

Goldman Sachs & Co. LLC and Subsidiaries

Consolidated Financial Statements
and Supplemental Financial Information
pursuant to Rule 17a-5 of the
Securities and Exchange Commission and
Regulation 1.10 of the Commodity Futures
Trading Commission as of and
for the year ended December 31, 2021

Confidential

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

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Information Required Pursuant to Rules 17a-5, 17a-12, and 18a-7 under the Securities Exchange Act of 1934

FILING FOR THE PERIOD BEGINNING 1/1/2021 AND ENDING 12/31/2021
MM/DD/YY MM/DD/YY

A. REGISTRANT IDENTIFICATION

NAME OF FIRM: Goldman Sachs & Co. LLC

TYPE OF REGISTRANT (check all applicable boxes):

☒ Broker-dealer ☒ Security-based swap dealer ☐ Major security-based swap participant
☐ Check here if respondent is also an OTC derivatives dealer

ADDRESS OF PRINCIPAL PLACE OF BUSINESS: (Do not use a P.O. box no.)

200 West Street
(No. and Street)

New York New York 10282
(City) (State) (Zip Code)

PERSON TO CONTACT WITH REGARD TO THIS FILING

Thomas J. Favia (212) 902-1710 thomas.favia@gs.com
(Name) (Area Code – Telephone Number) (Email Address)

B. ACCOUNTANT IDENTIFICATION

INDEPENDENT PUBLIC ACCOUNTANT whose reports are contained in this filing*

PricewaterhouseCoopers LLP
(Name – if individual, state last, first, and middle name)

300 Madison Avenue New York New York 10017
(Address) (City) (State) (Zip Code)

10/20/2003 PCAOB ID 238
(Date of Registration with PCAOB)(if applicable) (PCAOB Registration Number, if applicable)

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* Claims for exemption from the requirement that the annual reports be covered by the reports of an independent public accountant must be supported by a statement of facts and circumstances relied on as the basis of the exemption. See 17 CFR 240.17a-5(e)(1)(ii), if applicable.

Persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB control number.

This filing contains (check all applicable boxes):**

- ☒ (a) Statement of financial condition.
- ☐ (b) Notes to consolidated statement of financial condition.
- ☒ (c) Statement of income (loss) or, if there is other comprehensive income in the period(s) presented, a statement of comprehensive income (as defined in § 210.1-02 of Regulation S-X).
- ☒ (d) Statement of cash flows.
- ☒ (e) Statement of changes in stockholders' or partners' or sole proprietor's equity.
- ☒ (f) Statement of changes in liabilities subordinated to claims of creditors.
- ☒ (g) Notes to consolidated financial statements.
- ☒ (h) Computation of net capital under 17 CFR 240.15c3-1 or 17 CFR 240.18a-1, as applicable.
- ☐ (i) Computation of tangible net worth under 17 CFR 240.18a-2.
- ☒ (j) Computation for determination of customer reserve requirements pursuant to Exhibit A to 17 CFR 240.15c3-3.
- ☐ (k) Computation for determination of security-based swap reserve requirements pursuant to Exhibit B to 17 CFR 240.15c3-3 or Exhibit A to 17 CFR 240.18a-4, as applicable.
- ☒ (l) Computation for Determination of PAB Requirements under Exhibit A to § 240.15c3-3.
- ☒ (m) Information relating to possession or control requirements for customers under 17 CFR 240.15c3-3.
- ☐ (n) Information relating to possession or control requirements for security-based swap customers under 17 CFR 240.15c3-3(p)(2) or 17 CFR 240.18a-4, as applicable.
- ☒ (o) Reconciliations, including appropriate explanations, of the FOCUS Report with computation of net capital or tangible net worth under 17 CFR 240.15c3-1, 17 CFR 240.18a-1, or 17 CFR 240.18a-2, as applicable, and the reserve requirements under 17 CFR 240.15c3-3 or 17 CFR 240.18a-4, as applicable, if material differences exist, or a statement that no material differences exist.
- ☐ (p) Summary of financial data for subsidiaries not consolidated in the statement of financial condition.
- ☒ (q) Oath or affirmation in accordance with 17 CFR 240.17a-5, 17 CFR 240.17a-12, or 17 CFR 240.18a-7, as applicable.
- ☒ (r) Compliance report in accordance with 17 CFR 240.17a-5 or 17 CFR 240.18a-7, as applicable.
- ☐ (s) Exemption report in accordance with 17 CFR 240.17a-5 or 17 CFR 240.18a-7, as applicable.
- ☐ (t) Independent public accountant's report based on an examination of the statement of financial condition.
- ☒ (u) Independent public accountant's report based on an examination of the financial report or financial statements under 17 CFR 240.17a-5, 17 CFR 240.18a-7, or 17 CFR 240.17a-12, as applicable.
- ☒ (v) Independent public accountant's report based on an examination of certain statements in the compliance report under 17 CFR 240.17a-5 or 17 CFR 240.18a-7, as applicable.
- ☐ (w) Independent public accountant's report based on a review of the exemption report under 17 CFR 240.17a-5 or 17 CFR 240.18a-7, as applicable.
- ☐ (x) Supplemental reports on applying agreed-upon procedures, in accordance with 17 CFR 240.15c3-1e or 17 CFR 240.17a-12, as applicable.
- ☐ (y) Report describing any material inadequacies found to exist or found to have existed since the date of the previous audit, or a statement that no material inadequacies exist, under 17 CFR 240.17a-12(k).
- ☒ (z) Other:
 - ☒ Statement of segregation requirements and funds in segregation for customers trading on U.S. commodity exchanges
 - ☒ Statement of segregation requirements and funds in segregation for customers' dealer options accounts
 - ☒ Statement of secured amounts and funds held in separate accounts pursuant to Commission Regulation 30.7
 - ☒ Computation of CFTC Minimum Net Capital Requirement
 - ☒ Statement of cleared swaps customer segregation requirements and funds in cleared swaps customer accounts under 4D(F) of the CEA

****To request confidential treatment of certain portions of this filing, see 17 CFR 240.17a-5(e)(3) or 17 CFR 240.18a-7(d)(2), as applicable.**

OATH OR AFFIRMATION

State of New York

ss:

County of New York

I, Brian Doyle, affirm that, to the best of my knowledge and belief, the accompanying consolidated financial statements and supplemental financial information pertaining to the firm of Goldman Sachs & Co. LLC as of December 31, 2021, are true and correct. I further affirm that, as of December 31, 2021, neither the firm nor any partner, officer, director, Executive Officer (defined for purposes of this oath as executive officers of Goldman Sachs & Co. LLC, and members of the Board of Directors and the Management Committee of The Goldman Sachs Group, Inc., the sole member of Goldman Sachs & Co. LLC), or equivalent person, as the case may be, had any proprietary interest in any account classified solely as that of a customer except as follows:

Receivables from customers and counterparties includes \$10,761,252 receivable from Executive Officers and payables to customers and counterparties includes \$68,081,210 payable to Executive Officers. Additionally, the account balances of certain affiliates are included in receivables from customers and counterparties or payables to customers and counterparties for purposes of financial statement presentation.

In addition, pursuant to Financial Industry Regulatory Authority Rule 4140, we affirm that the attached consolidated financial statements and supplemental financial information as of December 31, 2021, have been or will be made available to Executive Officers of The Goldman Sachs Group, Inc.



Brian Doyle
Chief Financial Officer

Subscribed and sworn before me; 3/14/2022



ALLISON GUERRA
Notary Public, State of New York
No. 01GU6133148
Qualified in Kings County
Certificate Filed in New York County
Commission Expires September 12, 2025

INDEX

	Page No.
Report of Independent Registered Public Accounting Firm	1
Consolidated Financial Statements	2
Consolidated Statement of Financial Condition	2
Consolidated Statement of Earnings	3
Consolidated Statement of Comprehensive Income	3
Consolidated Statement of Changes in Member's Equity	4
Consolidated Statement of Changes in Subordinated Borrowings	5
Consolidated Statement of Cash Flows	6
Notes to Consolidated Financial Statements	7
Note 1. Description of Business	7
Note 2. Basis of Presentation	7
Note 3. Significant Accounting Policies	7
Note 4. Fair Value Measurements	11
Note 5. Financial Instruments Owned and Financial Instruments Sold, But Not Yet Purchased	16
Note 6. Cash Instruments	16
Note 7. Derivatives and Hedging Activities	19
Note 8. Fair Value Option	25
Note 9. Collateralized Agreements and Financings	27
Note 10. Other Assets	30
Note 11. Unsecured Borrowings	30
Note 12. Subordinated Borrowings	30
Note 13. Other Liabilities	31
Note 14. Securitization Activities	31
Note 15. Variable Interest Entities	32
Note 16. Commitments, Contingencies and Guarantees	33
Note 17. Transactions with Related Parties	35
Note 18. Income Taxes	36
Note 19. Credit Concentrations	38
Note 20. Legal Proceedings	38
Note 21. Net Capital Requirements	39
Note 22. Employee Benefit Plans	40
Note 23. Employee Incentive Plans	40
Note 24. Subsequent Events	42
Supplemental Financial Information	43
Supplemental Financial Information Pursuant to Rule 17a-5	43
Supplemental Financial Information Pursuant to Regulation 1.10	48



Report of Independent Registered Public Accounting Firm

To the Board of Managers and Members of
Goldman Sachs & Co. LLC

Opinion on the Financial Statements

We have audited the accompanying consolidated statement of financial condition of Goldman Sachs & Co. LLC and its subsidiaries (the "Company") as of December 31, 2021, and the related consolidated statements of earnings, of comprehensive income, of changes in member's equity, of changes in subordinated borrowings and of cash flows for the year then ended, including the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021, and the results of its operations and its cash flows for the year then ended in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

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

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

Our audit included performing procedures to assess the risks of material misstatement of the

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

Supplemental Information

The accompanying Supplemental Financial Information Pursuant to Rule 17a-5 and Supplemental Financial Information Pursuant to Regulation 1.10 as of December 31, 2021 (collectively, the "supplemental information") has been subjected to audit procedures performed in conjunction with the audit of the Company's consolidated financial statements. The supplemental information is the responsibility of the Company's management. Our audit procedures included determining whether the supplemental information reconciles to the consolidated financial statements or the underlying accounting and other records, as applicable, and performing procedures to test the completeness and accuracy of the information presented in the supplemental information. In forming our opinion on the supplemental information, we evaluated whether the supplemental information, including its form and content, is presented in conformity with Rule 17a-5 under the Securities Exchange Act of 1934 and Regulation 1.10 under the Commodity Exchange Act. In our opinion, the supplemental information is fairly stated, in all material respects, in relation to the consolidated financial statements as a whole.

PricewaterhouseCoopers LLP

February 25, 2022

We have served as the Company's auditor since 1922.

Consolidated Statement of Financial Condition

<i>\$ in millions</i>	As of December 2021
Assets	
Cash	\$ 6,391
Collateralized agreements:	
Securities purchased under agreements to resell (at fair value)	103,789
Securities borrowed (includes \$35,326 at fair value)	214,767
Secured loans to The Goldman Sachs Group, Inc.	24,550
Receivables:	
Brokers, dealers and clearing organizations	28,926
Customers and counterparties (includes \$42 at fair value)	62,943
Financial instruments owned (at fair value and includes \$39,561 pledged as collateral)	142,733
Other assets	4,311
Total assets	\$ 588,410
Liabilities and member's equity	
Collateralized financings:	
Securities sold under agreements to repurchase (at fair value)	\$ 139,758
Securities loaned (includes \$21,631 at fair value)	131,526
Other secured financings (includes \$5,868 at fair value)	39,432
Payables:	
Brokers, dealers and clearing organizations	5,324
Customers and counterparties	154,540
Financial instruments sold, but not yet purchased (at fair value)	55,000
Unsecured short-term borrowings	9,450
Unsecured long-term borrowings	25
Other liabilities	15,394
Subordinated borrowings	22,500
Total liabilities	572,949
Commitments, contingencies and guarantees	
Member's equity	
Member's equity	15,460
Accumulated other comprehensive income	1
Total member's equity	15,461
Total liabilities and member's equity	\$ 588,410

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statement of Earnings

	Year Ended December 2021
<i>\$ in millions</i>	
Revenues	
Investment banking	\$ 9,153
Investment management	4,325
Commissions and fees	2,197
Market making	3,325
Other principal transactions	(101)
Total non-interest revenues	18,899
Interest income	3,184
Interest expense	1,052
Net interest income	2,132
Total net revenues	21,031
Operating expenses	
Compensation and benefits	5,646
Service charges	998
Brokerage, clearing, exchange and distribution fees	2,349
Market development	166
Communications and technology	537
Depreciation and amortization	485
Occupancy	184
Professional fees	366
Other expenses	1,531
Total operating expenses	12,262
Pre-tax earnings	8,769
Provision for taxes	2,102
Net earnings	\$ 6,667

Consolidated Statement of Comprehensive Income

	Year Ended December 2021
<i>\$ in millions</i>	
Net earnings	\$ 6,667
Debt valuation adjustment, net of tax	1
Comprehensive income	\$ 6,668

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statement of Changes in Member's Equity

<i>\$ in millions</i>	Year Ended December 2021
Beginning balance	\$ 11,994
Net earnings	6,667
Distributions to The Goldman Sachs Group, Inc.	(3,500)
Contributions from The Goldman Sachs Group, Inc.	299
Other comprehensive income	1
Ending balance	\$ 15,461

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statement of Changes in Subordinated Borrowings

<i>\$ in millions</i>	Year Ended December 2021
Beginning balance	\$ 22,500
Payments to The Goldman Sachs Group, Inc.	—
Borrowings from The Goldman Sachs Group, Inc.	—
Ending balance	\$ 22,500

The accompanying notes are an integral part of these consolidated financial statements.

