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

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the year ended December 31, 2023

Commission File Number 1-11758

Morgan Stanley

(Exact name of Registrant as specified in its charter)

Delaware	**1585 Broadway**	**36-3145972**	**(212) 761-4000**
(State or other jurisdiction of incorporation or organization)	**New York, NY 10036** (Address of principal executive offices, including Zip Code)	(I.R.S. Employer Identification No.)	(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of exchange on which registered
Common Stock, $0.01 par value	MS	New York Stock Exchange
Depositary Shares, each representing 1/1,000th interest in a share of Floating Rate Non-Cumulative Preferred Stock, Series A, $0.01 par value	MS/PA	New York Stock Exchange
Depositary Shares, each representing 1/1,000th interest in a share of Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series E, $0.01 par value	MS/PE	New York Stock Exchange
Depositary Shares, each representing 1/1,000th interest in a share of Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series F, $0.01 par value	MS/PF	New York Stock Exchange
Depositary Shares, each representing 1/1,000th interest in a share of Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series I, $0.01 par value	MS/PI	New York Stock Exchange
Depositary Shares, each representing 1/1,000th interest in a share of Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series K, $0.01 par value	MS/PK	New York Stock Exchange
Depositary Shares, each representing 1/1,000th interest in a share of 4.875% Non-Cumulative Preferred Stock, Series L, $0.01 par value	MS/PL	New York Stock Exchange
Depositary Shares, each representing 1/1,000th interest in a share of 4.250% Non-Cumulative Preferred Stock, Series O, $0.01 par value	MS/PO	New York Stock Exchange
Depositary Shares, each representing 1/1,000th interest in a share of 6.500% Non-Cumulative Preferred Stock, Series P, $0.01 par value	MS/PP	New York Stock Exchange
Global Medium-Term Notes, Series A, Fixed Rate Step-Up Senior Notes Due 2026 of Morgan Stanley Finance LLC (and Registrant's guarantee with respect thereto)	MS/26C	New York Stock Exchange
Global Medium-Term Notes, Series A, Floating Rate Notes Due 2029 of Morgan Stanley Finance LLC (and Registrant's guarantee with respect thereto)	MS/29	New York Stock Exchange

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the Registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the Registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer ☒ Accelerated filer ☐ Non-accelerated filer ☐ Smaller reporting company ☐ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the Registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the Registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the Registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the Registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of June 30, 2023, the aggregate market value of the common stock of the Registrant held by non-affiliates of the Registrant was approximately $136,317,364,533. This calculation does not reflect a determination that persons are affiliates for any other purposes.

As of January 31, 2024, there were1,635,268,297 shares of the Registrant's common stock, $0.01 par value, outstanding.

Documents Incorporated by Reference: Portions of the Registrant's definitive proxy statement for its 2024 annual meeting of shareholders are incorporated by reference in Part III of this Form 10-K.

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Forward-Looking Statements

We have included in or incorporated by reference into this report, and from time to time may make in our public filings, press releases or other public statements, certain statements, including, without limitation, those under "Management's Discussion and Analysis of Financial Condition and Results of Operations," "Quantitative and Qualitative Disclosures about Risk" and "Legal Proceedings" that may constitute "forward-looking statements" within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. In addition, our management may make forward-looking statements to analysts, investors, representatives of the media and others. These forward-looking statements are not historical facts and represent only our beliefs regarding future events, many of which, by their nature, are inherently uncertain and beyond our control.

The nature of our business makes predicting the future trends of our revenues, expenses and net income difficult. The risks and uncertainties involved in our businesses could affect the matters referred to in such statements, and it is possible that our actual results may differ, possibly materially, from the anticipated results indicated in these forward-looking statements. Important factors that could cause actual results to differ from those in the forward-looking statements include, without limitation:

