.02 billion and purchased credit derivatives had a total gross notional amount of $100.92 billion, for total net notional purchased protection of $1.91 billion. Substantially all of the firm's written and purchased credit derivatives are credit default swaps.

The table below presents information about credit derivatives.

	As of June 2019				
	Credit Spread on Underlier (basis points)				
$ in millions	0 - 250	251 - 500	501 - 1,000	Greater than 1,000	Total
Maximum Payout/Notional Amount of Written Credit Derivatives by Tenor					
Less than 1 year	$ 10,458	$ 468	$ 685	$ 2,166	$ 13,777
1 – 5 years	59,574	5,515	4,378	3,736	73,203
Greater than 5 years	10,268	1,637	72	59	12,036
Total	$ 80,300	$ 7,620	$ 5,135	$ 5,961	$ 99,016
Maximum Payout/Notional Amount of Purchased Credit Derivatives					
Offsetting	$ 74,315	$ 7,137	$ 4,799	$ 5,307	$ 91,558
Other	$ 7,366	$ 745	$ 556	$ 697	$ 9,364
Fair Value of Written Credit Derivatives					
Asset	$ 2,266	$ 311	$ 158	$ 169	$ 2,904
Liability	229	132	288	1,238	1,887
Net asset/(liability)	$ 2,037	$ 179	$ (130)	$ (1,069)	$ 1,017

In the table above:

- Fair values exclude the effects of both netting of receivable balances with payable balances under enforceable netting agreements, and netting of cash received or posted under enforceable credit support agreements, and therefore are not representative of the firm's credit exposure.
- Tenor is based on remaining contractual maturity.
- The credit spread on the underlier, together with the tenor of the contract, are indicators of payment/performance risk. The firm is less likely to pay or otherwise be required to perform where the credit spread and the tenor are lower.
- Offsetting purchased credit derivatives represent the notional amount of purchased credit derivatives that economically hedge written credit derivatives with identical underliers.
- Other purchased credit derivatives represent the notional amount of all other purchased credit derivatives not included in offsetting.

Derivatives with Credit-Related Contingent Features

Certain of the firm's derivatives have been transacted under bilateral agreements with counterparties who may require the firm to post collateral or terminate the transactions based on changes in the firm's credit ratings. The firm assesses the impact of these bilateral agreements by determining the collateral or termination payments that would occur assuming a downgrade by all rating agencies. A downgrade by any one rating agency, depending on the agency's relative ratings of the firm at the time of the downgrade, may have an impact which is comparable to the impact of a downgrade by all rating agencies.

The table below presents information about net derivative liabilities under such bilateral agreements (excluding application of collateral posted), the related fair value of collateral posted and the additional collateral or termination payments that could have been called by counterparties in the event of a one-notch and two-notch downgrade in the firm's credit ratings.

$ in millions	As of June 2019
Net derivative liabilities under bilateral agreements	$ 243
Collateral posted	$ 16
Additional collateral or termination payments:	
One-notch downgrade	$ –
Two-notch downgrade	$ –

Hedge Accounting

Prior to the deconsolidation of GS Paris Inc. ET CIE in December 2018, the firm applied hedge accounting for certain foreign currency forward contracts used to manage foreign currency exposures on the firm's net investment in certain non-U.S. operations. As of June 2019, the firm had no derivatives accounted for as hedges.

Note 8.

Fair Value Option

Other Financial Assets and Financial Liabilities at Fair Value

In addition to cash and derivative instruments included in financial instruments owned and financial instruments sold, but not yet purchased, the firm accounts for certain of its other financial assets and financial liabilities at fair value, substantially all under the fair value option. The primary reasons for electing the fair value option are to:

- Reflect economic events in earnings on a timely basis;
- Mitigate volatility in earnings from using different measurement attributes (e.g., transfers of financial instruments owned accounted for as financings are recorded at fair value, whereas the related secured financing would be recorded on an accrual basis absent electing the fair value option); and
- Address simplification and cost-benefit considerations (e.g., accounting for hybrid financial instruments at fair value in their entirety versus bifurcation of embedded derivatives).

Hybrid financial instruments are instruments that contain bifurcatable embedded derivatives and do not require settlement by physical delivery of nonfinancial assets. If the firm elects to bifurcate the embedded derivative from the associated debt, the derivative is accounted for at fair value and the host contract is accounted for at amortized cost. If the firm does not elect to bifurcate, the entire hybrid financial instrument is accounted for at fair value under the fair value option. As of June 2019, the firm did not elect to bifurcate any hybrid financial instruments.

Other financial assets and financial liabilities accounted for at fair value under the fair value option include:

- Resale and repurchase agreements;
- Certain securities borrowed and loaned;
- Certain other secured financings; and
- Certain receivables from customers and counterparties, including certain margin loans.

Fair Value of Other Financial Assets and Financial Liabilities by Level

The table below presents, by level within the fair value hierarchy, other financial assets and financial liabilities at fair value, substantially all of which are accounted for at fair value under the fair value option.

	As of June 2019			
$ in millions	Level 1	Level 2	Level 3	Total
Assets				
Resale agreements	$ –	$ 73,406	$ –	$ 73,406
Securities borrowed	–	21,113	–	21,113
Receivables from customers and counterparties	–	64	–	64
Total	$ –	$ 94,583	$ –	$ 94,583
Liabilities				
Repurchase agreements	$ –	$ (78,082)	$ –	$ (78,082)
Securities loaned	–	(17,801)	–	(17,801)
Other secured financings	–	(4,361)	(175)	(4,536)
Total	$ –	$ (100,244)	$ (175)	$ (100,419)

In the table above, other financial assets are shown as positive amounts and other financial liabilities are shown as negative amounts.

Valuation Techniques and Significant Inputs

Other financial assets and financial liabilities at fair value are generally valued based on discounted cash flow techniques, which incorporate inputs with reasonable levels of price transparency, and are generally classified in level 2 because the inputs are observable. Valuation adjustments may be made for liquidity and for counterparty and the firm's credit quality.

See below for information about the significant inputs used to value other financial assets and financial liabilities at fair value.