Consolidated Statement of Cash Flows

	Year Ended December 2021
<i>\$ in millions</i>	
Cash flows from operating activities	
Net earnings	\$ 6,667
Adjustments to reconcile net earnings to net cash provided by operating activities:	
Depreciation and amortization	485
Deferred income taxes	(171)
Share-based compensation	1,192
Changes in operating assets and liabilities:	
Receivables and payables, net	4,261
Collateralized transactions (excluding other secured financings), net	(21,933)
Financial instruments owned	27,097
Financial instruments sold, but not yet purchased	(1,873)
Other, net	3,693
Net cash provided by operating activities	19,418
Cash flows from investing activities	
Purchase of property, leasehold improvements and equipment	(759)
Net cash used for investing activities	(759)
Cash flows from financing activities	
Unsecured short-term borrowings, net	(13,360)
Other secured financings (short-term), net	(3,557)
Proceeds from issuance of other secured financings (long-term)	1,814
Repayment of other secured financings (long-term), including the current portion	(836)
Derivative contracts with a financing element, net	919
Distributions to The Goldman Sachs Group, Inc.	(3,500)
Settlement of share-based awards in satisfaction of withholding tax requirements	(518)
Net cash used for financing activities	(19,038)
Net decrease in cash	(379)
Cash, beginning balance	6,770
Cash, ending balance	\$ 6,391
Supplemental disclosures:	
Cash payments for interest, net of capitalized interest	\$ 1,105
Cash payments for income taxes, net	\$ 1,781

See Note 17 for information about non-cash activities.

The accompanying notes are an integral part of these consolidated financial statements.

Notes to Consolidated Financial Statements

Note 1.

Description of Business

Goldman Sachs & Co. LLC (GS&Co.), a limited liability company registered as a U.S. broker-dealer, futures commission merchant, swap dealer and security-based swap dealer, 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 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 and spin-offs, and equity and debt underwriting of public offerings and private placements.

Global Markets

The firm facilitates client transactions and makes markets in fixed income, equity, currency and commodity products with institutional clients, such as corporations, financial institutions, investment funds and governments. The firm also makes markets in and clears institutional client transactions on major stock, options and futures exchanges and provides prime brokerage and other equities financing activities, including securities lending, margin lending and swaps. The firm also provides financing to clients through securities purchased under agreements to resell (resale agreements).

Asset Management

The firm manages assets 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 clients and a network of third-party distributors. The firm holds equity investments, which include alternative investing activities related to public and private equity.

Wealth Management

The firm provides investing and wealth advisory solutions, including executing brokerage transactions and managing assets for individuals in its wealth management business.

Note 2.

Basis of Presentation

These consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States (U.S. GAAP) and include 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.

All references to 2021 refer to the firm's year ended, or the date, as the context requires, December 31, 2021. 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 Note 4 for policies on fair value measurements and below and Note 15 for policies on consolidation accounting. All other significant accounting policies are either described below or included in the following footnotes:

Fair Value Measurements	Note 4
Financial Instruments Owned and Financial Instruments Sold, But Not Yet Purchased	Note 5
Cash Instruments	Note 6
Derivatives and Hedging Activities	Note 7
Fair Value Option	Note 8
Collateralized Agreements and Financings	Note 9
Other Assets	Note 10
Unsecured Borrowings	Note 11
Subordinated Borrowings	Note 12
Other Liabilities	Note 13
Securitization Activities	Note 14
Variable Interest Entities	Note 15
Commitments, Contingencies and Guarantees	Note 16
Transactions with Related Parties	Note 17
Income Taxes	Note 18
Credit Concentrations	Note 19
Legal Proceedings	Note 20
Employee Benefit Plans	Note 22
Employee Incentive Plans	Note 23

Notes to Consolidated Financial Statements

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 15 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 generally accounted for 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 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 these consolidated financial statements requires management to make certain estimates and assumptions, the most important of which relate to fair value measurements, provisions for losses that may arise from litigation and regulatory proceedings (including governmental investigations), and accounting for income taxes. These estimates and assumptions are based on the best available information but actual results could be materially different.

Revenue Recognition

Financial Assets and 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 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. Fair value gains or losses are generally included in market making or other principal transactions. See Note 4 for further information about fair value measurements.

Revenue from Contracts with Clients. The firm recognizes revenue earned from contracts with clients for services, such as investment banking, investment management, and execution and clearing (contracts with clients), when the performance obligations related to the underlying transaction are completed.

Revenues from contracts with clients represent approximately 83% of total non-interest revenues for 2021 (including substantially all of investment banking revenues, investment management revenues and commissions and fees).

Investment Banking

Advisory. Fees from financial advisory assignments are recognized in revenues when the services related to the underlying transaction are completed under the terms of the assignment. Non-refundable deposits and milestone payments in connection with financial advisory assignments are recognized in revenues upon completion of the underlying transaction or when the assignment is otherwise concluded.

Notes to Consolidated Financial Statements

Expenses associated with financial advisory assignments are recognized when incurred and are included in other expenses. Client reimbursements for such expenses are included in investment banking revenues.

Underwriting. Fees from underwriting assignments are recognized in revenues upon completion of the underlying transaction based on the terms of the assignment.

Expenses associated with underwriting assignments are generally deferred until the related revenue is recognized or the assignment is otherwise concluded. Such expenses are included in other expenses.

Investment Management

The firm earns management fees and incentive fees for investment management services, which are included in investment management revenues. Management fees are calculated as a percentage of net asset value, invested capital or committed capital and are recognized over time in the period in which the services are performed. Incentive fees are calculated as a percentage of a fund's excess return above a specified benchmark or other performance target. Incentive fees earned from a fund are recognized when it is probable that a significant reversal of such fees will not occur, which is generally when such fees are no longer subject to fluctuations in the market value of investments held by the fund. Therefore, incentive fees recognized during the period may relate to performance obligations satisfied in previous periods.

Distribution fees paid by the firm are calculated based on either a percentage of the management fee or the committed capital. Such fees are included in brokerage, clearing, exchange and distribution fees.

Commissions and Fees

The firm earns commissions and fees from executing and clearing client transactions on stock, options and futures markets, as well as over-the-counter (OTC) transactions. Commissions and fees are recognized on the day the trade is executed. The firm also provides third-party research services to clients in connection with certain soft-dollar arrangements. Third-party research costs incurred by the firm in connection with such arrangements are presented net within commissions and fees.

Remaining Performance Obligations

Remaining performance obligations are services that the firm has committed to perform in the future in connection with its contracts with clients. The firm's remaining performance obligations are generally related to its financial advisory assignments and certain investment management activities. Revenues associated with remaining performance obligations relating to financial advisory assignments cannot be determined until the outcome of the transaction. For the firm's investment management activities, where fees are calculated based on the net asset value of the fund or separately managed account, future revenues associated with such remaining performance obligations cannot be determined as such fees are subject to fluctuations in the market value of investments held by the fund or separately managed account.

The firm is able to determine the future revenues associated with management fees calculated based on committed capital. As of December 2021, future net revenues associated with such remaining performance obligations will be recognized through 2026. Annual revenues associated with such performance obligations average less than \$70 million through 2026.

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 14 for further information about transfers of financial assets accounted for as sales.

Cash

Cash included cash and due from banks of \$3.63 billion as of December 2021. Cash also included interest-bearing deposits with banks of \$2.76 billion as of December 2021. See Note 17 for further information about cash deposited with an affiliate.

The firm segregates cash for regulatory and other purposes related to client activity. Cash segregated for regulatory and other purposes was \$4.73 billion as of December 2021. In addition, the firm segregates securities for regulatory and other purposes related to client activity. See Note 9 for further information about segregated securities.

Notes to Consolidated Financial Statements

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. These receivables primarily include margin receivables relating to transactions cleared on derivative exchanges as well as receivables when the firm has failed to deliver securities to a purchaser by the settlement date. As these receivables generally do not give rise to material credit risk for the firm, no allowance for credit losses is held against them. Payables to brokers, dealers and clearing organizations primarily includes payables relating to unsettled trades, including payables when the firm has failed to receive securities from a seller by the settlement date. 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 4 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 December 2021.

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 any allowance for credit losses, which generally approximates fair value. To mitigate credit exposure on customer margin loans, the firm monitors the market value of these transactions, and delivers or obtains additional collateral due to changes in the market value of the transactions, as appropriate. As such, generally no allowance for credit losses is held against these receivables. As these receivables are not accounted for at fair value, they are not included in the firm's fair value hierarchy in Notes 4 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 December 2021. See Note 8 for further information about receivables from customers and counterparties accounted for at fair value under the fair value option. Interest on receivables from customers and counterparties is recognized over the life of the transaction and included in interest income.

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. The firm's receivables from contracts with clients were \$1.21 billion as of December 2021. As of December 2021, 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 4 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 December 2021. Interest on payables to customers and counterparties is recognized over the life of the transaction and included in interest expense.

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.

Notes to Consolidated Financial Statements

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. 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.

Recent Accounting Developments

Facilitation of the Effects of Reference Rate Reform on Financial Reporting (ASC 848). In March 2020, the FASB issued ASU No. 2020-04, “Reference Rate Reform – Facilitation of the Effects of Reference Rate Reform on Financial Reporting.” This ASU provides optional relief from applying generally accepted accounting principles to derivatives, cash instruments and other contracts and transactions affected by reference rate reform. In addition, in January 2021 the FASB issued ASU No. 2021-01, “Reference Rate Reform – Scope,” which clarified the scope of ASC 848 relating to contract modifications. The firm adopted these ASUs upon issuance and elected to apply the relief available to certain modified derivatives. The adoption of these ASUs did not have a material impact on the firm’s consolidated financial statements.

Note 4.

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 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 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 liabilities may require 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.

Notes to Consolidated Financial Statements

The valuation techniques and nature of significant inputs used to determine the fair value of the firm's financial instruments are described below. See Notes 5 through 8 for further information about significant unobservable inputs used to value level 3 financial instruments.

Valuation Techniques and Significant Inputs for Cash Instruments

Level 1. Level 1 cash instruments include U.S. government obligations, certain non-U.S. government obligations, certain agency obligations, certain corporate debt instruments, certain other debt obligations 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. Level 2 cash instruments include most non-U.S. government obligations, most agency obligations, most mortgage-backed loans and securities, most corporate debt instruments, 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 executable) 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. 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 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 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 and capitalization rates. 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 any loan forbearances and 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;

Notes to Consolidated Financial Statements

- 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 debt securities and corporate loans. 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 or similar 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);
- Duration.

Equity Securities

Equity securities consists of private equities. Recent third-party completed or pending transactions (e.g., merger proposals, debt restructurings, tender offers) are considered 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 and revenue 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 Debt Obligations

The significant inputs to the valuation of other debt obligations 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.

Valuation Techniques and Significant Inputs 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 only observable for contracts with shorter tenors.

Notes to Consolidated Financial Statements

- **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.

Level 1. 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. 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 executable) and the relationship of recent market activity to the prices provided from alternative pricing sources.

Level 3. 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 Note 7 for further information about significant unobservable inputs used in the valuation of level 3 derivatives.

Notes to Consolidated Financial Statements

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 exit price valuation. These adjustments incorporate bid/offer spreads, the cost of liquidity, and credit 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.

Valuation Techniques and Significant Inputs for Other Financial Instruments at Fair Value

In addition to cash instruments and derivatives, the firm accounts for certain of its other financial assets and liabilities at fair value under the fair value option. Such instruments include resale and repurchase agreements; certain securities borrowed and loaned transactions; certain other secured financings, including transfers of assets accounted for as financings; and certain receivables from customers and counterparties, including certain margin loans. These instruments 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. The significant inputs used to value the firm's other financial instruments are described below.

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.

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

Receivables from Customers and Counterparties.

The significant inputs to the valuation of such receivables are interest rates, the amount and timing of expected future cash flows and funding spreads.

Financial Assets and Liabilities at Fair Value

The table below presents financial assets and liabilities accounted for at fair value.

<i>\$ in millions</i>	As of December 2021
Total level 1 financial assets	\$ 89,062
Total level 2 financial assets	192,394
Total level 3 financial assets	1,427
Counterparty and cash collateral netting	(993)
Total financial assets at fair value	\$ 281,890
Total assets	\$ 588,410
Total level 3 financial assets divided by:	
Total assets	0.2%
Total financial assets at fair value	0.5%
Total level 1 financial liabilities	\$ 36,141
Total level 2 financial liabilities	191,026
Total level 3 financial liabilities	2,043
Counterparty and cash collateral netting	(6,953)
Total financial liabilities at fair value	\$ 222,257
Total liabilities	\$ 572,949
Total level 3 financial liabilities divided by:	
Total liabilities	0.4%
Total financial liabilities at fair value	0.9%

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.