- the effect of market conditions, particularly in the global equity, fixed income, currency, credit and commodities markets, including corporate, commercial and residential mortgage lending, real estate and energy markets;
- the level of individual investor participation in the global markets, as well as the level and mix of client assets;
- the flow of investment capital into or from AUM;
- the level and volatility of equity, fixed income and commodity prices, interest rates, inflation and currency values, other market indices or other market factors, such as market liquidity;
- the availability and cost of both credit and capital, as well as the credit ratings assigned to our unsecured short-term and long-term debt;
- technological changes instituted by us, our competitors or counterparties, and technological risks, including risks associated with emerging technologies, business continuity and related operational risks, including breaches or other disruptions of our or a third party's (or third-parties thereof) operations or systems;
- risk associated with cybersecurity threats, including data protection and cybersecurity risk management;
- our ability to effectively manage our capital and liquidity, including under stress tests designed by our banking regulators;
- the impact of current, pending and future legislation or changes thereto, regulation (including capital, leverage, funding, liquidity, consumer protection, and recovery and resolution requirements) and our ability to address such requirements;
- uncertainty concerning fiscal or monetary policies established by central banks and financial regulators, government shutdowns, debt ceilings or funding;
- changes to global trade policies, tariffs and replacement or reform of certain interest rate benchmarks;
- legal and regulatory actions, including litigation and enforcement, and other non-financial risks in the U.S. and worldwide;
- changes in tax laws and regulations globally;
- the effectiveness of our risk management processes and related controls, including climate risk;
- our ability to effectively respond to an economic downturn, or other market disruptions;
- the effect of social, economic, and political conditions and geopolitical events, including as a result of government shutdowns, changes in U.S. presidential administrations or Congress, sovereign risk, acts of war or aggression, and terrorist activities or military actions;
- the actions and initiatives of current and potential competitors, as well as governments, central banks, regulators and self-regulatory organizations;
- our ability to provide innovative products and services and execute our strategic initiatives, and costs related thereto, including with respect to the operational or technological integration related to such innovative and strategic initiatives;
- the performance and results of our acquisitions, divestitures, joint ventures, partnerships, minority stakes or strategic alliances, or other strategic arrangements and related integrations;
- investor, consumer and business sentiment and confidence in the financial markets;
- our reputation and the general perception of the financial services industry;
- our ability to retain, integrate and attract qualified employees or successfully transition key roles;
- climate-related incidents, other environmental and sustainability matters, and global pandemics; and
- other risks and uncertainties detailed under "Business—Competition," "Business—Supervision and Regulation," "Risk Factors" and elsewhere throughout this report.

Accordingly, you are cautioned not to place undue reliance on forward-looking statements, which speak only as of the date on which they are made. We undertake no obligation to update publicly or revise any forward-looking statements to reflect the impact of circumstances or events that arise after the dates they are made, whether as a result of new information, future events or otherwise, except as required by applicable law. You should, however, consult further disclosures we may make in future filings of our annual reports on Form 10-K, quarterly reports on Form 10-Q and current reports on Form 8-K and any amendments thereto or in future press releases or other public statements.

Available Information

We file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission ("SEC"). The SEC maintains a website, *www.sec.gov*, that contains annual, quarterly and current reports, proxy and information statements, and other information that issuers file electronically with the SEC. Our electronic SEC filings are available to the public at the SEC's website.

Our website is *www.morganstanley.com*. You can access our Investor Relations webpage at *www.morganstanley.com/about-us-ir*. We make available free of charge, on or through our Investor Relations webpage, our proxy statements, annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and any amendments to those reports filed or furnished pursuant to the Securities Exchange Act of 1934, as amended ("Exchange Act"), as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. We also make available, through our Investor Relations webpage, via a link to the SEC's website, statements of beneficial ownership of our equity securities filed by our directors, officers, 10% or greater shareholders and others under Section 16 of the Exchange Act.

You can access information about our corporate governance at *www.morganstanley.com/about-us-governance*, our sustainability initiatives at *www.morganstanley.com/about-us/sustainability-at-morgan-stanley*, and our commitment to diversity and inclusion at *www.morganstanley.com/about-us/diversity*. Our webpages include:

- Amended and Restated Certificate of Incorporation;
- Amended and Restated Bylaws;
- Charters for our Audit Committee, Compensation, Management Development and Succession Committee, Governance and Sustainability Committee, Operations and Technology Committee, and Risk Committee;
- Corporate Governance Policies;
- Policy Regarding Corporate Political Activities;
- Policy Regarding Shareholder Rights Plan;
- Equity Ownership Commitment;
- Code of Ethics and Business Conduct;
- Code of Conduct;
- Integrity Hotline Information;
- Environmental and Social Policies; and
- 2022 ESG Report: Diversity & Inclusion, Climate, and Sustainability.

Our Code of Ethics and Business Conduct applies to all directors, officers and employees, including our Chief Executive Officer, Chief Financial Officer and Deputy Chief Financial Officer. We will post any amendments to the Code of Ethics and Business Conduct and any waivers that are required to be disclosed by the rules of either the SEC or the New York Stock Exchange LLC ("NYSE") on our website. You can request a copy of these documents, excluding exhibits, at no cost, by contacting Investor Relations, 1585 Broadway, New York, NY 10036 (212-761-4000). The information on our website is not incorporated by reference into this report.