Resale and Repurchase Agreements and Securities Borrowed and Loaned. The significant inputs to the valuation of resale and repurchase agreements and securities borrowed and loaned are funding spreads, the amount and timing of expected future cash flows and interest rates. See Note 9 for further information about collateralized agreements and financings.

Other Secured Financings. The significant inputs to the valuation of other secured financings at fair value are the amount and timing of expected future cash flows, interest rates, funding spreads, the fair value of the collateral delivered by the firm (which is determined using the amount and timing of expected future cash flows, market prices, market yields and recovery assumptions) and the frequency of additional collateral calls. See Note 9 for further information about collateralized agreements and financings.

Receivables from Customers and Counterparties. Receivables from customers and counterparties at fair value primarily consist of certain margin loans. The significant inputs to the valuation of such receivables are interest rates, the amount and timing of expected future cash flows and funding spreads.

Level 3 Transfers

Transfers between levels of the fair value hierarchy are reported at the beginning of the reporting period in which they occur. Transfers into level 3 other financial liabilities during the six months ended June 2019 were $20 million, reflecting transfers of certain other secured financings from level 2. The individual drivers of the transfers into level 3 derivatives were not material. There were no transfers of other financial liabilities out of level 3 during the six months ended June 2019.

Long-Term Debt Instruments

The difference between the aggregate contractual principal amount and the related fair value of long-term other secured financings for which the fair value option was elected was not material as of June 2019.

Note 9.

Collateralized Agreements and Financings

Collateralized agreements are resale agreements and securities borrowed. Collateralized financings are repurchase agreements, securities loaned and other secured financings. The firm enters into these transactions in order to, among other things, facilitate client activities, invest excess cash, acquire securities to cover short positions and finance certain firm activities.

Collateralized agreements and financings are presented on a net-by-counterparty basis when a legal right of setoff exists. Interest on collateralized agreements and collateralized financings is recognized over the life of the transaction.

The table below presents the carrying value of resale and repurchase agreements and securities borrowed and loaned transactions.

$ in millions	As of June 2019
Resale agreements	$ 73,406
Securities borrowed	$ 158,562
Repurchase agreements	$ 78,082
Securities loaned	$ 61,097

In the table above:

- Resale and repurchase agreements are carried at fair value under the fair value option. See Note 8 for further information about the valuation techniques and significant inputs used to determine fair value.
- As of June 2019, $21.11 billion of securities borrowed and $17.80 billion of securities loaned were at fair value.

Resale and Repurchase Agreements

A resale agreement is a transaction in which the firm purchases financial instruments from a seller, typically in exchange for cash, and simultaneously enters into an agreement to resell the same or substantially the same financial instruments to the seller at a stated price plus accrued interest at a future date.

A repurchase agreement is a transaction in which the firm sells financial instruments to a buyer, typically in exchange for cash, and simultaneously enters into an agreement to repurchase the same or substantially the same financial instruments from the buyer at a stated price plus accrued interest at a future date.

Even though repurchase and resale agreements (including "repos- and reverses-to-maturity") involve the legal transfer of ownership of financial instruments, they are accounted for as financing arrangements because they require the financial instruments to be repurchased or resold before or at the maturity of the agreement. The financial instruments purchased or sold in resale and repurchase agreements typically include U.S. government and agency obligations, and equity securities.

The firm receives financial instruments purchased under resale agreements and makes delivery of financial instruments sold under repurchase agreements. To mitigate credit exposure, the firm monitors the market value of these financial instruments on a daily basis, and delivers or obtains additional collateral due to changes in the market value of the financial instruments, as appropriate. For resale agreements, the firm typically requires collateral with a fair value approximately equal to the carrying value of the relevant assets in the consolidated statement of financial condition.

Securities Borrowed and Loaned Transactions

In a securities borrowed transaction, the firm borrows securities from a counterparty in exchange for cash or securities. When the firm returns the securities, the counterparty returns the cash or securities. Interest is generally paid periodically over the life of the transaction.

In a securities loaned transaction, the firm lends securities to a counterparty in exchange for cash or securities. When the counterparty returns the securities, the firm returns the cash or securities posted as collateral. Interest is generally paid periodically over the life of the transaction.

The firm receives securities borrowed and makes delivery of securities loaned. To mitigate credit exposure, the firm monitors the market value of these securities on a daily basis, and delivers or obtains additional collateral due to changes in the market value of the securities, as appropriate. For securities borrowed transactions, the firm typically requires collateral with a fair value approximately equal to the carrying value of the securities borrowed transaction.

Certain of the firm's securities borrowed and loaned are recorded at fair value under the fair value option. See Note 8 for further information about securities borrowed and loaned accounted for at fair value.

All other securities borrowed and loaned are recorded based on the amount of cash collateral advanced or received plus accrued interest. As these agreements generally can be terminated on demand, they exhibit little, if any, sensitivity to changes in interest rates. Therefore, the carrying value of such agreements approximates fair value. As these agreements are not accounted for at fair value, they are not included in the firm's fair value hierarchy in Notes 5 through 8. Had these agreements been included in the firm's fair value hierarchy, they would have been classified in level 2 as of June 2019.

Offsetting Arrangements

The table below presents resale and repurchase agreements and securities borrowed and loaned transactions included in the consolidated statement of financial condition, as well as the amounts not offset in the consolidated statement of financial condition.

	As of June 2019			
	Assets		Liabilities	
$ in millions	Resale agreements	Securities borrowed	Repurchase agreements	Securities loaned
Included in consolidated statement of financial condition				
Gross carrying value	$ 129,787	$ 158,562	$ 134,462	$ 61,097
Counterparty netting	(56,381)	–	(56,380)	–
Total	73,406	158,562	78,082	61,097
Amounts not offset				
Counterparty netting	(8,609)	(42,926)	(8,609)	(42,926)
Collateral	(63,353)	(111,680)	(67,606)	(17,897)
Total	$ 1,444	$ 3,956	$ 1,867	$ 274

In the table above:

- Substantially all of the gross carrying values of these arrangements are subject to enforceable netting agreements.
- Where the firm has received or posted collateral under credit support agreements, but has not yet determined such agreements are enforceable, the related collateral has not been netted.
- Amounts not offset includes counterparty netting that does not meet the criteria for netting under U.S. GAAP and the fair value of collateral received or posted subject to enforceable credit support agreements.