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

<i>\$ in millions</i>	As of December 2021
Cash instruments	\$ 1,401
Derivatives	26
Total	\$ 1,427

See Notes 5 through 8 for further information about level 3 financial assets (including information about unrealized gains and losses related to level 3 financial assets and transfers into and out of level 3).

Notes to Consolidated Financial Statements

Note 5.

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

Financial instruments owned and financial instruments sold, but not yet purchased include cash instruments and derivatives primarily held in connection with the firm's market-making or risk management activities. These assets and liabilities are accounted for at fair value either under the fair value option or in accordance with other U.S. GAAP, and the related fair value gains and losses are generally recognized in the consolidated statement of earnings.

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

<i>\$ in millions</i>	As of December 2021	
	Financial Instruments	Financial Instruments
	Owned	Sold, But Not Yet Purchased
Cash instruments	\$ 135,577	\$ 46,393
Derivatives	7,156	8,607
Total	\$ 142,733	\$ 55,000

See Note 6 for further information about cash instruments and Note 7 for further information about derivatives.

Gains and Losses from Market Making and Other Principal Transactions

The table below presents market making revenues by major product type and other principal transactions revenues.

<i>\$ in millions</i>	Year Ended December 2021
Interest rates	\$ (705)
Credit	722
Currencies	98
Equities	3,200
Commodities	10
Market making	3,325
Other principal transactions	(101)
Total	\$ 3,224

In the table above:

- Gains/(losses) include both realized and unrealized gains and losses. Gains/(losses) exclude related interest income and interest expense.

- Gains/(losses) included in market making are primarily related to the firm's financial instruments owned and financial instruments sold, but not yet purchased, including both derivative and non-derivative financial instruments. Gains/(losses) are not representative of the manner in which the firm manages its business activities because many of the firm's market-making and client facilitation strategies utilize financial instruments across various product types. Accordingly, gains or losses in one product type frequently offset gains or losses in other product types. For example, most of the firm's longer-term derivatives across product types are sensitive to changes in interest rates and may be economically hedged with interest rate swaps. Similarly, a significant portion of the firm's cash instruments and derivatives across product types has exposure to foreign currencies and may be economically hedged with foreign currency contracts.

Note 6.

Cash Instruments

Cash instruments consists of instruments primarily held in connection with the firm's market-making or risk management activities. These instruments are accounted for at fair value and the related fair value gains and losses are recognized in the consolidated statement of earnings.

Fair Value of Cash Instruments by Level

The table below presents cash instruments by level within the fair value hierarchy.

<i>\$ in millions</i>	As of December 2021			
	Level 1	Level 2	Level 3	Total
Assets				
Government and agency obligations:				
U.S.	\$ 46,248	\$ 26,682	\$ –	\$ 72,930
Non-U.S.	21	363	–	384
Loans and securities backed by:				
Commercial real estate	–	1,013	52	1,065
Residential real estate	–	1,293	77	1,370
Corporate debt instruments	251	12,223	1,126	13,600
State and municipal obligations	–	568	–	568
Other debt obligations	63	948	43	1,054
Equity securities	42,467	2,036	103	44,606
Total	\$ 89,050	\$ 45,126	\$ 1,401	\$ 135,577
Liabilities				
Government and agency obligations:				
U.S.	\$(14,989)	\$ (25)	\$ –	\$(15,014)
Non-U.S.	(423)	(546)	–	(969)
Loans and securities backed by:				
commercial real estate	–	(42)	–	(42)
Corporate debt instruments	(22)	(9,598)	(5)	(9,625)
Equity securities	(20,705)	(36)	(2)	(20,743)
Total	\$(36,139)	\$(10,247)	\$ (7)	\$(46,393)

Notes to Consolidated Financial Statements

In the table above:

- Cash instrument assets are shown as positive amounts and cash instrument liabilities are shown as negative amounts.
- Corporate debt instruments includes corporate loans, debt securities and convertible debentures.
- Other debt obligations includes other asset-backed securities and money market instruments.
- Equity securities includes public and private equities and exchange-traded funds. Such securities included investments accounted for at fair value under the fair value option where the firm would otherwise apply the equity method of accounting of \$27 million as of December 2021.

See Note 4 for an overview of the firm's fair value measurement policies and the valuation techniques and significant inputs used to determine the fair value of cash instruments.

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 level 3 cash instruments.

<i>\$ in millions</i>	As of December 2021	
	Amount or Range	Weighted Average
Loans and securities backed by commercial real estate		
Level 3 assets	\$52	
Yield	5.6% to 28.5%	23.6%
Recovery rate	5.1% to 86.5%	53.6%
Duration (years)	0.1 to 4.1	2.1
Loans and securities backed by residential real estate		
Level 3 assets	\$77	
Yield	0.4% to 26.6%	12.4%
Cumulative loss rate	0.1% to 43.4%	17.7%
Duration (years)	1.2 to 12.6	6.0
Corporate debt instruments		
Level 3 assets	\$1,126	
Yield	2.1% to 18.0%	13.0%
Recovery rate	68.1% to 69.9%	69.4%
Duration (years)	2.0 to 5.0	3.4
Other debt obligations		
Level 3 assets	\$43	
Yield	14.2% to 44.8%	25.2%
Recovery rate	95.6% to 100.0%	97.6%
Duration (years)	0.9 to 3.7	2.4
Equity securities		
Level 3 assets	\$103	
Multiples	0.9x to 5.4x	4.6x

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 yield for corporate debt instruments is appropriate for valuing a specific corporate debt instrument but may not be appropriate for valuing any other corporate debt instrument. 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 December 2021. Due to the distinctive nature of each level 3 cash instrument, the interrelationship of inputs is not necessarily uniform within each product type.
- Cash instruments are valued using discounted cash flows.
- The firm's corporate debt instruments that are classified in level 3 primarily contain an embedded derivative component. As the significant unobservable inputs used to value these corporate debt instruments primarily relate to the embedded derivative component, these unobservable inputs are incorporated in the firm's derivative disclosures in Note 7.

Notes to Consolidated Financial Statements

Level 3 Rollforward

The table below presents a summary of the changes in fair value for level 3 cash instruments.

<i>\$ in millions</i>	Year Ended December 2021
Total cash instrument assets	
Beginning balance	\$ 1,253
Net realized gains/(losses)	51
Net unrealized gains/(losses)	46
Purchases	577
Sales	(377)
Settlements	(137)
Transfers into level 3	65
Transfers out of level 3	(77)
Ending balance	\$ 1,401
Total cash instrument liabilities	
Beginning balance	\$ (3)
Net unrealized gains/(losses)	(1)
Purchases	3
Sales	(6)
Ending balance	\$ (7)

In the table above:

- Changes in fair value are presented for all cash instruments that are classified in level 3 as of the end of the period.
- Net unrealized gains/(losses) relates to cash instruments that were still held at period-end.
- Purchases includes originations and secondary purchases.
- Transfers between levels of the fair value hierarchy are reported at the beginning of the reporting period in which they occur. If a cash instrument was transferred to level 3 during a reporting period, its entire gain or loss for the period is classified in level 3.
- For level 3 cash instrument assets, increases are shown as positive amounts, while decreases are shown as negative amounts. For level 3 cash instrument liabilities, increases are shown as negative amounts, while decreases are shown as positive amounts.
- Level 3 cash instruments are frequently economically hedged with level 1 and level 2 cash instruments and/or level 1, level 2 or level 3 derivatives. Accordingly, gains or losses that are classified in level 3 can be partially offset by gains or losses attributable to level 1 or level 2 cash instruments and/or level 1, level 2 or level 3 derivatives. As a result, gains or losses included in the level 3 rollforward below do not necessarily represent the overall impact on the firm's results of operations, liquidity or capital resources.

The table below presents information, by product type, for assets included in the summary table above.

<i>\$ in millions</i>	Year Ended December 2021
Loans and securities backed by commercial real estate	
Beginning balance	\$ 63
Net realized gains/(losses)	5
Net unrealized gains/(losses)	(16)
Purchases	14
Sales	(8)
Settlements	(12)
Transfers into level 3	14
Transfers out of level 3	(8)
Ending balance	\$ 52
Loans and securities backed by residential real estate	
Beginning balance	\$ 78
Net realized gains/(losses)	5
Net unrealized gains/(losses)	18
Purchases	1
Sales	(27)
Settlements	(8)
Transfers into level 3	24
Transfers out of level 3	(14)
Ending balance	\$ 77
Corporate debt instruments	
Beginning balance	\$ 1,013
Net realized gains/(losses)	38
Net unrealized gains/(losses)	26
Purchases	506
Sales	(328)
Settlements	(98)
Transfers into level 3	21
Transfers out of level 3	(52)
Ending balance	\$ 1,126
Equity securities	
Beginning balance	\$ 84
Net realized gains/(losses)	1
Net unrealized gains/(losses)	10
Purchases	25
Sales	(8)
Settlements	(7)
Transfers out of level 3	(2)
Ending balance	\$ 103
Other	
Beginning balance	\$ 15
Net realized gains/(losses)	2
Net unrealized gains/(losses)	8
Purchases	31
Sales	(6)
Settlements	(12)
Transfers into level 3	6
Transfers out of level 3	(1)
Ending balance	\$ 43

Notes to Consolidated Financial Statements

In the table above, the beginning balance and sales during the year for other included non-U.S. government and agency obligations and other debt obligations.

Level 3 Rollforward Commentary

The net realized and unrealized gains on level 3 cash instrument assets of \$97 million (reflecting \$51 million of net realized gains and \$46 million of net unrealized gains) for the year ended December 2021 included gains/(losses) of \$(1) million reported in market making, \$31 million reported in other principal transactions and \$67 million reported in interest income.

The drivers of the net unrealized gains on level 3 cash instrument assets for 2021 were not material.

Transfers into level 3 cash instrument assets during 2021 primarily reflected transfers of certain loans and securities backed by residential real estate 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 cash instrument assets during 2021 primarily reflected 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 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 market-making positions 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 financing activities. 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. Realized and unrealized gains and losses on derivatives, including those with affiliates, are included in market making and other principal transactions in the consolidated statement of earnings.

Notes to Consolidated Financial Statements

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

<i>\$ in millions</i>	As of December 2021	
	Derivative Assets	Derivative Liabilities
Not accounted for as hedges		
Exchange-traded	\$ 3	\$ 2
OTC-cleared	345	274
Bilateral OTC	19,054	18,749
Total interest rates	19,402	19,025
OTC-cleared	14	14
Bilateral OTC	4,842	5,429
Total credit	4,856	5,443
Currencies – bilateral OTC	4,086	4,389
Commodities – bilateral OTC	80	72
Exchange-traded	20,907	23,515
Bilateral OTC	34,975	39,273
Total equities	55,882	62,788
Total gross fair value	\$ 84,306	\$ 91,717
Offset in the consolidated statement of financial condition		
Exchange-traded	\$ (20,870)	\$ (20,870)
OTC-cleared	(266)	(266)
Bilateral OTC	(55,039)	(55,039)
Counterparty netting	(76,175)	(76,175)
Cash collateral netting – bilateral OTC	(975)	(6,935)
Total amounts offset	\$ (77,150)	\$ (83,110)
Included in the consolidated statement of financial condition		
Exchange-traded	\$ 40	\$ 2,647
OTC-cleared	93	22
Bilateral OTC	7,023	5,938
Total	\$ 7,156	\$ 8,607
Not offset in the consolidated statement of financial condition		
Cash collateral	\$ (12)	\$ (231)
Securities collateral	(240)	(26)
Total	\$ 6,904	\$ 8,350

<i>\$ in millions</i>	Notional Amounts as of December 2021
Not accounted for as hedges	
Exchange-traded	\$ 76,752
OTC-cleared	346,765
Bilateral OTC	2,307,433
Total interest rates	2,730,950
OTC-cleared	–
Bilateral OTC	257,207
Total credit	257,207
Exchange-traded	1,516
Bilateral OTC	661,043
Total currencies	662,559
Exchange-traded	59
OTC-cleared	1
Bilateral OTC	1,350
Total commodities	1,410
Exchange-traded	615,727
OTC-cleared	1
Bilateral OTC	872,956
Total equities	1,488,684
Total notional amounts	\$ 5,140,810

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 \$6.31 billion and derivative liabilities of \$5.70 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.

Notes to Consolidated Financial Statements

Fair Value of Derivatives by Level

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

\$ in millions	As of December 2021			
	Level 1	Level 2	Level 3	Total
Assets				
Interest rates	\$ 2	\$ 19,399	\$ 1	\$ 19,402
Credit	–	4,690	166	4,856
Currencies	–	4,086	–	4,086
Commodities	–	80	–	80
Equities	10	55,517	355	55,882
Gross fair value	12	83,772	522	84,306
Counterparty netting in levels	–	(75,661)	(496)	(76,157)
Subtotal	\$ 12	\$ 8,111	\$ 26	\$ 8,149
Cross-level counterparty netting				(18)
Cash collateral netting				(975)
Net fair value				\$ 7,156
Liabilities				
Interest rates	\$ (2)	\$ (19,022)	\$ (1)	\$ (19,025)
Credit	–	(5,241)	(202)	(5,443)
Currencies	–	(4,386)	(3)	(4,389)
Commodities	–	(72)	–	(72)
Equities	–	(61,320)	(1,468)	(62,788)
Gross fair value	(2)	(90,041)	(1,674)	(91,717)
Counterparty netting in levels	–	75,661	496	76,157
Subtotal	\$ (2)	\$ (14,380)	\$ (1,178)	\$ (15,560)
Cross-level counterparty netting				18
Cash collateral netting				6,935
Net fair value				\$ (8,607)

In the table above:

- 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.