Business

Overview

We are a global financial services firm that, through our subsidiaries and affiliates, advises, and originates, trades, manages and distributes capital for governments, institutions and individuals. We were originally incorporated under the laws of the State of Delaware in 1981, and our predecessor companies date back to 1924. We are a financial holding company ("FHC") regulated by the Board of Governors of the Federal Reserve System ("Federal Reserve") under the Bank Holding Company Act of 1956, as amended ("BHC Act"). We conduct our business from our headquarters in and around New York City, our regional offices and branches throughout the U.S. and our principal offices in London, Frankfurt, Tokyo, Hong Kong and other world financial centers. Unless the context otherwise requires, the terms "Morgan Stanley," the "Firm," "us," "we" and "our" mean Morgan Stanley (the "Parent Company") together with its consolidated subsidiaries. See the "Glossary of Common Terms and Acronyms" for the definition of certain terms and acronyms used throughout the 2023 Form 10-K.

Financial information concerning us, our business segments and geographic regions for each of the years ended December 31, 2023, December 31, 2022, and December 31, 2021 is included in "Financial Statements and Supplementary Data."

Business Segments

We are a global financial services firm that maintains significant market positions in each of our business segments: Institutional Securities, Wealth Management and Investment Management. Through our subsidiaries and affiliates, we provide a wide variety of products and services to a large and diversified group of clients and customers, including corporations, governments, financial institutions and individuals. Additional information related to our business segments, respective clients, and products and services provided is included under "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Competition

All aspects of our businesses are highly competitive, and we expect them to remain so. We compete in the U.S. and globally for clients, market share and human talent. Operating within the financial services industry on a global basis presents, among other things, technological, risk management, regulatory, infrastructure and other challenges that require effective resource allocation in order for us to remain competitive. Our competitive position depends on a number of factors, including our reputation, client experience, the quality and consistency of our long-term investment performance, innovation, execution, relative pricing and other factors, including entering into new or expanding current businesses as a result of acquisitions and other strategic initiatives. Our ability to sustain or improve our competitive position also depends substantially on our ability to continue to attract and retain highly qualified employees while managing compensation and other costs. We compete with commercial banks, investment banking firms, brokerage firms, insurance companies, exchanges, electronic trading and clearing platforms, financial data repositories, investment advisers and sponsors of mutual funds, hedge funds, real assets funds and private credit and equity funds, energy companies, financial technology firms and other companies offering financial and ancillary services in the U.S. and globally, including, in certain instances, through the internet. In addition, restrictive laws and regulations applicable to certain global financial services institutions, which have been increasing in complexity and volume, may prohibit us from engaging in certain transactions, impose more stringent capital and liquidity requirements, and increase costs, and can put us at a competitive disadvantage to competitors in certain businesses not subject to these same requirements. See also "Supervision and Regulation" herein and "Risk Factors."

We compete directly in the U.S. and globally with other securities and financial services firms and broker-dealers and with others on a regional or product basis. Additionally, there is increased competition driven by established firms and asset managers, as well as the emergence of new firms, non-financial companies and business models, including innovative uses of technology, competing for the same clients and assets, or offering similar products and services to retail and institutional customers. We also compete with companies that provide online trading and banking services, investment advisory services, robo-advice capabilities, access to digital asset capabilities and services, and other financial products and services.

Our ability to access capital at competitive rates (which is generally impacted by, among other things, our credit spreads and ratings) and to commit and deploy capital efficiently, particularly in our more capital-intensive businesses, including underwriting and sales, trading, financing and market-making activities, also affects our competitive position. We expect clients to continue to request that we provide loans or lending commitments in connection with certain investment banking activities.

It is possible that competition may become even more intense as we continue to compete with financial or other institutions that may be larger, or better capitalized, or may have a stronger local presence and longer operating history in certain geographies or products. Many of these firms have the ability to offer a wide range of products and services through different platforms that may enhance their competitive position and could result in additional pricing pressure on our businesses.

We continue to experience price competition in some of our businesses. In particular, the ability to execute securities, derivatives and other financial instrument trades electronically on exchanges, swap execution facilities and other automated trading platforms, and the introduction and application of new

technologies will likely continue the pressure on our revenues. The trend toward direct access to automated, electronic markets will likely continue as additional markets move to more automated trading platforms. We have experienced and will likely continue to experience competitive pressures in these and other areas in the future.

Our ability to compete successfully in the investment management industry is affected by several factors, including our reputation, quality of investment professionals, performance of investment strategies or product offerings relative to peers and appropriate benchmark indices, advertising and sales promotion efforts, fee levels, the effectiveness of and access to distribution channels and investment pipelines, the types of products offered, and regulatory restrictions specific to FHCs. Our investment products, including alternative investment products, may compete with investments offered by other investment managers, including by investment managers who may be subject to less stringent legal and regulatory regimes than us.