Gross Carrying Value of Repurchase Agreements and Securities Loaned

The table below presents the gross carrying value of repurchase agreements and securities loaned by class of collateral pledged.

	As of June 2019	
$ in millions	Repurchase agreements	Securities loaned
Money market instruments	$ 591	$ –
U.S. government and agency obligations	121,284	735
Non-U.S. government and agency obligations	2,126	17,398
Securities backed by commercial real estate	307	–
Securities backed by residential real estate	982	28
Corporate debt securities	2,807	3,411
State and municipal obligations	304	–
Other debt obligations	217	20
Equity securities	5,844	39,505
Total	$ 134,462	$ 61,097

The table below presents the gross carrying value of repurchase agreements and securities loaned by maturity date.

	As of June 2019	
$ in millions	Repurchase agreements	Securities loaned
No stated maturity and overnight	$ 78,525	$ 60,182
2 - 30 days	24,644	–
31 - 90 days	15,691	915
91 days - 1 year	13,484	–
Greater than 1 year	2,118	–
Total	$ 134,462	$ 61,097

In the table above:

- Repurchase agreements and securities loaned that are repayable prior to maturity at the option of the firm are reflected at their contractual maturity dates.
- Repurchase agreements and securities loaned that are redeemable prior to maturity at the option of the holder are reflected at the earliest dates such options become exercisable.

Other Secured Financings

In addition to repurchase agreements and securities loaned transactions, the firm funds certain assets through the use of other secured financings and pledges financial instruments as collateral in these transactions. These other secured financings consist of:

- Secured financings from Goldman Sachs Funding LLC (Funding IHC), a wholly owned subsidiary of Group Inc.;
- Liabilities of consolidated VIEs; and
- Other structured financing arrangements.

Other secured financings includes nonrecourse arrangements. Nonrecourse other secured financings were $22 million as of June 2019.

The firm has elected to apply the fair value option to certain other secured financings because the use of fair value eliminates non-economic volatility in earnings that would arise from using different measurement attributes. See Note 8 for further information about other secured financings that are accounted for at fair value.

Other secured financings that are not recorded at fair value are recorded based on the amount of cash received plus accrued interest, which generally approximates fair value. As these financings are not accounted for at fair value, they are not included in the firm's fair value hierarchy in Notes 5 through 8. Had these financings been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of June 2019.

The table below presents other secured financings by maturity.

$ in millions	**As of June 2019**
Other secured financings (short-term)	**$ 25,839**
Other secured financings (long-term):	
2020	**–**
2021	**422**
2022	**–**
2023	**–**
2024	**–**
2025 - thereafter	**268**
Total other secured financings (long-term)	**690**
Total other secured financings	**$ 26,529**

In the table above:

- Long-term other secured financings that are repayable prior to maturity at the option of the firm are reflected at their contractual maturity dates.
- Long-term other secured financings that are redeemable prior to maturity at the option of the holder are reflected at the earliest dates such options become exercisable.
- The weighted average interest rate on $21.99 billion of other secured financings accounted for at amortized cost was 2.47%.

Collateral Received and Pledged

The firm receives cash and securities (e.g., U.S. government and agency obligations, other sovereign and corporate obligations, as well as equity securities) as collateral, primarily in connection with resale agreements, securities borrowed, derivative transactions and customer margin loans. The firm obtains cash and securities as collateral on an upfront or contingent basis for derivative instruments and collateralized agreements to reduce its credit exposure to individual counterparties.

In many cases, the firm is permitted to deliver or repledge financial instruments received as collateral when entering into repurchase agreements and securities loaned transactions, primarily in connection with secured client financing activities. The firm is also permitted to deliver or repledge these financial instruments in connection with other secured financings, collateralized derivative transactions and firm or customer settlement requirements.

The firm also pledges certain financial instruments owned in connection with repurchase agreements, securities loaned transactions and other secured financings in connection with other secured financings to counterparties who may or may not have the right to deliver or repledge them.

The table below presents financial instruments at fair value received as collateral that were available to be delivered or repledged and were delivered or repledged.

$ in millions	**As of June 2019**
Collateral available to be delivered or repledged	**$ 434,476**
Collateral that was delivered or repledged	**$ 393,505**

In the table above, collateral available to be delivered or repledged excludes $9.38 billion of securities received under resale agreements and securities borrowed transactions that contractually had the right to be delivered or repledged, but were segregated for regulatory and other purposes.

The table below presents information about assets pledged.

$ in millions	**As of June 2019**
Financial instruments owned pledged to counterparties that:	
Had the right to deliver or repledge	**$ 45,224**
Did not have the right to deliver or repledge	**$ 30,660**

The firm also segregated securities included in financial instruments owned of $15.33 billion for regulatory and other purposes. See Note 3 for information about segregated cash.

Note 10.

Securitization Activities

The firm securitizes residential and commercial mortgages, corporate bonds and other types of financial assets by selling these assets to securitization vehicles (e.g., trusts, corporate entities and limited liability companies) or through a resecuritization. The firm acts as underwriter of the beneficial interests that are sold to investors. The firm's residential mortgage securitizations are substantially all in connection with U.S. government agency securitizations.

Beneficial interests issued by securitization entities are debt or equity instruments that give the investors rights to receive all or portions of specified cash inflows to a securitization vehicle and include senior and subordinated interests in principal, interest and/or other cash inflows. The proceeds from the sale of beneficial interests are used to pay the transferor for the financial assets sold to the securitization vehicle or to purchase securities which serve as collateral.

The firm accounts for a securitization as a sale when it has relinquished control over the transferred financial assets. Prior to securitization, the firm generally accounts for assets pending transfer at fair value and therefore does not typically recognize significant gains or losses upon the transfer of assets. Net revenues from underwriting activities are recognized in connection with the sales of the underlying beneficial interests to investors.