See Note 4 for an overview of the firm's fair value measurement policies and the valuation techniques and significant inputs used to determine the fair value of derivatives.

Significant Unobservable Inputs

The table below presents the amount of net level 3 derivative liabilities, and ranges, averages and medians of significant unobservable inputs used to value level 3 derivatives.

\$ in millions	As of December 2021	
	Amount or Range	Average/Median
Credit, net	\$(36)	
Credit spreads (bps)	1 to 153	23/11
Upfront credit points	2 to 100	34/26
Recovery rates	15% to 70%	57%/70%
Equities, net	\$(1,113)	
Correlation	(39)% to 99%	61%/67%
Volatility	4% to 150%	18%/10%

Level 3 interest rates and currencies were not material as of December 2021, and therefore are not included in the table above.

In the table above:

- 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 amount 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, correlation and discounted cash flow models.

Notes to Consolidated Financial Statements

- The fair value of any one instrument may be determined using multiple valuation techniques. For example, option pricing models and discounted cash flow 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 provides information about the ranges of significant unobservable inputs used to value the firm's level 3 derivative instruments:

- **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.
- **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.

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 to changes in significant unobservable inputs, in isolation, as of period-end:

- **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.

- **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.

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 Rollforward

The table below presents a summary of the changes in fair value for level 3 derivatives.

	Year Ended December 2021
<i>\$ in millions</i>	
Total level 3 derivatives, net	
Beginning balance	\$ (1,337)
Net realized gain/(losses)	(89)
Net unrealized gains/(losses)	(186)
Purchases	131
Sales	(592)
Settlements	838
Transfers into level 3	(76)
Transfers out of level 3	159
Ending balance	\$ (1,152)

In the table above:

- Changes in fair value are presented for all derivative assets and liabilities that are classified in level 3 as of the end of the period.
- Net unrealized gains/(losses) relates to instruments that were still held at period-end.
- Transfers between levels of the fair value hierarchy are reported at the beginning of the reporting period in which they occur. If a derivative was transferred into level 3 during a reporting period, its entire gain or loss for the period is classified in level 3.
- Positive amounts for transfers into level 3 and negative amounts for transfers out of level 3 represent net transfers of derivative assets. Negative amounts for transfers into level 3 and positive amounts for transfers out of level 3 represent net transfers of derivative liabilities.
- A derivative with level 1 and/or level 2 inputs is classified in level 3 in its entirety if it has at least one significant level 3 input.

Notes to Consolidated Financial Statements

- If there is one significant level 3 input, the entire gain or loss from adjusting only observable inputs (i.e., level 1 and level 2 inputs) is classified in level 3.
- Gains or losses that have been classified in level 3 resulting from changes in level 1 or level 2 inputs are frequently offset by gains or losses attributable to level 1 or level 2 derivatives and/or level 1, level 2 and level 3 cash instruments. As a result, gains/(losses) included in the level 3 rollforward below do not necessarily represent the overall impact on the firm's results of operations, liquidity or capital resources.

The table below presents information, by product type, for derivatives included in the summary table above.

<i>\$ in millions</i>	Year Ended December 2021
Interest rates, net	
Beginning balance	\$ 1
Net unrealized gains/(losses)	(1)
Ending balance	\$ –
Credit, net	
Beginning balance	\$ (17)
Net realized gain/(losses)	(3)
Net unrealized gains/(losses)	12
Purchases	(1)
Sales	(31)
Settlements	1
Transfers into level 3	2
Transfers out of level 3	1
Ending balance	\$ (36)
Currencies, net	
Beginning balance	\$ –
Net realized gain/(losses)	1
Net unrealized gains/(losses)	(2)
Settlements	(2)
Ending balance	\$ (3)
Commodities, net	
Beginning balance	\$ (8)
Settlements	2
Transfers out of level 3	6
Ending balance	\$ –
Equities, net	
Beginning balance	\$ (1,313)
Net realized gain/(losses)	(87)
Net unrealized gains/(losses)	(195)
Purchases	132
Sales	(561)
Settlements	837
Transfers into level 3	(78)
Transfers out of level 3	152
Ending balance	\$ (1,113)

Level 3 Rollforward Commentary

The net realized and unrealized losses on level 3 derivatives of \$275 million (reflecting \$89 million of net realized losses and \$186 million of net unrealized losses) for 2021 were substantially all reported in market making.

The net unrealized losses on level 3 derivatives for 2021 were attributable to losses on certain equity derivatives, primarily reflecting the impact of an increase in equity prices.

The drivers of transfers into level 3 derivatives during 2021 were not material.

Transfers out of level 3 derivatives during 2021 primarily reflected transfers of certain equity derivative liabilities to level 2 (principally due to increased transparency of certain unobservable inputs used to value these derivatives).

Credit Derivatives

The firm enters into a broad array of credit derivatives to facilitate client transactions and to manage the credit risk associated with market-making and investing and financing 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.

Notes to Consolidated Financial Statements

- 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 December 2021, written credit derivatives had a total gross notional amount of \$126.47 billion and purchased credit derivatives had a total gross notional amount of \$130.74 billion, for total net notional purchased protection of \$4.27 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 December 2021				
	Credit Spread on Underlier (basis points)				
	Greater				
	251 -	501 -	1,000	1,000	Total
<i>\$ in millions</i>	0 - 250	500	1,000	1,000	Total
Maximum Payout/Notional Amount of Written Credit Derivatives by Tenor					
Less than 1 year	\$ 15,053	\$ 464	\$ 412	\$ 4,099	\$ 20,028
1 – 5 years	91,375	5,073	2,386	1,433	100,267
Greater than 5 years	5,220	774	169	13	6,176
Total	\$ 111,648	\$ 6,311	\$ 2,967	\$ 5,545	\$ 126,471
Maximum Payout/Notional Amount of Purchased Credit Derivatives					
Offsetting	\$ 111,740	\$ 6,359	\$ 2,818	\$ 5,122	\$ 126,039
Other	\$ 3,758	\$ 534	\$ 243	\$ 162	\$ 4,697
Fair Value of Written Credit Derivatives					
Asset	\$ 2,553	\$ 394	\$ 78	\$ 44	\$ 3,069
Liability	189	58	191	1,542	1,980
Net asset/(liability)	\$ 2,364	\$ 336	\$ (113)	\$ (1,498)	\$ 1,089

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.

Notes to Consolidated Financial Statements

Impact of Credit and Funding Spreads on Derivatives

The firm realizes gains or losses on its derivative contracts. These gains or losses include credit valuation adjustments (CVA) relating to uncollateralized derivative assets and liabilities, which represent the gains or losses (including hedges) attributable to the impact of changes in credit exposure, counterparty and Group Inc.'s credit spreads, liability funding spreads (which include Group Inc.'s credit), probability of default and assumed recovery. These gains or losses also include funding valuation adjustments (FVA) relating to uncollateralized derivative assets, which represent the gains or losses (including hedges) attributable to the impact of changes in expected funding exposures and funding spreads.

The table below presents information about CVA and FVA.

<i>\$ in millions</i>	Year Ended December 2021
CVA, net of hedges	\$ (16)
FVA, net of hedges	26
Total	\$ 10

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 bilateral agreements (excluding collateral posted) and the fair value of collateral posted. Additional collateral or termination payments that could have been called at the reporting date by counterparties in the event of a one- or two-notch downgrade in the credit ratings of the firm and/or Group Inc. was not material.

<i>\$ in millions</i>	As of December 2021
Net derivative liabilities under bilateral agreements	\$1,176
Collateral posted	\$ 266

Note 8.

Fair Value Option

Other Financial Assets and Liabilities at Fair Value

In addition to financial instruments owned and financial instruments sold, but not yet purchased, the firm accounts for certain of its other financial assets and 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 bifurcable 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 December 2021, the firm did not elect to bifurcate any hybrid financial instruments.

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

- Resale and repurchase agreements;
- Certain securities borrowed and loaned transactions;
- Certain receivables from customers and counterparties, including certain margin loans; and
- Certain other secured financings; including transfers of assets accounted for as financings.

Notes to Consolidated Financial Statements

Fair Value of Other Financial Assets and Liabilities by Level

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

\$ in millions	As of December 2021			
	Level 1	Level 2	Level 3	Total
Assets				
Resale agreements	\$ -	\$ 103,789	\$ -	\$ 103,789
Securities borrowed	-	35,326	-	35,326
Receivables from customers and counterparties	-	42	-	42
Total	\$ -	\$ 139,157	\$ -	\$ 139,157
Liabilities				
Repurchase agreements	\$ -	\$ (139,758)	\$ -	\$ (139,758)
Securities loaned	-	(21,631)	-	(21,631)
Other secured financings	-	(5,010)	(858)	(5,868)
Total	\$ -	\$ (166,399)	\$ (858)	\$ (167,257)

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

See Note 4 for an overview of the firm's fair value measurement policies and the valuation techniques and significant inputs used to determine the fair value of other financial assets and liabilities.

Level 3 Rollforward

The table below presents a summary of the changes in fair value for level 3 other financial liabilities accounted for at fair value.

\$ in millions	Year Ended December 2021
Other secured financings	
Beginning balance	\$ (893)
Net realized gains/(losses)	(12)
Net unrealized gains/(losses)	35
Settlements	12
Ending balance	\$ (858)

In the table above:

- Changes in fair value are presented for all other financial liabilities that are classified in level 3 as of the end of the period.
- Net unrealized gains/(losses) relates to other financial liabilities that were still held at period-end.

- For level 3 other financial liabilities, increases are shown as negative amounts, while decreases are shown as positive amounts.
- Level 3 other financial liabilities are frequently economically hedged with cash instruments and derivatives. Accordingly, gains or losses that are classified in level 3 can be partially offset by gains or losses attributable to level 1, 2 or 3 cash instruments or derivatives. As a result, gains or losses included in the level 3 rollforward below do not necessarily represent the overall impact on the firm's results of operations, liquidity or capital resources.

Level 3 Rollforward Commentary

The net realized and unrealized gains on level 3 other financial liabilities of \$23 million (reflecting \$12 million of net realized losses and \$35 million of net unrealized gains) for 2021 were reported in market making.

The drivers of the net unrealized gains on level 3 other financial liabilities for 2021 were not material.

There were no transfers into or out of level 3 other financial liabilities during 2021.

Gains and Losses on Financial Assets and Liabilities Accounted for at Fair Value Under the Fair Value Option

The table below presents the gains and losses recognized in earnings as a result of the election to apply the fair value option to certain financial assets and liabilities.

\$ in millions	Year Ended December 2021
Resale agreements	\$ (18)
Other secured financings	15
Other	33
Total	\$ 30

In the table above:

- Gains/(losses) were substantially all included in market making.
- Gains/(losses) exclude contractual interest, which is included in interest income and interest expense, for all instruments other than hybrid financial instruments.
- Other financial assets and liabilities at fair value are frequently economically hedged with cash instruments and derivatives. Accordingly, gains or losses on such other financial assets and liabilities can be partially offset by gains or losses on cash instruments and derivatives. As a result, gains or losses on other financial assets and liabilities do not necessarily represent the overall impact on the firm's results of operations, liquidity or capital resources.

Notes to Consolidated Financial Statements

Gains/(losses) on financial instruments owned and financial instruments sold, but not yet purchased are included in market making and other principal transactions. See Note 5 for further information about gains/(losses) from market making and other principal transactions.

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 December 2021.

Note 9.

Collateralized Agreements and Financings

Collateralized agreements are resale agreements, securities borrowed and secured loans to Group Inc. 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 or facilitate 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, which is included in interest income, and collateralized financings, which is included in interest expense, is recognized over the life of the transaction.

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.

Notes to Consolidated Financial Statements

All other securities borrowed and loaned are recorded based on the amount of cash collateral advanced or received plus accrued interest. The firm also reviews such securities borrowed to determine if an allowance for credit losses should be recorded by taking into consideration the fair value of collateral received. 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 4 through 8. Had these agreements been included in the firm's fair value hierarchy, they would have been classified in level 2 as of December 2021.

Secured Loans to Group Inc.

The firm had secured loans to Group Inc. of \$24.55 billion as of December 2021. See Note 17 for further information about these secured loans.

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.