Supervision and Regulation

As a major financial services firm, we are subject to extensive regulation by U.S. federal and state regulatory agencies and securities exchanges and by regulators and exchanges in each of the major markets where we conduct our business.

We continue to monitor the changing political, tax and regulatory environment. While it is likely that there will be changes in the way major financial institutions are regulated in both the U.S. and other markets in which we operate, it remains difficult to predict the exact impact these changes will have on our business, financial condition, results of operations and cash flows for a particular future period. We expect to remain subject to extensive supervision and regulation.

Financial Holding Company

Consolidated Supervision. We operate as a bank holding company ("BHC") and FHC under the BHC Act and are subject to comprehensive consolidated supervision, regulation and examination by the Federal Reserve. In particular, we are subject to (among other things): significant regulation and supervision; intensive scrutiny of our businesses and plans for expansion of those businesses; limitations on activities; a systemic risk regime that imposes heightened capital and liquidity requirements; restrictions on activities and investments imposed by a section of the BHC Act added by the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank Act") referred to as the "Volcker Rule," and comprehensive derivatives regulation. In addition, the Consumer Financial Protection Bureau ("CFPB") has primary rulemaking, enforcement and examination authority over us and our subsidiaries with respect to federal consumer protection laws.

Scope of Permitted Activities. The BHC Act limits the activities of BHCs and FHCs and grants the Federal Reserve authority to limit our ability to conduct activities. We must obtain the Federal Reserve's approval before engaging in certain banking and other financial activities both in the U.S. and internationally.

The BHC Act grandfathers "activities related to the trading, sale or investment in commodities and underlying physical properties," provided that we were engaged in "any of such activities as of September 30, 1997 in the U.S." and provided that certain other conditions that are within our reasonable control are satisfied. We currently engage in our commodities activities pursuant to the BHC Act grandfather exemption, as well as other authorities under the BHC Act.

Activities Restrictions under the Volcker Rule. The Volcker Rule prohibits banking entities, including us and our affiliates, from engaging in certain proprietary trading activities, as defined in the Volcker Rule, subject to exemptions for underwriting, market-making, risk-mitigating hedging and certain other activities. The Volcker Rule also prohibits certain investments and relationships by banking entities with covered funds, as defined in the Volcker Rule, subject to a number of exemptions and exclusions.

Capital Requirements. The Federal Reserve establishes capital requirements largely based on the Basel III capital standards established by the Basel Committee on Banking Supervision ("Basel Committee"), including well-capitalized standards, for large BHCs and evaluates our compliance with such requirements. The Office of the Comptroller of the Currency ("OCC") establishes similar capital requirements and standards for Morgan Stanley Bank, N.A. ("MSBNA") and Morgan Stanley Private Bank, National Association ("MSPBNA") (together, our "U.S. Bank Subsidiaries").

The Federal Reserve, Federal Deposit Insurance Corporation ("FDIC") and the OCC (collectively, "U.S. banking agencies") have proposed a comprehensive set of revisions to their capital requirements based on changes to the Basel III capital standards finalized by the Basel Committee. The impact on us of any revisions to the capital requirements is uncertain and depends on the adoption of final rulemakings by the U.S. banking agencies. For additional information, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements—Regulatory Developments and Other Matters—Basel III Endgame Proposal."

In addition, many of our regulated subsidiaries are subject to regulatory capital requirements, including regulated subsidiaries registered as swap dealers with the U.S. Commodity Futures Trading Commission ("CFTC") or conditionally registered as security-based swap dealers with the SEC or registered as broker-dealers or futures commission merchants.

For more information about the specific capital requirements applicable to us and our U.S. Bank Subsidiaries, as well as our subsidiaries that are broker-dealers, swap dealers and security-based swap dealers, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements" and Note 16 to the financial statements.

Capital Planning, Stress Tests and Capital Distributions. The Federal Reserve has adopted capital planning and stress test requirements for large BHCs, including Morgan Stanley. For more information about our capital planning and stress test requirements, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements."

In addition, the Federal Reserve, the OCC and the FDIC have the authority to prohibit or limit the payment of dividends by the banking organizations they supervise, including us and our U.S. Bank Subsidiaries, if, in the banking regulator's opinion, payment of a dividend would constitute an unsafe or unsound practice in light of the financial condition of the banking organization. For information about the Federal Reserve's restrictions on capital distributions for large BHCs, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements—Capital Plans, Stress Tests and the Stress Capital Buffer." All of these policies and other requirements could affect our ability to pay dividends and/or repurchase stock or require us to provide capital assistance to our U.S. Bank Subsidiaries under circumstances that we would not otherwise decide to do.