The firm generally receives cash in exchange for the transferred assets but may also have continuing involvement with the transferred financial assets, including ownership of beneficial interests in securitized financial assets, primarily in the form of debt instruments. The firm may also purchase senior or subordinated securities issued by securitization vehicles (which are typically VIEs) in connection with secondary market-making activities.

The primary risks included in beneficial interests and other interests from the firm's continuing involvement with securitization vehicles are the performance of the underlying collateral, the position of the firm's investment in the capital structure of the securitization vehicle and the market yield for the security. These interests are accounted for at fair value and included in financial instruments owned. Substantially all of these interests are classified in level 2 of the fair value hierarchy. See Notes 5 through 8 for further information about fair value measurements.

The table below presents information about nonconsolidated securitization entities to which the firm sold assets and had continuing involvement as of the end of the period.

	As of June 2019		
$ in millions	Outstanding Principal Amount	Retained Interests	Purchased Interests
U.S. government agency-issued collateralized mortgage obligations	$ 16,106	$ 1,243	$ –
Other residential mortgage-backed	7	4	–
Corporate debt and other asset-backed	147	20	3
Total	**$ 16,260**	**$ 1,267**	**$ 3**

In the table above:

- The outstanding principal amount is presented for the purpose of providing information about the size of the securitization entities and is not representative of the firm's risk of loss.
- The firm's risk of loss from retained or purchased interests is limited to the fair value of these interests.
- Purchased interests represent senior and subordinated interests, purchased in connection with secondary market-making activities, in securitization entities in which the firm also holds retained interests.
- Substantially all of the total outstanding principal amount and total fair value of retained interests relate to securitizations during 2012 and thereafter as of June 2019.
- Retained interests were carried at fair value.

The table below presents information about the weighted average key economic assumptions used in measuring the fair value of mortgage-backed retained interests.

$ in millions	As of June 2019
Fair value of retained interests	$ 1,247
Weighted average life (years)	5.4
Constant prepayment rate	19.2%
Impact of 10% adverse change	$ (26)
Impact of 20% adverse change	$ (49)
Discount rate	3.2%
Impact of 10% adverse change	$ (18)
Impact of 20% adverse change	$ (36)

In the table above:

- Amounts do not reflect the benefit of other financial instruments that are held to mitigate risks inherent in these retained interests.
- Changes in fair value based on an adverse variation in assumptions generally cannot be extrapolated because the relationship of the change in assumptions to the change in fair value is not usually linear.
- The impact of a change in a particular assumption is calculated independently of changes in any other assumption. In practice, simultaneous changes in assumptions might magnify or counteract the sensitivities disclosed above.
- The constant prepayment rate is included only for positions for which it is a key assumption in the determination of fair value.
- The discount rate for retained interests that relate to U.S. government agency-issued collateralized mortgage obligations does not include any credit loss. Expected credit loss assumptions are reflected in the discount rate for the remainder of retained interests.

The firm has other retained interests not reflected in the table above with a fair value of $20 million and a weighted average life of 4.0 years as of June 2019. Due to the nature and fair value of certain of these retained interests, the weighted average assumptions for constant prepayment and discount rates and the related sensitivity to adverse changes are not meaningful as of June 2019. The firm's maximum exposure to adverse changes in the value of these interests is the carrying value of $20 million as of June 2019.

Note 11.

Variable Interest Entities

A variable interest in a VIE is an investment (e.g., debt or equity) or other interest (e.g., derivatives or loans) that will absorb portions of the VIE's expected losses and/or receive portions of the VIE's expected residual returns.

The firm's variable interests in VIEs include senior and subordinated debt; loans; limited and general partnership interests; and preferred and common equity.

VIEs generally finance the purchase of assets by issuing debt and equity securities that are either collateralized by or indexed to the assets held by the VIE. The debt and equity securities issued by a VIE may include tranches of varying levels of subordination. The firm's involvement with VIEs includes securitization of financial assets, as described in Note 10, and investments in and loans to other types of VIEs, as described below. See Note 10 for further information about securitization activities, including the definition of beneficial interests. See Note 3 for the firm's consolidation policies, including the definition of a VIE.

VIE Consolidation Analysis

The enterprise with a controlling financial interest in a VIE is known as the primary beneficiary and consolidates the VIE. The firm determines whether it is the primary beneficiary of a VIE by performing an analysis that principally considers:

- Which variable interest holder has the power to direct the activities of the VIE that most significantly impact the VIE's economic performance;
- Which variable interest holder has the obligation to absorb losses or the right to receive benefits from the VIE that could potentially be significant to the VIE;
- The VIE's purpose and design, including the risks the VIE was designed to create and pass through to its variable interest holders;
- The VIE's capital structure;
- The terms between the VIE and its variable interest holders and other parties involved with the VIE; and
- Related-party relationships.

The firm reassesses its evaluation of whether an entity is a VIE when certain reconsideration events occur. The firm reassesses its determination of whether it is the primary beneficiary of a VIE on an ongoing basis based on current facts and circumstances.

VIE Activities

The firm is principally involved with VIEs through the following business activities:

Mortgage-Backed VIEs. The firm sells residential and commercial mortgage loans and securities to mortgage-backed VIEs and may retain beneficial interests in the assets sold to these VIEs. The firm purchases and sells beneficial interests issued by mortgage-backed VIEs in connection with market-making activities.

Real Estate, Credit- and Power-Related and Other Investing VIEs. The firm purchases equity and debt securities issued by and makes loans to VIEs that hold real estate, performing and nonperforming debt, distressed loans, power-related assets and equity securities. The firm generally does not sell assets to, or enter into derivatives with, these VIEs.

Corporate Debt and Other Asset-Backed VIEs. The firm structures VIEs that issue notes to clients, and purchases and sells beneficial interests issued by corporate debt and other asset-backed VIEs in connection with market-making activities.

Nonconsolidated VIEs

The table below presents a summary of the nonconsolidated VIEs in which the firm holds variable interests.