\$ in millions	As of December 2021			
	Assets		Liabilities	
	Resale agreements	Securities borrowed	Repurchase agreements	Securities loaned
Included in the consolidated statement of financial condition				
Gross carrying value	\$ 175,704	\$ 214,767	\$ 211,672	\$ 131,526
Counterparty netting	(71,915)	–	(71,914)	–
Total	103,789	214,767	139,758	131,526
Amounts not offset				
Counterparty netting	(15,796)	(41,831)	(15,796)	(41,831)
Collateral	(85,598)	(166,120)	(123,630)	(88,994)
Total	\$ 2,395	\$ 6,816	\$ 332	\$ 701

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.
- Resale agreements and repurchase agreements are carried at fair value under the fair value option. See Note 4 for further information about the valuation techniques and significant inputs used to determine fair value.
- Securities borrowed included in the consolidated statement of financial condition of \$35.33 billion as of December 2021, and securities loaned of \$21.63 billion as of December 2021 were at fair value under the fair value option. See Note 8 for further information about securities borrowed and securities loaned accounted for at fair value.

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.

\$ in millions	As of December 2021	
	Repurchase agreements	Securities loaned
Money market instruments	\$ 328	\$ 13
U.S. government and agency obligations	176,663	649
Non-U.S. government and agency obligations	2,181	25,422
Securities backed by commercial real estate	454	–
Securities backed by residential real estate	1,118	–
Corporate debt securities	5,791	8,966
State and municipal obligations	248	–
Other debt obligations	431	–
Equity securities	24,458	96,476
Total	\$ 211,672	\$ 131,526

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

\$ in millions	As of December 2021	
	Repurchase agreements	Securities loaned
No stated maturity and overnight	\$ 125,285	\$ 124,015
2 - 30 days	26,201	948
31 - 90 days	21,254	–
91 days - 1 year	35,458	6,563
Greater than 1 year	3,474	–
Total	\$ 211,672	\$ 131,526

Notes to Consolidated Financial Statements

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 include:

- Secured financings from Goldman Sachs Funding LLC (Funding IHC), a wholly owned subsidiary of Group Inc.;
- Transfers of assets accounted for as financings rather than sales; and
- Other structured financing arrangements.

Other secured financings included nonrecourse arrangements. Nonrecourse other secured financings were \$6 million as of December 2021.

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 4 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 December 2021.

The table below presents other secured financings by maturity.

<i>\$ in millions</i>	As of December 2021
Other secured financings (short-term)	\$ 37,966
Other secured financings (long-term):	
2023	972
2024	226
2025	14
2026 - thereafter	254
Total other secured financings (long-term)	1,466
Total other secured financings	\$ 39,432

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 \$33.56 billion of other secured financings accounted for at amortized cost was 0.09%.

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.

<i>\$ in millions</i>	As of December 2021
Collateral available to be delivered or repledged	\$ 686,779
Collateral that was delivered or repledged	\$ 606,478

The table below presents information about assets pledged.

<i>\$ in millions</i>	As of December 2021
Financial instruments owned pledged to counterparties that:	
Had the right to deliver or repledge	\$ 39,561
Did not have the right to deliver or repledge	\$ 52,317

Notes to Consolidated Financial Statements

The firm also segregates securities for regulatory and other purposes related to client activity. Such securities are segregated from financial instruments owned as well as from securities received as collateral under resale agreements and securities borrowed transactions. Securities segregated by the firm were \$41.49 billion as of December 2021.

Note 10.

Other Assets

The table below presents other assets by type.

<i>\$ in millions</i>	As of December 2021
Receivables from affiliates	\$ 1,614
Property, leasehold improvements and equipment	1,545
Income tax-related assets	636
Miscellaneous receivables and other	516
Total	\$ 4,311

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 \$3.55 billion as of December 2021. 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 when 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 impairments during 2021.

Note 11.

Unsecured Borrowings

The table below presents information about unsecured borrowings.

<i>\$ in millions</i>	As of December 2021
Unsecured short-term borrowings	\$ 9,450
Unsecured long-term borrowings	25
Total	\$ 9,475

Unsecured Short-Term Borrowings

The firm has loan agreements with Group Inc. and Funding IHC through which it obtains substantially all of its unsecured short-term borrowings. Group Inc. and Funding IHC can demand repayment of the outstanding borrowings under these agreements with 90-day advance notice. 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 4 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 December 2021.

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

<i>\$ in millions</i>	As of December 2021
Borrowings from affiliates	\$ 9,324
Other unsecured short-term borrowings	126
Total unsecured short-term borrowings	\$ 9,450
Weighted average interest rate	1.54%

Note 12.

Subordinated Borrowings

As of December 2021, the firm had outstanding borrowings of \$5.00 billion from Group Inc. under a subordinated loan agreement, maturing in 2024. In addition, the firm has a \$17.50 billion revolving subordinated loan agreement with Group Inc., maturing in 2023. As of December 2021, \$17.50 billion was outstanding.

Notes to Consolidated Financial Statements

The interest rate on these subordinated loan agreements is the Secured Overnight Financing Rate plus 3.48% 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 4 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 December 2021.

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 13.

Other Liabilities

The table below presents other liabilities by type.

<i>\$ in millions</i>	As of December 2021
Payables to affiliates	\$ 6,774
Compensation and benefits	4,894
Income tax-related liabilities	2,222
Accrued expenses and other	1,504
Total	\$ 15,394

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 December 2021, the firm's contract liabilities were \$56 million.

Note 14.

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.

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 4 through 8 for further information about fair value measurements.

The table below presents the amount of financial assets securitized and the cash flows received on retained interests in securitization entities in which the firm had continuing involvement as of the end of the period.

<i>\$ in millions</i>	Year Ended December 2021
Residential mortgages	\$ 21,546
Commercial mortgages	3,898
Total financial assets securitized	\$ 25,444
Retained interests cash flows	\$ 375

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.

<i>\$ in millions</i>	As of December 2021		
	Outstanding Principal Amount	Retained Interests	Purchased Interests
U.S. government agency-issued CMOs	\$ 33,984	\$ 955	\$ 3
Other residential mortgage-backed	4	3	—
Total	\$ 33,988	\$ 958	\$ 3

Notes to Consolidated Financial Statements

In the table above:

- CMOs represents collateralized mortgage obligations.
- 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.
- Retained interests are 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.

<i>\$ in millions</i>	As of December 2021
Fair value of retained interests	\$ 958
Weighted average life (years)	6.4
Constant prepayment rate	16.1%
Impact of 10% adverse change	\$ (35)
Impact of 20% adverse change	\$ (63)
Discount rate	2.7%
Impact of 10% adverse change	\$ (18)
Impact of 20% adverse change	\$ (35)

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 CMOs does not include any credit loss. Expected credit loss assumptions are reflected in the discount rate for the remainder of retained interests.

Note 15.

Variable Interest Entities

A variable interest in a VIE is an investment (e.g., debt or equity) or other interest (e.g., 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 14, and investments in and loans to other types of VIEs, as described below. 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.

Notes to Consolidated Financial Statements

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 and Power-Related VIEs. The firm purchases equity and debt securities issued by and makes loans to VIEs that hold real estate and power-related assets. 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.

<i>\$ in millions</i>	As of December 2021
Total nonconsolidated VIEs	
Assets in VIEs	\$ 49,491
Carrying value of variable interests - assets	\$ 1,506
Maximum exposure to loss:	
Retained interests	\$ 958
Purchased interests	526
Debt and equity	22
Total	\$ 1,506

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 debt and equity is the carrying value of these interests.

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

<i>\$ in millions</i>	As of December 2021
Mortgage-backed	
Assets in VIEs	\$ 45,101
Carrying value of variable interests - assets	\$ 1,389
Maximum exposure to loss:	
Retained interests	\$ 958
Purchased interests	431
Total	\$ 1,389
Real estate and power-related	
Assets in VIEs	\$ 3,240
Carrying value of variable interests - assets	\$ 22
Maximum exposure to loss:	
Debt and equity	\$ 22
Total	\$ 22
Corporate debt and other asset-backed	
Assets in VIEs	\$ 1,150
Carrying value of variable interests - assets	\$ 95
Maximum exposure to loss:	
Purchased interests	\$ 95
Total	\$ 95

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

Consolidated VIEs

As of December 2021, the carrying value of assets and liabilities in consolidated VIEs was not material.

Note 16.

Commitments, Contingencies and Guarantees

Commitments

The table below presents commitments by type.

<i>\$ in millions</i>	As of December 2021
Commitment Type	
Collateralized agreement	\$ 25,261
Collateralized financing	26,844
Investment commitments	16
Other	651
Total commitments	\$ 52,772

Notes to Consolidated Financial Statements

The table below presents commitments by expiration.

\$ in millions	As of December 2021			
	2022	2023 - 2024	2025 - 2026	2027 - Thereafter
Commitment Type				
Collateralized agreement	\$ 25,261	\$ -	\$ -	\$ -
Collateralized financing	26,844	-	-	-
Investment commitments	1	15	-	-
Other	372	277	2	-
Total commitments	\$ 52,478	\$ 292	\$ 2	\$ -

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	Derivatives
As of December 2021	
Carrying Value of Net Liability	\$ 2
Maximum Payout/Notional Amount by Period of Expiration	
2022	\$ 20
2023 - 2024	55
2025 - 2026	9
2027 - thereafter	20
Total	\$ 104

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.

Securities Clearing Guarantees. Securities clearing guarantees consist of the guarantees that the firm provides in its capacity as a sponsoring member of the Fixed Income Clearing Corporation.

As a sponsoring member of the Government Securities Division of the Fixed Income Clearing Corporation, the firm guarantees the performance of its sponsored member clients to the Fixed Income Clearing Corporation in connection with certain resale and repurchase agreements. To minimize potential losses on such guarantees, the firm obtains a security interest in the collateral that the sponsored client placed with the Fixed Income Clearing Corporation. Therefore, the risk of loss on such guarantees is minimal. There were no amounts outstanding under the guarantee as of December 2021.

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.

Notes to Consolidated Financial Statements

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 December 2021.

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 December 2021.

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.

<i>\$ in millions</i>	As of December 2021
Assets	
Cash	\$ 1,675
Collateralized agreements:	
Resale agreements	61,022
Securities borrowed	49,505
Secured loans to Group Inc.	24,550
Receivables:	
Brokers, dealers and clearing organizations	5,037
Customers and counterparties	25,230
Financial instruments owned	4,317
Other assets	1,614
Total	\$ 172,950
Liabilities	
Collateralized financings:	
Repurchase agreements	\$ 27,916
Securities loaned	114,843
Other secured financings	35,144
Payables:	
Brokers, dealers and clearing organizations	2,598
Customers and counterparties	14,688
Financial instruments sold, but not yet purchased	187
Unsecured short-term borrowings	9,324
Other liabilities	6,774
Subordinated borrowings	22,500
Total	\$ 233,974

Notes to Consolidated Financial Statements

In the table above:

- Cash included \$1.50 billion of segregated cash deposited with affiliates.
- Secured loans to Group Inc. consists of short-term loans secured by U.S. Treasury securities.
- The firm makes markets in debt issued by Group Inc. and certain affiliates. Financial instruments owned primarily included such issuances of \$3.53 billion and affiliate derivative contracts of \$335 million.
- Other assets primarily included receivables from Goldman Sachs International which were repaid in January 2022.
- 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 recognized interest income and expense in connection with securities borrowed, securities loaned, resale agreements, repurchase agreements, secured loans to Group Inc., unsecured short-term and long-term borrowings, other secured financings and subordinated borrowings from Group Inc. For the year ended December 2021, such interest income was \$187 million and interest expense was \$1.16 billion.

The firm receives and provides operational and administrative support and management services to affiliates and allocates costs for the services provided. For the year ended December 2021, the firm's net reimbursement from affiliates is approximately \$3.08 billion for these expenses. These amounts are reflected net in operating expenses in the consolidated statement of earnings.

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. For the year ended December 2021, the charge to the firm by affiliates was \$998 million, which is included in service charges.

The firm has revenue sharing agreements with affiliated entities related to certain activities under which it transfers revenues to, and receives revenues from, such entities. Revenues related to market and credit risk exposures held by the firm or by affiliated entities that arise from activities covered by these agreements are shared among the firm and these entities. For the year ended December 2021, the firm received net revenues from affiliates of approximately \$1.11 billion, which is primarily included in investment management in the consolidated statement of earnings, and the firm allocated revenues to affiliates of \$1.05 billion, which is included in operating expenses.

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 or incentive fees from these funds. For the year ended December 2021, fees earned from related party funds were approximately \$416 million, which were included in investment management in the consolidated statement of earnings.

The firm acts as underwriter for certain securities issuances of related parties. For the year ended December 2021, fees earned from related party underwritings were approximately \$71 million, which were included in investment banking in the consolidated statement of earnings.

During 2021, Group Inc. made a \$299 million non-cash capital contribution to the firm.

Note 18.

Income Taxes

In March 2021, the American Rescue Plan Act of 2021 (Rescue Plan) was signed into law. The Rescue Plan is a \$1.9 trillion stimulus package enacted to help address the economic and health impacts of the coronavirus pandemic. The legislation did not have a material impact on the firm for 2021.

In April 2021, the New York State (NYS) FY 2022 budget was enacted. The legislation temporarily increased the NYS corporate income tax rate from 6.5% to 7.25% for calendar years 2021 through 2023. The legislation did not have a material impact on the firm for 2021.

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.

Notes to Consolidated Financial Statements

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. The firm reports interest expense related to income tax matters in provision for taxes and income tax penalties in other expenses.