Liquidity Requirements. In addition to capital regulations, the U.S. banking agencies have adopted liquidity and funding standards, including the LCR, the NSFR, liquidity stress testing and associated liquidity reserve requirements.

For more information, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Balance Sheet—Regulatory Liquidity Framework."

Systemic Risk Regime. Under rules issued by the Federal Reserve, large BHCs, including Morgan Stanley, must conduct internal liquidity stress tests, maintain unencumbered highly liquid assets to meet projected net cash outflows for 30 days over the range of liquidity stress scenarios used in internal stress tests, and comply with various liquidity risk management requirements. These large BHCs also must comply with a range of risk management and corporate governance requirements.

The Federal Reserve also imposes single-counterparty credit limits ("SCCL") for large banking organizations. U.S. Global systemically important banks ("G-SIBs"), including us, are subject to a limit of 15% of Tier 1 capital for aggregate net credit exposures to any "major counterparty" (defined to include other U.S. G-SIBs, foreign G-SIBs and non-bank systemically important financial institutions supervised by the Federal Reserve). In addition, we are subject to a limit of 25% of Tier 1 capital for aggregate net credit exposures to any other unaffiliated counterparty.

The Federal Reserve may establish additional prudential standards for large BHCs, including with respect to an early remediation framework, contingent capital, enhanced public disclosures and limits on short-term debt, including off-balance sheet exposures. See "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements—Total Loss-Absorbing Capacity, Long-Term Debt and Clean Holding Company Requirements."

If the Federal Reserve or the Financial Stability Oversight Council determines that a BHC with $250 billion or more in consolidated assets poses a "grave threat" to U.S. financial stability, the institution may be, among other things, restricted in its ability to merge or offer financial products and/or required to terminate activities and dispose of assets. See also "Capital Requirements" and "Liquidity Requirements" and "Resolution and Recovery Planning" herein.

Resolution and Recovery Planning. We are required to submit once every two years to the Federal Reserve and the FDIC a resolution plan that describes our strategy for a rapid and orderly resolution under the U.S. Bankruptcy Code in the event of our material financial distress or failure. Interim updates are required in certain limited circumstances, including material mergers or acquisitions or fundamental changes to our resolution strategy.

Our preferred resolution strategy, which is set out in our most recent resolution plan, is an SPOE strategy, which generally contemplates the provision of adequate capital and liquidity by the Parent Company to certain of its subsidiaries so that such subsidiaries have the resources necessary to implement the resolution strategy after the Parent Company has filed for bankruptcy.

Our next resolution plan is due July 1, 2025. Further, we submit an annual recovery plan to the Federal Reserve that outlines the steps that management could take over time to generate or conserve financial resources in times of prolonged financial stress.

Certain of our domestic and foreign subsidiaries are also subject to resolution and recovery planning requirements in the jurisdictions in which they operate. For example, the FDIC currently requires certain insured depository institutions ("IDI"), including our U.S. Bank Subsidiaries, to submit a resolution plan every three years that describes the IDI's strategy for a rapid and orderly resolution in the event of material financial distress or failure of the IDI.

In addition, certain financial companies, including BHCs such as the Firm and certain of its subsidiaries, can be subject to a resolution proceeding under the orderly liquidation authority,

with the FDIC being appointed as receiver, provided that determination of extraordinary financial distress and systemic risk is made by the U.S. Treasury Secretary in consultation with the U.S. President. Regulators have adopted certain orderly liquidation authority implementing regulations and may expand or clarify these regulations in the future. If we were subject to the orderly liquidation authority, the FDIC would have considerable powers, including: the power to remove directors and officers responsible for our failure and to appoint new directors and officers; the power to assign our assets and liabilities to a third party or bridge financial company without the need for creditor consent or prior court review; the ability to differentiate among our creditors, including treating certain creditors within the same class better than others, subject to a minimum recovery right on the part of disfavored creditors to receive at least what they would have received in bankruptcy liquidation; and broad powers to administer the claims process to determine distributions from the assets of the receivership. The FDIC has been developing an SPOE strategy that could be used to implement the orderly liquidation authority.

Regulators have also taken and proposed various actions to facilitate an SPOE strategy under the U.S. Bankruptcy Code, the orderly liquidation authority or other resolution regimes.

For more information about our resolution plan-related submissions and associated regulatory actions, see “Risk Factors—Legal, Regulatory and Compliance Risk,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements—Total Loss-Absorbing Capacity, Long-Term Debt and Clean Holding Company Requirements” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements—Resolution and Recovery Planning.”