$ in millions	As of June 2019
Total nonconsolidated VIEs	
Assets in VIEs	$ 20,971
Carrying value of variable interests - assets	$ 1,548
Maximum exposure to loss:	
Retained interests	$ 1,267
Purchased interests	133
Loans and investments	148
Total maximum exposure to loss	**$ 1,548**

In the table above:

- The nature of the firm's variable interests is described in the rows under maximum exposure to loss.
- The firm's exposure to the obligations of VIEs is generally limited to its interests in these entities.
- The maximum exposure to loss excludes the benefit of offsetting financial instruments that are held to mitigate the risks associated with these variable interests.
- The maximum exposure to loss from retained interests, purchased interests, and loans and investments is the carrying value of these interests.
- The maximum exposure to loss from commitments is the notional amount, which does not represent anticipated losses and has not been reduced by unrealized losses.

The table below disaggregates, by principal business activity, the information for nonconsolidated VIEs included in the summary table above.

$ in millions	As of June 2019
Mortgage-backed	
Assets in VIEs	$ 17,687
Carrying value of variable interests - assets	$ 1,330
Maximum exposure to loss:	
Retained interests	$ 1,247
Purchased interests	83
Total maximum exposure to loss	**$ 1,330**
Real estate, credit- and power-related and other investing	
Assets in VIEs	$ 3,084
Carrying value of variable interests - assets	$ 148
Maximum exposure to loss:	
Loans and investments	$ 148
Total maximum exposure to loss	**$ 148**
Corporate debt and other asset-backed	
Assets in VIEs	$ 200
Carrying value of variable interests - assets	$ 70
Maximum exposure to loss:	
Retained interests	$ 20
Purchased interests	50
Total maximum exposure to loss	**$ 70**

The carrying values of the firm's variable interests in nonconsolidated VIEs are included in financial instruments owned and other assets.

Consolidated VIEs

The table below presents the carrying value and classification of assets and liabilities in consolidated VIEs.

$ in millions	As of June 2019
Mortgage-backed and other asset-backed	
Assets	
Financial instruments owned	$ 50
Other assets	3
Total	**$ 53**
Liabilities	
Other secured financings	$ (22)
Total	**$ (22)**

In the table above:

- Assets and liabilities are presented net of intercompany eliminations and exclude the benefit of offsetting financial instruments that are held to mitigate the risks associated with the firm's variable interests.
- VIEs in which the firm holds a majority voting interest are excluded if (i) the VIE meets the definition of a business and (ii) the VIE's assets can be used for purposes other than the settlement of its obligations.
- Substantially all assets can only be used to settle obligations of the VIE.
- Creditors and beneficial interest holders of mortgage-backed and other asset-backed VIEs do not have recourse to the general credit of the firm.

Note 12.

Other Assets

The table below presents other assets by type.

$ in millions	As of June 2019
Property, leasehold improvements and equipment	$ 1,095
Income tax-related assets	412
Receivables from affiliates	296
Goodwill and identifiable intangible assets	56
Miscellaneous receivables and other	430
Total	**$ 2,289**

In the table above, miscellaneous receivables and other primarily included prepaid expenses.

Property, Leasehold Improvements and Equipment

Property, leasehold improvements and equipment is net of accumulated depreciation and amortization of $3.35 billion as of June 2019. Property and equipment is depreciated on a straight-line basis over the useful life of the asset. Leasehold improvements are amortized on a straight-line basis over the shorter of the useful life of the improvement or the term of the lease. Capitalized costs of software developed or obtained for internal use are amortized on a straight-line basis over three years.

The firm tests property, leasehold improvements and equipment for impairment whenever events or changes in circumstances suggest that an asset's or asset group's carrying value may not be fully recoverable. To the extent the carrying value of an asset or asset group exceeds the projected undiscounted cash flows expected to result from the use and eventual disposal of the asset or asset group, the firm determines the asset or asset group is impaired and records an impairment equal to the difference between the estimated fair value and the carrying value of the asset or asset group. In addition, the firm will recognize an impairment prior to the sale of an asset or asset group if the carrying value of the asset or asset group exceeds its estimated fair value. There were no such impairments during the six months ended June 2019.

Goodwill

Goodwill is the cost of acquired companies in excess of the fair value of net assets, including identifiable intangible assets, at the acquisition date. As of June 2019, the carrying amount of the firm's goodwill was $50 million. Goodwill is assessed for impairment annually or more frequently if events occur or circumstances change that indicate an impairment may exist. No impairment was recorded during the six months ended June 2019.

Identifiable Intangible Assets

Intangible assets are net of accumulated amortization. As of June 2019, the gross carrying amount of the firm's identifiable intangible assets was $484 million, the related accumulated amortization was $478 million, and the net carrying amount was $6 million.

The firm's identifiable intangible assets, which primarily include customer lists, have finite useful lives and are amortized over their estimated useful lives generally using the straight-line method.

The firm tests intangible assets for impairment whenever events or changes in circumstances suggest that an asset's or asset group's carrying value may not be fully recoverable. There were no such impairments during the six months ended June 2019.

Note 13.

Short-Term Borrowings

The table below presents information about short-term borrowings.

$ in millions	As of June 2019
Other secured financings (short-term)	$ 25,839
Unsecured short-term borrowings	19,914
Total	**$ 45,753**

See Note 9 for information about other secured financings.

The firm obtains substantially all unsecured short-term borrowings from Group Inc. and Funding IHC. The carrying value of unsecured short-term borrowings that are not recorded at fair value generally approximates fair value due to the short-term nature of the obligations. As these unsecured short-term borrowings are not accounted for at fair value, they are not included in the firm's fair value hierarchy in Notes 5 through 8. Had these borrowings been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of June 2019.

The table below presents information about unsecured short-term borrowings.

$ in millions	As of June 2019
Borrowings from affiliates	$ 19,884
Other unsecured short-term borrowings	30
Total unsecured short-term borrowings	**$ 19,914**
Weighted average interest rate	**2.87%**

Note 14.

Long-Term Borrowings

The table below presents information about long-term borrowings.

$ in millions	As of June 2019
Other secured financings (long-term)	$ 690
Unsecured long-term borrowings	25
Subordinated borrowings	18,500
Total	**$ 19,215**

See Note 9 for information about other secured financings.