The table below presents information about the provision for taxes.

<i>\$ in millions</i>	Year Ended December 2021
Current taxes	
U.S. federal	\$1,880
State and local	393
Total current tax expense	2,273
Deferred taxes	
U.S. federal	(145)
State and local	(26)
Total deferred tax benefit	(171)
Provision for taxes	\$2,102

The difference between the reported income tax expense and the amount computed by multiplying pre-tax earnings by the federal statutory rate is primarily attributable to state and local taxes, partially offset by tax benefits on settlement of employee share-based awards.

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 December 2021, the firm had no valuation allowance to reduce deferred tax assets. Tax assets are included in other assets and tax liabilities are included in other liabilities.

The table below presents information about deferred tax assets and liabilities.

<i>\$ in millions</i>	As of December 2021
Deferred tax assets	
Compensation and benefits	\$ 964
Reserves	91
Total deferred tax assets	\$1,055
Deferred tax liabilities	
Depreciation and amortization	\$ 361
Unrealized gains	57
Prepaid expenses	20
Total deferred tax liabilities	\$ 438

Unrecognized Tax Benefits

The firm recognizes tax positions in the consolidated financial statements 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 financial statements. As of December 2021, the firm's liability related to uncertainty in income taxes was not material.

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.

GS Group has been accepted into the Compliance Assurance Process program by the IRS for each of the tax years from 2013 through 2022. 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 fieldwork for tax years through 2018 has been completed and the final resolution is not expected to have a material impact on the firm's income tax liability. The 2019 and 2020 tax years remain subject to post-filing review.

Notes to Consolidated Financial Statements

New York State and City examinations of 2015 through 2018 commenced during 2021. All years, including and subsequent to 2015 for New York State and City, and 2014 for all other significant states, remain open to examination by the taxing authorities.

The firm believes that the liability for unrecognized tax benefits it has established is adequate 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 the firm 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.

<i>\$ in millions</i>	As of December 2021
U.S. government and agency obligations	\$ 72,930
Percentage of total assets	12.4%

As of December 2021, 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.

<i>\$ in millions</i>	As of December 2021
U.S. government and agency obligations	\$ 157,056
Non-U.S. government and agency obligations	\$ 14,876

In the table above:

- Non-U.S. government and agency obligations primarily consists of securities issued by the governments of Japan and France.
- 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.

Notes to Consolidated Financial Statements

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 based on (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 December 2021 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 \$0.9 billion in excess of the aggregate reserves for such matters.

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, futures commission merchant, swap dealer and security-based swap dealer, and therefore 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 Rules 1.17 and Part 23 Subpart E 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 of the SEC.

As of December 2021, GS&Co. had regulatory net capital, as defined by Rule 15c3-1, of \$22.18 billion, which exceeded the amount required by \$17.74 billion.

In addition to its alternative minimum net capital requirements, GS&Co. is also required to hold tentative net capital in excess of \$5.00 billion and net capital in excess of \$1.00 billion in accordance with Rule 15c3-1. GS&Co. is also required to notify the SEC in the event that its tentative net capital is less than \$6.00 billion. As of December 2021, 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. CFTC rules establishing capital requirements for swap dealers that are not subject to the capital rules of a prudential regulator, such as the Board of Governors of the Federal Reserve System, became effective in October 2021. The CFTC also adopted financial reporting requirements for covered swap entities and amended existing capital rules for CFTC-registered futures commission merchants to provide explicit capital requirements for proprietary positions in swaps and security-based swaps that are not cleared by a clearing organization. As a registered swap dealer with the CFTC, as of December 2021, GS&Co. was subject to and in compliance with these capital requirements.

Notes to Consolidated Financial Statements

SEC rules govern the registration and regulation of security-based swap dealers. Security-based swaps are defined as swaps on single securities, single loans or narrow-based baskets or indices of securities. The SEC has adopted a number of rules for security-based swap dealers, including (i) capital, margin and segregation requirements, (ii) record-keeping, financial reporting and notification requirements, (iii) business conduct standards, (iv) regulatory and public trade reporting, and (v) the application of risk mitigation techniques to uncleared portfolios of security-based swaps. The compliance date for these SEC rules, as well as SEC rules addressing registration requirements and business conduct standards, was generally October 2021. In the fourth quarter of 2021, GS&Co. registered with the SEC as a security-based swap dealer and became subject to the SEC's regulations regarding security-based swaps. The SEC has recently proposed additional regulations regarding security-based swaps that would prohibit fraud or manipulation in connection with security-based swaps transactions, require public reporting of large positions in security-based swaps and impose requirements relating to the chief compliance officers of security-based swap dealers. The anti-fraud and anti-manipulation prohibitions, and the large trader reporting requirements, would be applicable to all market participants and are not limited to security-based swap dealers.

The effective rules did not and the proposed rules are not expected to have a material impact on GS&Co.

Note 22.

Employee Benefit Plans

The firm's employees participate in various Group Inc. sponsored pension plans and certain other postretirement benefit plans, primarily healthcare and life insurance. Group Inc. also provides certain benefits to former or inactive employees prior to retirement. The cost of these plans is allocated to the firm by Group Inc.

Defined Benefit Pension Plans and Postretirement Plans

Group Inc. maintains a defined benefit pension plan for substantially all U.S. employees hired prior to November 1, 2003. As of November 2004, this plan was closed to new participants and frozen for existing participants. In addition, the firm maintains unfunded postretirement benefit plans that provide medical and life insurance for eligible retirees and their dependents covered under these programs. These plans do not have a material impact on the firm's consolidated results of operations.

Defined Contribution Plans

The firm contributes to Group Inc.'s employer-sponsored U.S. defined contribution plan. The firm's contribution to this plan was \$87 million for 2021.

Note 23.

Employee Incentive Plans

The cost of employee services received in exchange for a share-based award is generally measured based on the grant-date fair value of the award. Share-based awards that do not require future service (i.e., vested awards, including awards granted to retirement-eligible employees) are expensed immediately. Share-based awards that require future service are amortized over the relevant service period. Forfeitures are recorded when they occur. Cash dividend equivalents are paid on outstanding restricted stock units (RSUs).

Stock Incentive Plan

Group Inc. sponsors a stock incentive plan, The Goldman Sachs Amended and Restated Stock Incentive Plan (2021) (2021 SIP), which provides for grants of RSUs, restricted stock, dividend equivalent rights, incentive stock options, nonqualified stock options, stock appreciation rights, and other share-based awards, each of which may be subject to terms and conditions, including performance or market conditions. On April 29, 2021, Group Inc.'s shareholders approved the 2021 SIP. The 2021 SIP is a successor to several predecessor stock incentive plans, the first of which was adopted on April 30, 1999, and each of which was approved by Group Inc.'s shareholders. The 2021 SIP is scheduled to terminate on the date of Group Inc.'s annual meeting of shareholders that occurs in 2025.

Notes to Consolidated Financial Statements

Restricted Stock Units

Group Inc. grants RSUs (including RSUs subject to performance conditions) to employees, which are generally valued based on the closing price of the underlying shares on the date of grant after taking into account a liquidity discount for any applicable post-vesting and delivery transfer restrictions. The value of equity awards also considers the impact of material non-public information, if any, that Group Inc. expects to make available shortly following grant. RSUs generally vest and underlying shares of common stock deliver (net of required withholding tax) as outlined in the applicable award agreements. Award agreements generally provide that vesting is accelerated in certain circumstances, such as on retirement, death, disability and, in certain cases, conflicted employment. Delivery of the underlying shares of common stock is conditioned on the grantees satisfying certain vesting and other requirements outlined in the award agreements. RSUs not subject to performance conditions generally vest and deliver over a three-year period.

RSUs that are subject to performance conditions generally deliver after the end of a three-year period. For awards, that are subject to performance conditions, generally the final award is adjusted from zero up to 150% of the original grant based on satisfaction of those conditions. Dividend equivalents that accrue on these awards are paid when the awards settle. The subsequent amortization of the cost of these RSUs is allocated to the firm by Group Inc.

The table below presents the 2021 activity related to stock settled RSUs.

	Restricted Stock Units Outstanding		Weighted Average Grant-Date Fair Value of Restricted Stock Units Outstanding	
	Future Service Required	No Future Service Required	Future Service Required	No Future Service Required
Beginning balance	1,937,675	8,111,567	\$ 211.67	\$ 201.75
Granted	1,881,099	3,122,281	\$ 280.90	\$ 255.28
Forfeited	(281,871)	(163,848)	\$ 234.54	\$ 218.95
Delivered	—	(4,281,283)	\$ —	\$ 199.93
Vested	(1,638,532)	1,638,532	\$ 229.16	\$ 229.16
Transfers	(40,465)	(6,706)	\$ 225.27	\$ 220.79
Ending balance	1,857,906	8,420,543	\$ 262.79	\$ 227.56

In the table above:

- The weighted average grant-date fair value of RSUs granted was \$264.91 during 2021. The fair value of the RSUs granted included a liquidity discount of 11.0% during 2021 to reflect post-vesting and delivery transfer restrictions, generally of up to 4 years.
- The aggregate fair value of awards that vested was \$1.35 billion during 2021.
- The ending balance included restricted stock subject to future service requirements of 23,068 shares as of December 2021 and also included RSUs subject to future service requirements and performance conditions of 24,271 RSUs as of December 2021, and the maximum amount of such RSUs that may be earned was 24,271 RSUs as of December 2021.
- The ending balance also included RSUs not subject to future service requirements but subject to performance conditions of 54,724 RSUs as of December 2021 and the maximum amount of such RSUs that may be earned was 82,086 RSUs as of December 2021.

In relation to 2021 year-end, during the first quarter of 2022, Group Inc. granted to the firm's employees 5.6 million RSUs (of which 2.1 million RSUs require future service as a condition of delivery for the related shares of common stock) and delivered, net of required withholding tax, 0.5 million shares of restricted stock (which do not require future service). Both RSU and restricted stock awards are subject to additional conditions as outlined in the award agreements. Generally, shares underlying these RSUs, net of required withholding tax, deliver over a three-year period, but are subject to a one-year post-vesting and delivery transfer restriction. The restricted stock is subject to a three-year post-vesting and delivery transfer restriction. These awards are not included in the table above.

As of December 2021, there was \$255 million of total unrecognized compensation cost related to non-vested share-based compensation arrangements. This cost is expected to be recognized over a weighted average period of 1.80 years. In addition, there is unrecognized compensation cost related to share-based compensation arrangements subject to performance conditions. The maximum payout related to these awards is \$1.7 million. This cost is expected to be recognized over a weighted average period of two years.

Notes to Consolidated Financial Statements

The table below presents the share-based compensation and the related excess tax benefit.

<i>\$ in millions</i>	Year Ended December 2021
Share-based compensation	\$ 1,192
Excess net tax benefit for share-based awards	\$ 110

In the table above, excess net tax benefit for share-based awards includes the net tax benefit on dividend equivalents paid on RSUs and the delivery of common stock underlying share-based awards. These amounts are included in income tax expense.

Note 24.

Subsequent Events

Management has evaluated whether any events or transactions occurred subsequent to the date of the consolidated statement of financial condition and through February 25, 2022, the date these consolidated financial statements were issued, and determined that there were no material events or transactions that would require recognition or disclosure in these consolidated financial statements.