Cyber and Information Security Risk Management and Protection of Client Information

The financial services industry faces increased global regulatory focus regarding cyber and information security risk management practices. Many aspects of our businesses are subject to cybersecurity legal, regulatory and disclosure requirements enacted by U.S. federal and state governments and other non-U.S. jurisdictions. These requirements are generally aimed at codifying basic cybersecurity protections and mandating data breach notification requirements.

Our businesses are also subject to increasing privacy and data protection legal requirements concerning the use and protection of certain personal information with regard to clients, employees and others. These requirements impose mandatory privacy and data protection obligations, including providing for individual rights, enhanced governance and accountability requirements, and significant fines and litigation risk for noncompliance. In addition, several jurisdictions have enacted or proposed personal and other data localization requirements and restrictions on cross-border transfer of personal and other data that may restrict our ability to conduct business in those jurisdictions or create additional financial and regulatory burdens to do so.

Numerous jurisdictions have passed laws, rules and regulations in these areas and many are considering new or updated ones that could impact our businesses, particularly as the application, interpretation and enforcement of these laws, rules and regulations are often uncertain and evolving. Many aspects of our businesses are subject to legal requirements concerning the use and protection of certain customer and other information, as well as the privacy and cybersecurity laws referenced above. We have adopted measures designed to comply with these and related applicable requirements in all relevant jurisdictions.

For additional information on our cybersecurity strategy and processes, see “Cybersecurity.”

Institutional Securities and Wealth Management

U.S. Bank Subsidiaries. Our U.S. Bank Subsidiaries are FDIC-insured depository institutions subject to supervision, regulation and examination by the OCC and are subject to the OCC’s risk governance guidelines, which establish heightened standards for a large IDI’s risk governance framework and the oversight of that framework by the IDI’s board of directors. Our U.S. Bank Subsidiaries are also subject to prompt corrective action standards, which require the relevant federal banking regulator to take prompt corrective action with respect to a depository institution if that institution does not meet certain capital adequacy standards. In addition, BHCs, such as Morgan Stanley, are required to serve as a source of strength to their U.S. bank subsidiaries and commit resources to support these subsidiaries in the event such subsidiaries are in financial distress. Our U.S. Bank Subsidiaries’ business activities are generally limited to supporting our Institutional Securities and Wealth Management business segments. Our U.S. Bank Subsidiaries’ business activities are generally limited to supporting our Institutional Securities and Wealth Management business segments.

Our U.S. Bank Subsidiaries are also subject to Sections 23A and 23B of the Federal Reserve Act, which impose restrictions on certain transactions with affiliates, including any extension of credit to, or purchase of assets from, an affiliate. These restrictions limit the total amount of credit exposure that our U.S. Bank Subsidiaries may have to any one affiliate and to all affiliates and require collateral for those exposures. Section 23B requires affiliate transactions to be on market terms.

As commonly controlled FDIC-insured depository institutions, each of our U.S. Bank Subsidiaries could be responsible for any loss to the FDIC from the failure of the other U.S. Bank Subsidiary.

Broker-Dealer and Investment Adviser Regulation. Our primary U.S. broker-dealer subsidiaries, Morgan Stanley & Co. LLC ("MS&Co.") and Morgan Stanley Smith Barney LLC ("MSSB") are registered broker-dealers with the SEC and in all 50 states, the District of Columbia, Puerto Rico and the U.S. Virgin Islands and are members of various self-regulatory organizations, including the Financial Industry Regulatory Authority ("FINRA"), and various securities exchanges and clearing organizations. Broker-dealers are subject to laws and regulations covering all aspects of the securities business, including sales and trading practices, securities offerings, publication of research reports, use of customers' funds and securities, capital structure, risk management controls in connection with market access, recordkeeping and retention, and the conduct of their directors, officers, representatives and other associated persons. Broker-dealers are also regulated by securities administrators in those states where they do business. Our significant broker-dealer subsidiaries are members of the Securities Investor Protection Corporation.

MSSB is also a registered investment adviser with the SEC. MSSB's relationship with its investment advisory clients is subject to the fiduciary and other obligations imposed on investment advisers. The SEC and other supervisory bodies generally have broad administrative powers to address non-compliance, including the power to restrict or limit MSSB from carrying on its investment advisory and other asset management activities.

The Firm is subject to various regulations that affect broker-dealer sales practices and customer relationships, including the SEC's "Regulation Best Interest," which requires broker-dealers to act in the "best interest" of retail customers at the time a recommendation is made without placing the financial or other interests of the broker-dealer ahead of the interest of the retail customer.

Margin lending by our broker-dealers is regulated by the Federal Reserve's restrictions on lending in connection with purchases and short sales of securities. Our broker-dealers are also subject to maintenance and other margin requirements imposed under FINRA and other self-regulatory organization rules.