Subordinated Borrowings

As of June 2019, the firm had outstanding borrowings of $5.00 billion from Group Inc. under four subordinated loan agreements, which mature in 2020. In addition, the firm has a $13.50 billion revolving subordinated loan agreement with Group Inc., which matures in 2021. As of June 2019, $13.50 billion was outstanding.

Amounts borrowed under these subordinated loan agreements bear interest at a rate of the London Interbank Offered Rate plus 0.75% per annum. The carrying value of these borrowings approximates fair value. As these subordinated loan agreements are not accounted for at fair value, they are not included in the firm's fair value hierarchy in Notes 5 through 8. Had these borrowings been included in the firm's fair value hierarchy, substantially all would have been classified in level 2 as of June 2019.

The subordinated borrowings from Group Inc. are available in computing net capital under the U.S. Securities and Exchange Commission's (SEC) uniform net capital rule. To the extent that such borrowings are required for the firm's continued compliance with minimum net capital requirements, they may not be repaid.

Note 15.

Other Liabilities

The table below presents other liabilities by type.

$ in millions	As of June 2019
Payables to affiliates	$ 2,589
Compensation and benefits	1,791
Income tax-related liabilities	1,439
Accrued expenses and other	1,132
Total	**$ 6,951**

In the table above, accrued expenses and other includes contract liabilities, which represent consideration received by the firm, in connection with its contracts with clients, prior to providing the service. As of June 2019, the firm's contract liabilities were not material.

Note 16.

Commitments, Contingencies and Guarantees

Commitments

The table below presents commitments by type.

$ in millions	As of June 2019
Collateralized agreement commitments	$ 23,200
Collateralized financing commitments	21,372
Other	342
Total commitments	**$ 44,914**

The table below presents commitments by expiration.

	As of June 2019			
$ in millions	Remainder of 2019	2020 - 2021	2022 - 2023	2024 - Thereafter
Collateralized agreement commitments	$ 23,200	$ –	$ –	$ –
Collateralized financing commitments	21,372	–	–	–
Other	188	118	35	1
Total commitments	**$ 44,760**	**$ 118**	**$ 35**	**$ 1**

Collateralized Agreement Commitments/ Collateralized Financing Commitments

Collateralized agreement commitments includes forward starting resale and securities borrowing agreements, and collateralized financing commitments includes forward starting repurchase and secured lending agreements that settle at a future date, generally within three business days. Collateralized agreement commitments also includes transactions where the firm has entered into commitments to provide contingent financing to its clients and counterparties through resale agreements. The firm's funding of these commitments depends on the satisfaction of all contractual conditions to the resale agreement and these commitments can expire unused.

Contingencies — Legal Proceedings

See Note 20 for information about legal proceedings.

Guarantees

The table below presents derivatives that meet the definition of a guarantee.

$ in millions	As of June 2019
Carrying Value of Net Liability	**$ 2**
Maximum Payout/Notional Amount by Period of Expiration	
Remainder of 2019	$ 4
2020 - 2021	33
2022 - 2023	39
2024 - thereafter	7
Total	**$ 83**

In the table above, the maximum payout is based on the notional amount of the contract and does not represent anticipated losses.

Derivative Guarantees. The firm enters into various derivatives that meet the definition of a guarantee under U.S. GAAP, including written equity and commodity put options, written currency contracts and interest rate caps, floors and swaptions. These derivatives are risk managed together with derivatives that do not meet the definition of a guarantee, and therefore the amounts in the table above do not reflect the firm's overall risk related to derivative activities. Disclosures about derivatives are not required if they may be cash settled and the firm has no basis to conclude it is probable that the counterparties held the underlying instruments at inception of the contract. The firm has concluded that these conditions have been met for certain large, internationally active commercial and investment bank counterparties, central clearing counterparties, hedge funds and certain other counterparties. Accordingly, the firm has not included such contracts in the table above. See Note 7 for information about credit derivatives that meet the definition of a guarantee, which are not included in the table above.

Derivatives are accounted for at fair value and therefore the carrying value is considered the best indication of payment/performance risk for individual contracts. However, the carrying values in the table above exclude the effect of counterparty and cash collateral netting.

Indemnities and Guarantees of Service Providers. In the ordinary course of business, the firm indemnifies and guarantees certain service providers, such as clearing and custody agents, trustees and administrators, against specified potential losses in connection with their acting as an agent of, or providing services to, the firm or its affiliates.

The firm may also be liable to some clients or other parties for losses arising from its custodial role or caused by acts or omissions of third-party service providers, including sub-custodians and third-party brokers. In certain cases, the firm has the right to seek indemnification from these third-party service providers for certain relevant losses incurred by the firm. In addition, the firm is a member of payment, clearing and settlement networks, as well as securities exchanges that may require the firm to meet the obligations of such networks and exchanges in the event of member defaults and other loss scenarios.

In connection with the firm's prime brokerage and clearing businesses, the firm agrees to clear and settle on behalf of its clients the transactions entered into by them with other brokerage firms. The firm's obligations in respect of such transactions are secured by the assets in the client's account, as well as any proceeds received from the transactions cleared and settled by the firm on behalf of the client. In connection with joint venture investments, the firm may issue loan guarantees under which it may be liable in the event of fraud, misappropriation, environmental liabilities and certain other matters involving the borrower.

The firm is unable to develop an estimate of the maximum payout under these guarantees and indemnifications. However, management believes that it is unlikely the firm will have to make any material payments under these arrangements, and no material liabilities related to these guarantees and indemnifications have been recognized in the consolidated statement of financial condition as of June 2019.

Other Representations, Warranties and Indemnifications. The firm provides representations and warranties to counterparties in connection with a variety of commercial transactions and occasionally indemnifies them against potential losses caused by the breach of those representations and warranties. The firm may also provide indemnifications protecting against changes in or adverse application of certain U.S. tax laws in connection with ordinary-course transactions, such as securities issuances, borrowings or derivatives.

In addition, the firm may provide indemnifications to some counterparties to protect them in the event additional taxes are owed or payments are withheld, due either to a change in or an adverse application of certain non-U.S. tax laws.