Supplemental Financial Information Pursuant to Rule 17a-5**Computation of Net Capital Requirement Under Rule 15c3-1 of the Securities and Exchange Commission**

As of December 31, 2021

(in millions)

Computation of Net Capital

1. Total ownership equity			\$ 15,461
2. Deduct: ownership equity not allowable for net capital			<u>—</u>
3. Total ownership equity qualified for net capital			15,461
4. Add:			
A. Liabilities subordinated to claims of general creditors allowable in computation of net capital			22,500
B. Other (deductions) or allowable credits			<u>—</u>
5. Total capital and allowable subordinated liabilities			37,961
6. Deductions and/or charges:			
A. Total non-allowable assets		\$ 5,579	
1. Additional charges for customers' and non-customers' security accounts			—
2. Additional charges for customers' and non-customers' commodity accounts			—
3. Additional charges for customers' and non-customers' security-based swap accounts			—
4. Additional charges for customers' and non-customers' swap accounts			529
B. Aged fail-to-deliver			590
1. Number of items (not in millions)	5,590		
C. Aged short security differences			—
D. Secured demand note deficiency			—
E. Commodity futures contracts and spot commodities - proprietary capital charges			—
F. Other deductions and/or charges			2,653
G. Deductions for accounts carried under Rule 15c3-1(a)(6), (a)(7) and (c)(2)(x)			<u>454</u>
H. Total deductions and/or charges			9,805
7. Other additions and/or allowable credits			<u>—</u>
8. Tentative net capital			28,156
9. Market risk exposure - for VaR firms			—
10. Market risk exposure - for Basel 2.5 firms			4,908
A. Total value at risk			266
Value at risk components			
1. Fixed income VaR	\$	79	
2. Currency VaR		24	
3. Commodities VaR		5	
4. Equities VaR		158	
5. Credit derivatives VaR		<u>—</u>	
B. Diversification benefit			<u>(79)</u>
C. Total diversified VaR			187
D. Multiplication factor (not in millions)			<u>3</u>
E. Subtotal			561
F. Total stressed VaR			534
G. Multiplication factor (not in millions)			<u>3</u>
H. Subtotal			<u>1,602</u>

Supplemental Financial Information Pursuant to Rule 17a-5**Computation of Net Capital Requirement Under Rule 15c3-1 of the Securities and Exchange Commission**

As of December 31, 2021

(in millions)

Computation of Net Capital (continued)

I. Incremental risk charge	\$ 690
J. Comprehensive risk measure	—
K. Specific risk - standard specific market risk	153
L. Specific risk - securitization	651
M. Alternative method for equities under Appendix A to Rule 15c3-1 or Rule 18a-1a, as applicable	—
N. Residual positions	1,251
O. Other	—
11. Credit risk exposure for certain counterparties	
A. Counterparty exposure charge	1,064
B. Concentration charge	—
12. Total credit risk exposure	<u>1,064</u>
13. Net capital	<u>\$ 22,184</u>

Calculation of Excess Tentative Net Capital

1. Tentative net capital	\$ 28,156
2. Minimum tentative net capital requirement	<u>5,000</u>
3. Excess tentative net capital	<u>23,156</u>
4. Tentative net capital in excess of 120% of minimum tentative net capital requirement reported on line 2	<u>\$ 22,156</u>

Calculation of Minimum Net Capital Requirement

5. Ratio minimum net capital requirement	
A. 62/3% of total aggregate indebtedness	\$ —
B. 2% of combined aggregate debit items as shown in Formula for Reserve Requirements pursuant to Rule 15c3-3	4,442
i. Minimum CFTC net capital requirement	4,442
C. Percentage of risk margin amount computed under 17 CFR 240.15c3-1(a)(7)(i) or (a)(10)	—
D. For broker-dealers engaged in reverse repurchase agreements, 10% of the amounts in 17 CFR 240.15c3-1(a)(9)(i)-(iii)	—
E. Minimum ratio requirement (sum of lines 5.A, 5.B, 5.C and/or 5.D, as applicable)	<u>4,442</u>
6. Fixed-dollar minimum net capital requirement	<u>1,000</u>
7. Minimum net capital requirement (greater of lines 5.E and 6)	<u>4,442</u>
8. Excess net capital (line 13 less 7)	<u>\$ 17,742</u>

Statement Pursuant to Paragraph (d)(4) of Rule 17a-5

There are no material differences between this computation of net capital and the corresponding computation prepared by GS&Co. included in its December 31, 2021, unaudited Part II FOCUS Report, as amended and filed on February 18, 2022.

Supplemental Financial Information Pursuant to Rule 17a-5**Formula for Determination of Customer Account Reserve Requirements of Brokers and Dealers Under Rule 15c3-3 of the Securities and Exchange Commission**

As of December 31, 2021

(in millions)

Credit Balances

1. Free credit balances and other credit balances in customers' security accounts	\$ 81,378
2. Monies borrowed collateralized by securities carried for the accounts of customers	1,915
3. Monies payable against customers' securities loaned	29,202
4. Customers' securities failed to receive	1,345
5. Credit balances in firm accounts which are attributable to principal sales to customers	29,909
6. Market value of stock dividends, stock splits and similar distributions receivable outstanding over 30 calendar days	180
7. Market value of short security count differences over 30 calendar days old	—
8. Market value of short securities and credits (not to be offset by longs or by debits) in all suspense accounts over 30 calendar days	786
9. Market value of securities which are in transfer in excess of 40 calendar days and have not been confirmed to be in transfer by the transfer agent or the issuer during the 40 days	26
10. Other (unclaimed cash dividends greater than 7 days old)	418
11. Total credits	<u>\$145,159</u>

Debit Balances

12. Debit balances in customers' cash and margin accounts excluding unsecured accounts and accounts doubtful of collection	\$ 48,110
13. Securities borrowed to effectuate short sales by customers and securities borrowed to make delivery on customers' securities failed to deliver	80,817
14. Failed to deliver of customers' securities not older than 30 calendar days	993
15. Margin required and on deposit with the Options Clearing Corporation for all option contracts written or purchased in customer accounts	1,915
16. Margin required and on deposit with a clearing agency registered with the SEC or a derivatives clearing organization registered with the CFTC related to the following types of positions written, purchased or sold in customer accounts: (1) security futures products and (2) futures contracts (and options thereon) carried in a securities account pursuant to an SRO portfolio margining rule	—
17. Other	—
18. Aggregate debit items	131,835
19. Less 3% (for alternative method only - Rule 15c3-1(a)(1)(ii))	<u>(3,955)</u>
20. Total 15c3-3 debits	<u>\$127,880</u>

Reserve Computation

21. Excess of total debits over total credits (line 20 less line 11)	\$ —
22. Excess of total credits over total debits (line 11 less line 20)	17,279
23. If computation is made monthly as permitted, enter 105% of excess of total credits over total debits	—
24. Amount held on deposit in "Reserve Bank Account(s)," including value of qualified securities as of December 31, 2021	21,248
25. Amount of deposit (or withdrawal) including value of qualified securities	<u>303</u>
26. New amount in Reserve Bank Account(s) after adding deposit or subtracting withdrawal including value of qualified securities as of January 4, 2022	<u>\$ 21,551</u>

Statement Pursuant to Paragraph (d)(4) of Rule 17a-5

There are no material differences between this reserve computation and the corresponding computation prepared by GS&Co. included in its December 31, 2021, unaudited Part II FOCUS Report, as amended and filed on February 18, 2022.

Supplemental Financial Information Pursuant to Rule 17a-5**Formula for Determination of PAB Account Reserve Requirements of Brokers and Dealers Under Rule 15c3-3 of the Securities and Exchange Commission**

As of December 31, 2021

(in millions)

Credit Balances

1. Free credit balances and other credit balances in PAB security accounts	\$ 15,946
2. Monies borrowed collateralized by securities carried for the accounts of PAB	6,123
3. Monies payable against PAB securities loaned	2,625
4. PAB securities failed to receive	356
5. Credit balances in firm accounts which are attributable to principal sales to PAB	15,929
6. Market value of stock dividends, stock splits and similar distributions receivable outstanding over 30 calendar days	—
7. Market value of short security count differences over 30 calendar days old	—
8. Market value of short securities and credits (not to be offset by longs or by debits) in all suspense accounts over 30 calendar days	—
9. Market value of securities which are in transfer in excess of 40 calendar days and have not been confirmed to be in transfer by the transfer agent or the issuer during the 40 days	—
10. Other	—
11. Total PAB credits	<u>\$ 40,979</u>

Debit Balances

12. Debit balances in PAB cash and margin accounts excluding unsecured accounts and accounts doubtful of collection	\$ 23,693
13. Securities borrowed to effectuate short sales by PAB and securities borrowed to make delivery on PAB securities failed to deliver	4,022
14. Failed to deliver of PAB securities not older than 30 calendar days	188
15. Margin required and on deposit with the Options Clearing Corporation for all option contracts written or purchased in PAB accounts	13,128
16. Margin required and on deposit with a clearing agency registered with the SEC or a derivatives clearing organization registered with the CFTC related to the following types of positions written, purchased or sold in PAB accounts: (1) security futures products and (2) futures contracts (and options thereon) carried in a securities account pursuant to an SRO portfolio margining rule	—
17. Other	—
18. Total PAB debits	<u>\$ 41,031</u>

Reserve Computation

19. Excess of total PAB debits over total PAB credits (line 18 less line 11)	\$ 52
20. Excess of total PAB credits over total PAB debits (line 11 less line 18)	—
21. Excess debits in customer reserve formula computation	—
22. PAB reserve requirement (line 20 less line 21)	—
23. Amount held on deposit in "Reserve Bank Account(s)," including value of qualified securities as of December 31, 2021	2,209
24. Amount of deposit (or withdrawal) including value of qualified securities	<u>(1,061)</u>
25. New amount in Reserve Bank Account(s) after adding deposit or subtracting withdrawal including value of qualified securities as of January 4, 2022	<u>\$ 1,148</u>

Statement Pursuant to Paragraph (d)(4) of Rule 17a-5

There are no material differences between this reserve computation and the corresponding computation prepared by GS&Co. included in its December 31, 2021, unaudited Part II FOCUS Report, as amended and filed on February 18, 2022.

Supplemental Financial Information Pursuant to Rule 17a-5**Information for Possession or Control Requirements Under Rule 15c3-3 of the Securities and Exchange Commission**

As of December 31, 2021

(in millions)

1. Customers' fully paid securities and excess margin securities not in the respondent's possession or control as of December 31, 2021, (for which instructions to reduce to possession or control had been issued as of December 31, 2021), but for which the required action was not taken by respondent within the time frames specified under Rule 15c3-3		\$ 212
A. Number of items (not in millions)		326
2. Customers' fully paid securities and excess margin securities for which instructions to reduce to possession or control had not been issued as of December 31, 2021, excluding items arising from "temporary lags which result from normal business operations" as permitted under Rule 15c3-3		\$ -
A. Number of items (not in millions)		-

Statement Pursuant to Paragraph (d)(4) of Rule 17a-5

There are no material differences between this information and the corresponding information prepared by GS&Co. included in its December 31, 2021, unaudited Part II FOCUS Report, as amended and filed on February 18, 2022.

Supplemental Financial Information Pursuant to Regulation 1.10**Statement of Segregation Requirements and Funds in Segregation for Customers Trading on U.S. Commodity Exchanges**

As of December 31, 2021

(in millions)

Segregation Requirements

1. Net ledger balance		
A. Cash		\$ 18,535
B. Securities (at market)		14,246
2. Net unrealized profit (loss) in open futures contracts traded on a contract market		2,501
3. Exchange traded options		
A. Add market value of open option contracts purchased on a contract market		15,972
B. Deduct market value of open option contracts granted (sold) on a contract market		(15,912)
4. Net equity (deficit) (add lines 1, 2 and 3)		35,342
5. Accounts liquidating to a deficit and accounts with debit balances – gross amount	\$ 1,509	
Less: amount offset by customer owned securities	(1,508)	1
6. Amount required to be segregated (add lines 4 and 5)		\$ 35,343

Funds in Segregated Accounts

7. Deposited in segregated funds bank accounts		
A. Cash		\$ 1,909
B. Securities representing investments of customers' funds (at market)		250
C. Securities held for particular customers or option customers in lieu of cash (at market)		1,435
8. Margins on deposit with derivatives clearing organizations of contract markets		
A. Cash		13,442
B. Securities representing investments of customers' funds (at market)		6,181
C. Securities held for particular customers or option customers in lieu of cash (at market)		12,811
9. Net settlement from (to) derivatives clearing organizations of contract markets		280
10. Exchange traded options		
A. Value of open long option contracts		15,972
B. Value of open short option contracts		(15,912)
11. Net equities with other FCMs		
A. Net liquidating equity		12
B. Securities representing investments of customers' funds (at market)		–
C. Securities held for particular customers or option customers in lieu of cash (at market)		–
12. Segregated funds on hand		–
13. Total amount in segregation (add lines 7 through 12)		36,380
14. Excess (deficiency) funds in segregation (subtract line 6 from line 13)		1,037
15. Management target amount for excess funds in segregation		675
16. Excess (deficiency) funds in segregation over (under) management target amount excess		\$ 362

There are no material differences between the computations shown in the supplemental financial information as presented in this report and the corresponding computations prepared by GS&Co. included in its December 31, 2021, unaudited Part II FOCUS Report, as amended and filed on February 18, 2022.

Supplemental Financial Information Pursuant to Regulation 1.10

Statement of Segregation Requirements and Funds in Segregation for Customers' Dealer Options Accounts

STATEMENT IS NOT APPLICABLE

Supplemental Financial Information Pursuant to Regulation 1.10**Statement of Secured Amounts and Funds Held in Separate Accounts Pursuant to Commission Regulation 30.7**

As of December 31, 2021

*(in millions)***Foreign Futures and Foreign Options Secured Amounts**

Amount required to be set aside pursuant to law, rule or regulation of a foreign government or a rule of a self-regulatory organization authorized thereunder

\$ —

1. Net ledger balance – foreign futures and foreign option trading – all customers

A. Cash	7,250
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B. Securities (at market)	1,984
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2. Net unrealized profit (loss) in open futures contracts traded on a foreign board of trade	753
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3. Exchange traded options

A. Market value of open option contracts purchased on a foreign board of trade	74
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B. Market value of open contracts granted (sold) on a foreign board of trade	(30)
--	------

4. Net equity (deficit) (add lines 1, 2 and 3)	10,031
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5. Accounts liquidating to a deficit and accounts with debit balances – gross amount	\$ 154
--	--------

Less: amount offset by customer owned securities	(148)	6
--	-------	---

6. Amount required to be set aside as the secured amount – net liquidating equity method (add lines 4 and 5)	10,037
--	--------

7. Greater of amount required to be set aside pursuant to foreign jurisdiction (above) or line 6	\$ 10,037
--	-----------

There are no material differences between the computations shown in the supplemental financial information as presented in this report and the corresponding computations prepared by GS&Co. included in its December 31, 2021, unaudited Part II FOCUS Report, as amended and filed on February 18, 2022.