Our U.S. broker-dealer subsidiaries are subject to the SEC's net capital rule and the net capital requirements of various exchanges, other regulatory authorities and self-regulatory organizations. For more information about these requirements, see Note 16 to the financial statements.

Research Regulation. In addition to research-related regulations currently in place in the U.S. and other jurisdictions, regulators continue to focus on research conflicts of interest and may impose additional regulations.

Futures Activities and Certain Commodities Activities Regulation. MS&Co. and E*TRADE Futures LLC, as futures commission merchants, and MSSB, as an introducing broker, are subject to net capital requirements of, and certain of their activities are regulated by, the CFTC and the National Futures Association ("NFA"). MS&Co. is also subject to requirements of, and regulation by, the CME Group, in its capacity as MS&Co.'s designated self-regulatory organization, and various commodity futures exchanges of which MS&Co. is a member. Rules and regulations of the CFTC, NFA, the Joint Audit Committee and commodity futures exchanges address obligations related to, among other things, customer asset protections, including rules and regulations governing the segregation of customer funds, the use by futures commission merchants of customer funds, the margining of customer accounts and documentation entered into by futures commission merchants with their customers, record-keeping and reporting obligations of futures commission merchants and introducing brokers, risk disclosure and risk management. Our commodities activities are subject to extensive laws and regulations in the U.S. and abroad.

Derivatives Regulation. We are subject to comprehensive regulation of our derivatives businesses, including regulations that impose margin requirements, public and regulatory reporting, central clearing and mandatory trading on regulated exchanges or execution facilities for certain types of swaps and security-based swaps (collectively, "Swaps").

CFTC and SEC rules require registration of swap dealers and security-based swap dealers, respectively, and impose numerous obligations on such registrants, including adherence to business conduct standards for all in-scope Swaps. We have registered a number of U.S. and non-U.S. swap dealers and conditionally registered a number of U.S. and non-U.S security-based swap dealers. Swap dealers and security-based swap dealers regulated by a prudential regulator are subject to uncleared Swap margin requirements and minimum capital requirements established by the prudential regulators. Swap dealers and security-based swap dealers not subject to regulation by a prudential regulator are subject to uncleared Swap margin requirements and minimum capital requirements established by the CFTC and SEC, respectively. In some cases, the CFTC and SEC permit non-U.S. swap dealers and security-based swap dealers that do not have a prudential regulator to comply with applicable non-U.S. uncleared Swap margin and minimum capital requirements instead of direct compliance with CFTC or SEC requirements.

Investment Management

Many of the subsidiaries engaged in our investment management activities are registered as investment advisers with the SEC. Many aspects of our investment management activities are also subject to federal and state laws and regulations in place primarily for the protection of the investor or client. These laws and regulations generally grant supervisory agencies and bodies broad administrative powers, including the power to limit or restrict us from carrying on our investment management activities in the event that we fail to comply with such laws and regulations.

In addition, certain of our subsidiaries are U.S. registered broker-dealers and act as distributors to our proprietary mutual funds and as placement agents to certain private investment funds managed by our Investment Management business segment. Certain of our affiliates are registered as commodity trading advisors and/or commodity pool operators, or are operating under certain exemptions from such registration pursuant to CFTC rules and other guidance, and have certain responsibilities with respect to each pool they advise. Our investment management activities are subject to additional laws and regulations, including restrictions on sponsoring or investing in, or maintaining certain other relationships with, covered funds, as defined by the Volcker Rule, subject to certain limited exemptions. See also "Financial Holding Company—Activities Restrictions under the Volcker Rule," "Institutional Securities and Wealth Management—Broker-Dealer and Investment Adviser Regulation," "Institutional Securities and Wealth Management—Regulation of Futures Activities and Certain Commodities Activities," and "Institutional Securities and Wealth Management—Derivatives Regulation" herein and "Non-U.S. Regulation" herein for a discussion of other regulations that impact our Investment Management business activities.

U.S. Consumer Protection

We are subject to supervision and regulation by the CFPB with respect to U.S. federal consumer protection laws. Federal consumer protection laws to which we are subject include the Gramm-Leach-Bliley Act's privacy provisions, Equal Credit Opportunity Act, Home Mortgage Disclosure Act, Electronic Fund Transfer Act, Fair Credit Reporting Act, Real Estate Settlement Procedures Act, Truth in Lending Act and Truth in Savings Act, all of which are enforced by the CFPB. We are also subject to certain federal consumer protection laws enforced by the OCC, including the Servicemembers Civil Relief Act. Furthermore, we are subject to certain state consumer protection laws, and under the Dodd-Frank Act, state attorneys general and other state officials are empowered to enforce certain federal consumer protection laws and regulations. These federal and state consumer protection laws apply to a range of our activities.