These indemnifications generally are standard contractual terms and are entered into in the ordinary course of business. Generally, there are no stated or notional amounts included in these indemnifications, and the contingencies triggering the obligation to indemnify are not expected to occur. The firm is unable to develop an estimate of the maximum payout under these guarantees and indemnifications. However, management believes that it is unlikely the firm will have to make any material payments under these arrangements, and no material liabilities related to these arrangements have been recognized in the consolidated statement of financial condition as of June 2019.

Note 17.

Transactions with Related Parties

The firm enters into transactions with Group Inc. and affiliates in the normal course of business as part of market making and general operations.

The table below presents assets and liabilities with affiliates.

$ in millions	As of June 2019
Assets	
Collateralized agreements:	
Resale agreements	$ 22,758
Securities borrowed	62,539
Receivables:	
Brokers, dealers and clearing organizations	4,431
Customers and counterparties	625
Financial instruments owned	2,856
Other assets	296
Total	**$ 93,505**
Liabilities	
Collateralized financings:	
Repurchase agreements	$ 26,825
Securities loaned	59,324
Other secured financings	23,017
Payables:	
Brokers, dealers and clearing organizations	3,426
Customers and counterparties	9,231
Financial instruments sold, but not yet purchased	228
Unsecured short-term borrowings	19,884
Other liabilities	2,589
Subordinated borrowings	18,500
Total	**$ 163,024**

In the table above:

- The firm makes markets in debt issued by Group Inc. and certain affiliates. Financial instruments owned primarily included such issuances of $2.63 billion and affiliate derivative contracts of $165 million.
- Financial instruments sold, but not yet purchased, consists of derivative contracts with affiliates.

Group Inc. has guaranteed the payment obligations of GS&Co., subject to certain exceptions.

The firm receives and provides operational and administrative support and management services to affiliates and allocates costs for the services provided.

The firm is subject to service charges from affiliates for employment related costs of employees of affiliates pursuant to a Master Services Agreement supplemented by Service Level Agreements.

The firm enters into various types of activities with affiliates and allocates revenues to, and receives revenues from, such affiliates for their participation.

The firm acts as the investment manager for numerous related party funds of Group Inc. and is entitled to receive management fees and, in certain cases, advisory fees from these funds.

The firm acts as underwriter for certain debt issuances of related parties.

Note 18.

Income Taxes

Provision for Income Taxes

GS&Co. has elected to be taxed as a corporation for U.S. federal income tax purposes. As a corporation for tax purposes, the firm is subject to U.S. Federal and various state and local income taxes on its earnings. The firm is included with Group Inc. and subsidiaries in the consolidated corporate federal as well as consolidated or combined state and local tax returns. The firm computes its tax liability on a modified separate company basis and settles such liability with Group Inc. pursuant to a tax sharing agreement. To the extent the firm generates tax benefits from losses, it will be reimbursed by Group Inc. pursuant to the tax sharing agreement. The firm's state and local tax liabilities are allocated to reflect its share of the consolidated or combined state and local income tax liability.

Income taxes are provided for using the asset and liability method under which deferred tax assets and liabilities are recognized for temporary differences between the financial reporting and tax bases of assets and liabilities.

Deferred Income Taxes

Deferred income taxes reflect the net tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities. These temporary differences result in taxable or deductible amounts in future years and are measured using the tax rates and laws that will be in effect when such differences are expected to reverse. Valuation allowances are established to reduce deferred tax assets to the amount that more likely than not will be realized. As of June 2019, the firm's valuation allowance recorded was not material. Tax assets are included in other assets and tax liabilities are included in other liabilities.

Unrecognized Tax Benefits

The firm recognizes tax positions in the consolidated statement of financial condition only when it is more likely than not that the position will be sustained on examination by the relevant taxing authority based on the technical merits of the position. A position that meets this standard is measured at the largest amount of benefit that will more likely than not be realized on settlement. A liability is established for differences between positions taken in a tax return and amounts recognized in the consolidated statement of financial condition. As of June 2019, the firm did not record a liability related to uncertainty in income taxes.

Regulatory Tax Examinations

The firm is subject to examination by the U.S. Internal Revenue Service (IRS) and other taxing authorities in jurisdictions where the firm has significant business operations, such as New York State and City. The tax years under examination vary by jurisdiction.

U.S. Federal examinations of GS Group for calendar years 2011 and 2012 began in 2013. GS Group has been accepted into the Compliance Assurance Process program by the IRS for each of the tax years from 2013 through 2019. This program allows GS Group to work with the IRS to identify and resolve potential U.S. Federal tax issues before the filing of tax returns. The 2013 through 2017 tax years remain subject to post-filing review.

New York State and City examinations of 2011 through 2014 began in 2017. All years including and subsequent to 2015 for New York State and City remain subject to post-filing review. All years including and subsequent to 2009 for all other significant states, excluding New York State and City, remain subject to post-filing review.

The firm believes that no liability for unrecognized tax benefits is required to be established in relation to the potential for additional assessments.

Note 19.

Credit Concentrations

The firm's concentrations of credit risk arise from its market making, client facilitation, investing, underwriting, lending and collateralized transactions, and cash management activities, and may be impacted by changes in economic, industry or political factors. These activities expose the firm to many different industries and counterparties, and may also subject the firm to a concentration of credit risk to a particular counterparty, borrower or issuer, including sovereign issuers, or to a particular clearing house or exchange. The firm seeks to mitigate credit risk by actively monitoring exposures and obtaining collateral from counterparties as deemed appropriate.

The firm measures and monitors its credit exposure based on amounts owed to the firm after taking into account risk mitigants that management considers when determining credit risk. Such risk mitigants include netting and collateral arrangements and economic hedges, such as credit derivatives, futures and forward contracts. Netting and collateral agreements permit the firm to offset receivables and payables with such counterparties and/or enable the firm to obtain collateral on an upfront or contingent basis.

The table below presents the credit concentrations in cash instruments included in financial instruments owned.

$ in millions	**As of June 2019**
U.S. government and agency obligations	**$ 72,429**
Percentage of total assets	**18.5%**

As of June 2019, the firm did not have credit exposure to any other external counterparty that exceeded 2% of total assets.