Supplemental Financial Information Pursuant to Regulation 1.10**Statement of Secured Amounts and Funds Held in Separate Accounts Pursuant to Commission Regulation 30.7**

As of December 31, 2021

(in millions)

Funds Deposited in Separate 17 CFR 30.7 Accounts

1. Cash in banks		
A. Banks located in the United States	\$ 412	
B. Other banks qualified under Regulation 30.7	<u>1,332</u>	<u>\$ 1,744</u>
2. Securities		
A. In safekeeping with banks located in the United States	4,851	
B. In safekeeping with other banks qualified under Regulation 30.7	<u>-</u>	<u>4,851</u>
3. Equities with registered futures commission merchants		
A. Cash	-	
B. Securities	-	
C. Unrealized gain (loss) on open futures contracts	-	
D. Value of long option contracts	-	
E. Value of short option contracts	<u>-</u>	<u>-</u>
4. Amounts held by clearing organizations of foreign boards of trade		
A. Cash	-	
B. Securities	-	
C. Amount due to (from) clearing organizations - daily variation	-	
D. Value of long option contracts	-	
E. Value of short option contracts	<u>-</u>	<u>-</u>
5. Amounts held by members of foreign boards of trade		
A. Cash	1,497	
B. Securities	1,693	
C. Unrealized gain (loss) on open futures contracts	753	
D. Value of long option contracts	74	
E. Value of short option contracts	<u>(30)</u>	<u>3,987</u>
6. Amounts with other depositories designated by a foreign board of trade		-
7. Segregated funds on hand		<u>-</u>
8. Total funds in separate 17 CFR 30.7 accounts		<u>10,582</u>
9. Excess (deficiency) set aside funds for secured amount (subtract line 7 secured statement from line 8)		<u>545</u>
10. Management target amount for excess funds in separate 17 CFR 30.7 accounts		<u>475</u>
11. Excess (deficiency) funds in separate 17 CFR 30.7 accounts over (under) management target		<u>\$ 70</u>

There are no material differences between the computations shown in the supplemental financial information as presented in this report and the corresponding computations prepared by GS&Co. included in its December 31, 2021, unaudited Part II FOCUS Report, as amended and filed on February 18, 2022.

Supplemental Financial Information Pursuant to Regulation 1.10**Computation of CFTC Minimum Net Capital Requirement**

As of December 31, 2021

*(in millions)***Net Capital Required****A. Risk-based requirement**

i. Amount of customer risk maintenance margin requirement	\$ 48,138
ii. Enter 8% of line A.i	\$ 3,851
iii. Amount of non-customer risk maintenance margin requirement	3,098
iv. Enter 8% of line A.iii	248
v. Amount of uncleared swap margin	17,152
vi. If the FCM is also registered as a swap dealer, enter 2% of line A.v	<u>343</u>
vii. Enter the sum of lines A.ii, A.iv and A.vi	4,442

B. Minimum dollar amount requirement

20

C. Other NFA requirement

-

D. Minimum CFTC Net Capital Requirement.

Enter the greatest of lines A, B or C	<u>\$ 4,442</u>
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CFTC Early Warning Level\$ 4,886

There are no material differences between the computations shown in the supplemental financial information as presented in this report and the corresponding computations prepared by GS&Co. included in its December 31, 2021, unaudited Part II FOCUS Report, as amended and filed on February 18, 2022.

Supplemental Financial Information Pursuant to Regulation 1.10**Statement of Cleared Swaps Customer Segregation Requirements and Funds in Cleared Swaps Customer Accounts Under 4d(f) of the CEA**

As of December 31, 2021

*(in millions)***Cleared Swaps Customer Requirements**

1. Net ledger balance		
A. Cash		\$ 9,713
B. Securities (at market)		5,932
2. Net unrealized profit (loss) in open cleared swaps		(146)
3. Cleared swaps options		
A. Market value of open cleared swaps option contracts purchased		—
B. Market value of open cleared swaps option contracts granted (sold)		—
4. Net equity (deficit) (add lines 1, 2 and 3)		15,499
5. Accounts liquidating to a deficit and accounts with debit balances – gross amount	\$ 35	
Less: amount offset by customer owned securities	(32)	3
6. Amount required to be segregated for cleared swaps customers (add lines 4 and 5)		<u>\$15,502</u>

Funds in Cleared Swaps Customer Segregated Accounts

7. Deposited in cleared swaps customer segregated accounts at banks		
A. Cash		\$ 1,143
B. Securities representing investments of cleared swaps customers' funds (at market)		—
C. Securities held for particular cleared swaps customers in lieu of cash (at market)		412
8. Margins on deposit with derivatives clearing organizations in cleared swaps customer segregated accounts		
A. Cash		1,809
B. Securities representing investments of cleared swaps customers' funds (at market)		7,047
C. Securities held for particular cleared swaps customers in lieu of cash (at market)		5,521
9. Net settlement from (to) derivatives clearing organizations		(20)
10. Cleared swaps options		
A. Value of open cleared swaps long option contracts		—
B. Value of open cleared swaps short option contracts		—
11. Net equities with other FCMs		
A. Net liquidating equity		—
B. Securities representing investments of cleared swaps customers' funds (at market)		—
C. Securities held for particular cleared swaps customers in lieu of cash (at market)		—
12. Cleared swaps customer funds on hand		—
13. Total amount in cleared swaps customer segregation (add lines 7 through 12)		<u>15,912</u>
14. Excess (deficiency) funds in cleared swaps customer segregation (subtract line 6 from line 13)		<u>410</u>
15. Management target amount for excess funds in cleared swaps segregated accounts		<u>350</u>
16. Excess (deficiency) funds in cleared swaps customer segregated accounts over (under) management target excess		<u>\$ 60</u>

There are no material differences between the computations shown in the supplemental financial information as presented in this report and the corresponding computations prepared by GS&Co. included in its December 31, 2021, unaudited Part II FOCUS Report, as amended and filed on February 18, 2022.

30 Hudson Street | Jersey City, NJ 07302-4699



June 16, 2022

Goldman Sachs & Co. LLC's Compliance Report (Restated)

Goldman Sachs & Co. LLC (the "firm") is a registered broker-dealer subject to Rule 17a-5 promulgated by the Securities and Exchange Commission (17 C.F.R. §240.17a-5, "Reports to be made by certain brokers and dealers"). As required by 17 C.F.R. § 240.17a-5(d)(1) and (3), the firm states as follows:

- (1) The firm has established and maintained Internal Control Over Compliance, as that term is defined in paragraph (d)(3)(ii) of Rule 17a-5;
- (2) The firm's Internal Control Over Compliance was not effective for the year ended December 31, 2021 because of the following material weakness in the firm's Internal Control Over Compliance:
 - The firm's controls over intra-day withdrawals from the Special Reserve Bank Accounts for the Exclusive Benefit of Customers and PAB Accounts were not designed and operating effectively to ensure that non-compliance with 17 C.F.R. § 240.15c3-3(e), 240.15c3-3(g), or 240.15c3-3(p)(3) would be prevented or detected on a timely basis.
- (3) The firm's Internal Control Over Compliance was not effective as of December 31, 2021 because of the material weakness described above;
- (4) The firm was in compliance with 17 C.F.R. § 240.15c3-1, 17 C.F.R. §240.15c3-3(e), and 17 C.F.R. §240.15c3-3(p)(3) as of December 31, 2021; and
- (5) The information the firm used to state that the firm was in compliance with 17 C.F.R. §240.15c3-1, 17 C.F.R. §240.15c3-3(e), and 17 C.F.R. §240.15c3-3(p)(3) was derived from the books and records of the firm.

Management previously concluded that the Company's Internal Control Over Compliance was effective as of and during the year ended December 31, 2021. However, after discovery of the material weakness described above, management subsequently determined that the firm's Internal Control Over Compliance was not effective as of and during the year ended December 31, 2021. Accordingly, this Compliance Report has been restated and our conclusions on the firm's Internal Control Over Compliance as presented herein, are different from those expressed in our previous Compliance Report.

We, the undersigned, affirm that, to our best knowledge and belief, this Compliance Report is true and correct.

DocuSigned by:

Brian Doyle

June 16, 2022

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Brian Doyle

Chief Financial Officer

DocuSigned by:

Richard Hempzell

June 16, 2022

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Richard Hempzell

Chief Operations Officer



Report of Independent Registered Public Accounting Firm

To Management and the Board of Managers of Goldman Sachs & Co. LLC

We have examined Goldman Sachs & Co. LLC's (the "Company") assertions, included in the accompanying Goldman Sachs & Co. LLC's Compliance Report, that

- (1) the Company's internal control over compliance with the financial responsibility rules (as defined below) was not effective during the year ended December 31, 2021 based on controls necessary to achieve the objectives of the financial responsibility rules,
- (2) the Company's internal control over compliance with the financial responsibility rules was not effective as of December 31, 2021 based on controls necessary to achieve the objectives of the financial responsibility rules,
- (3) the Company was in compliance with 17 C.F.R. § 240.15c3-1 (the "net capital rule"), 240.15c3-3(e) (the "customer reserve requirements rule"), and 240.15c3-3(p)(3) (the "security-based swap customer reserve requirements rule") as of December 31, 2021, and
- (4) the information used to assert that the Company was in compliance with 17 C.F.R. § 240.15c3-1, 240.15c3-3(e), and 240.15c3-3(p)(3) was derived from the Company's books and records.

The Company's management is responsible for establishing and maintaining a system of internal control over compliance that has the objective of providing the Company with reasonable assurance that non-compliance with 17 C.F.R. § 240.15c3-1, 17 C.F.R. § 240.15c3-3 (the "customer protection rule"), 17 C.F.R. § 240.17a-13 ("the quarterly securities count rule"), or Rule 2231 of the Financial Industry Regulatory Authority (the "account statements rule"), which requires account statements to be sent to the customers of the Company (collectively, the "financial responsibility rules") will be prevented or detected on a timely basis. The Company's management is also responsible for compliance with the net capital rule, the customer reserve requirements rule, and the security-based swap customer reserve requirements rule and that the information used to assert compliance was derived from the books and records. Our responsibility is to express an opinion on the Company's assertions based on our examination.

We conducted our examination in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the examination to obtain reasonable assurance about whether (1) the Company's internal control over compliance with the financial responsibility rules was effective as of and during the year ended December 31, 2021, (2) the Company complied with 17 C.F.R. § 240.15c3-1, 240.15c3-3(e), and 240.15c3-3(p)(3) as of December 31, 2021, and (3) the information used to assert compliance with 17 C.F.R. § 240.15c3-1, 240.15c3-3(e), and 240.15c3-3(p)(3) as of December 31, 2021 was derived from the Company's books and records. Our examination included testing and evaluating the design and operating effectiveness of internal control over compliance with the financial responsibility rules, testing and evaluating the Company's compliance with 17 C.F.R. § 240.15c3-1, 240.15c3-3(e), and 240.15c3-3(p)(3), determining whether the information used to assert compliance with 240.15c3-1, 240.15c3-3(e), and 240.15c3-3(p)(3) was derived from the Company's books and records, and performing such other procedures as we considered necessary in the



circumstances. We believe that our examination provides a reasonable basis for our opinion. Our examination does not provide a legal determination on Goldman Sachs & Co. LLC's compliance with the financial responsibility rules.

Because of its inherent limitations, internal control over compliance may not prevent or detect non-compliance with the financial responsibility rules. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Management and we previously concluded that:

- the Company's internal control over compliance with the financial responsibility rules was effective as of and during the year ended December 31, 2021,
- the Company was in compliance with the net capital rule, the customer reserve requirements rule, and the security-based swap customer requirements rule as of December 31, 2021, and
- the information used to assert that the Company was in compliance with 17 C.F.R. § 240.15c3-1 240.15c3-3(e), and 240.15c3-3(p)(3) was derived from the Company's books and records.

However, management has subsequently determined that the Company's internal control over compliance with the financial responsibility rules was not effective as of and during the year ended December 31, 2021 because of the following material weakness identified in the Company's internal control over compliance as of and during the year ended December 31, 2021:

- The Company's controls over intra-day withdrawals from the Special Reserve Bank Accounts for the Exclusive Benefit of Customers and PAB Accounts were not designed and operating effectively to ensure that non-compliance with 17 C.F.R. § 240.15c3-3(e), 240.15c3-3(g), or 240.15c3-3(p)(3) would be prevented or detected on a timely basis.

Accordingly, Goldman Sachs & Co. LLC's Compliance Report has been restated and our opinion on the Company's internal control over compliance with the financial responsibility rules, as presented herein, is different from that expressed in our previous report.

In our opinion,

- because of the material weakness referred to above, the Company's internal control over compliance with the financial responsibility rules was not effective as of and during the year ended December 31, 2021,
- the Company was in compliance with the net capital rule, the reserve requirements rule, and the security-based swap customer reserve requirements rule as of December 31, 2021, and
- the information used to assert that the Company was in compliance with 17 C.F.R. § 240.15c3-1, 240.15c3-3(e), and 240.15c3-3(p)(3) was derived from the Company's books and records.

PricewaterhouseCoopers LLP

February 25, 2022, except for the effects of the matter described in the last paragraph of Goldman Sachs & Co. LLC's Compliance Report, as to which the date is June 16, 2022