Collateral obtained by the firm related to derivative assets is principally cash and is held by the firm or a third-party custodian. Collateral obtained by the firm related to resale agreements and securities borrowed transactions is primarily U.S. government and agency obligations and non-U.S. government and agency obligations. See Note 9 for further information about collateralized agreements and financings.

The table below presents U.S. government and agency obligations, and non-U.S. government and agency obligations that collateralize resale agreements and securities borrowed transactions.

$ in millions	**As of June 2019**
U.S. government and agency obligations	**$ 88,179**
Non-U.S. government and agency obligations	**$ 9,513**

In the table above:

- Non-U.S. government and agency obligations primarily consists of securities issued by the governments of Germany, the United Kingdom, Japan and Canada.
- Given that the firm's primary credit exposure on such transactions is to the counterparty to the transaction, the firm would be exposed to the collateral issuer only in the event of counterparty default.

Note 20.

Legal Proceedings

The firm is involved in a number of judicial, regulatory and arbitration proceedings concerning matters arising in connection with the conduct of the firm's businesses. Many of these proceedings are in early stages, and many of these cases seek an indeterminate amount of damages.

Under ASC 450, an event is "reasonably possible" if "the chance of the future event or events occurring is more than remote but less than likely" and an event is "remote" if "the chance of the future event or events occurring is slight." Thus, references to the upper end of the range of reasonably possible loss for cases in which the firm is able to estimate a range of reasonably possible loss mean the upper end of the range of loss for cases for which the firm believes the risk of loss is more than slight.

These proceedings include, but are not limited to, the firm's role in certain underwriting activities, currency-related matters, treasury matters, mutual fund, swaps and securities-related matters.

With respect to matters for which management has been able to estimate a range of reasonably possible loss where (i) actual or potential plaintiffs have claimed an amount of money damages, (ii) the firm is being, or threatened to be, sued by purchasers in a securities offering and is not being indemnified by a party that the firm believes will pay the full amount of any judgment, or (iii) the purchasers are demanding that the firm repurchase securities, management has estimated the upper end of the range of reasonably possible loss as being equal to (a) in the case of (i), the amount of money damages claimed, (b) in the case of (ii), the difference between the initial sales price of the securities that the firm sold in such offering and the estimated lowest subsequent price of such securities prior to the action being commenced and (c) in the case of (iii), the price that purchasers paid for the securities less the estimated value, if any, as of June 2019 of the relevant securities, in each of cases (i), (ii) and (iii), taking into account any other factors believed to be relevant to the particular matter or matters of that type. As of the date hereof, the firm has estimated the upper end of the range of reasonably possible aggregate loss for such matters where management has been able to estimate a range of reasonably possible aggregate loss to be approximately $800 million in excess of the aggregate reserves for such matters.

More than one Group Inc. subsidiary may be named in a particular proceeding and Group Inc. may attribute the upper end of the range of reasonably possible loss to more than one Group Inc. subsidiary for such proceeding. Therefore the sum of the upper end of the range of reasonably possible loss amounts for all Group Inc. subsidiaries may exceed the upper end of the range of the consolidated reasonably possible loss reported by Group Inc. in its financial statements. Although more than one named subsidiary may be attributed the upper end of the range of reasonably possible loss for a proceeding, Group Inc. generally attributes reserves for a particular proceeding to only one subsidiary based on Group Inc.'s evaluation of the proceeding.

Management is generally unable to estimate a range of reasonably possible loss for matters other than those included in the estimate above, including where (i) actual or potential plaintiffs have not claimed an amount of money damages, except in those instances where management can otherwise determine an appropriate amount, (ii) matters are in early stages, (iii) matters relate to regulatory investigations or reviews, except in those instances where management can otherwise determine an appropriate amount, (iv) there is uncertainty as to the likelihood of a class being certified or the ultimate size of the class, (v) there is uncertainty as to the outcome of pending appeals or motions, (vi) there are significant factual issues to be resolved, and/or (vii) there are novel legal issues presented. For example, the firm's potential liabilities with respect to regulatory investigations and reviews generally are not included in management's estimate of reasonably possible loss. However, management does not believe, based on currently available information, that the outcomes of such other matters will have a material adverse effect on the firm's financial condition, though the outcomes could be material to the firm's operating results for any particular period, depending, in part, upon the operating results for such period.

Note 21.

Net Capital Requirements

GS&Co. is a registered U.S. broker-dealer and futures commission merchant, and is subject to regulatory capital requirements including those imposed by the SEC, the U.S. Commodity Futures Trading Commission (CFTC), the Chicago Mercantile Exchange, the Financial Industry Regulatory Authority, Inc. and the National Futures Association. Rule 15c3-1 of the SEC and Rule 1.17 of the CFTC specify uniform minimum net capital requirements, as defined, for their registrants, and also effectively require that a significant part of the registrants' assets be kept in relatively liquid form. GS&Co. has elected to calculate its minimum capital requirements in accordance with the "Alternative Net Capital Requirement" as permitted by Rule 15c3-1.

As of June 2019, GS&Co. had regulatory net capital, as defined by Rule 15c3-1, of $18.19 billion, which exceeded the amount required by $15.76 billion.

In addition to its alternative minimum net capital requirements, GS&Co. is also required to hold tentative net capital in excess of $1.00 billion and net capital in excess of $500 million in accordance with the market and credit risk standards of Appendix E of Rule 15c3-1. GS&Co. is also required to notify the SEC in the event that its tentative net capital is less than $5.00 billion. As of June 2019, GS&Co. had tentative net capital and net capital in excess of both the minimum and the notification requirements.

The U.S. Dodd-Frank Wall Street Reform and Consumer Protection Act contains provisions that require the registration of all swap dealers, major swap participants, security-based swap dealers and major security-based swap participants. GS&Co. is registered as a “swap dealer” under the CFTC rules and will be subject to regulatory capital requirements once the rules are finalized by the CFTC.

Note 22.

Subsequent Events

Management has evaluated whether any events or transactions occurred subsequent to the date of the consolidated statement of financial condition and through August 7, 2019, the date the consolidated statement of financial condition was issued, and determined that there were no material events or transactions that would require recognition or disclosure in this consolidated statement of financial condition.