Non-U.S. Regulation

Our businesses are regulated extensively by non-U.S. regulators, including governments, central banks and regulatory bodies, securities exchanges, commodity exchanges, and self-regulatory organizations, especially in those jurisdictions in which we maintain an office. Certain regulators have prudential, business conduct and other authority over us or our subsidiaries, as well as powers to limit or restrict us from engaging in certain businesses or to conduct administrative proceedings that can result in censures, fines, asset seizures and forfeitures, the issuance of cease-and-desist orders, or the suspension or expulsion of a regulated entity, its affiliates or its employees. Certain of our subsidiaries are subject to capital, liquidity, leverage and other prudential requirements that are applicable under non-U.S. law.

Firmwide Financial Crimes Program

Our Financial Crimes program is coordinated and implemented on an enterprise-wide basis and supports our financial crime prevention efforts across all regions and business units. The program includes anti-money laundering ("AML"), economic sanctions ("Sanctions"), anti-boycott, anti-corruption, anti-tax evasion, and government and political activities compliance programs and aligned business-line risk functions.

In the U.S., the Bank Secrecy Act, as amended by the USA PATRIOT Act of 2001 and the Anti-Money Laundering Act of 2020, imposes significant obligations on financial institutions to detect and deter money laundering and terrorist financing activity, including requiring banks, broker-dealers, futures commission merchants, introducing brokers and mutual funds to develop and implement AML programs, verify the identity of customers that maintain accounts, and monitor and report suspicious activity to appropriate law enforcement or regulatory authorities. Outside of the U.S., applicable laws, rules and regulations similarly require designated types of financial institutions to implement AML programs.

We are also subject to Sanctions, such as regulations and economic sanctions programs administered by the U.S. government, including the U.S. Treasury Department's Office of Foreign Assets Control ("OFAC") and the U.S. Department of State, and similar sanctions programs imposed by foreign governments or global or regional multilateral organizations. In addition, we are subject to anti-corruption laws, such as the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act, in the jurisdictions in which we operate. Anti-corruption laws generally prohibit offering, promising, giving or authorizing others to give anything of value, either directly or indirectly, to a government official or private party in order to influence official action or otherwise gain an unfair business advantage, such as to obtain or retain business.

Human Capital

Employees and Culture

Our employees are our most important asset. With offices in 42 countries, we have approximately 80 thousand employees across the globe as of December 31, 2023, whom we depend on to build value for our clients and shareholders. To facilitate talent attraction and retention, we strive to make Morgan Stanley a diverse and inclusive workplace, with a strong culture and opportunities for our employees to grow and develop in their career. We support our employees with competitive compensation, benefits, and health and wellbeing programs.

Our core values guide decision-making aligned with the expectations of our employees, clients, shareholders,

regulators, directors and the communities in which we operate. These guiding values—*Put Clients First, Do the Right Thing, Lead with Exceptional Ideas, Commit to Diversity and Inclusion, and Give Back*—are at the heart of our workplace culture and underpin our success. Our Code of Conduct is central to our expectation that employees embody our values. Every new hire and every employee annually is required to certify to their understanding of and adherence to the Code of Conduct. We also invite employee feedback on our culture and workplace through our ongoing employee engagement surveys. For a further discussion of the culture, values and conduct of employees, see "Quantitative and Qualitative Disclosures about Risk—Risk Management."

Diversity and Inclusion

We believe a diverse and inclusive workforce is important to Morgan Stanley's continued success and our ability to serve our clients. Our programming, including the Morgan Stanley Institute for Inclusion, supports our workforce and helps to build a sense of community and belonging for all colleagues. We have deepened our investments to recruit, advance and retain diverse talent through a holistic approach, focused on professional development, health and wellbeing, benefits, and culture.

Talent Development and Retention

We are committed to the development of our workforce and supporting mobility and career growth. Our talent development programs are designed to provide employees with the resources to help them achieve their career goals, build management skills and lead their organizations. We believe supporting employee development and growth contributes to long-term retention.

We continue to offer leadership programs to support employees as they progress in their career at the firm.

Compensation, Financial and Employee Wellbeing

We provide responsible and effective compensation programs that reinforce our values and culture through four key objectives: deliver pay for sustainable performance, attract and retain top talent, align with shareholder interests and mitigate excessive risk taking. In addition to salaries, these programs (which vary by location) include annual bonuses, retirement savings plans with matching contributions, an employee stock purchase plan, student loan refinancing and a financial wellbeing program. To promote equitable rewards for all employees, we have enhanced our practices to support fair and consistent compensation and reward decisions based on merit, perform ongoing reviews of compensation decisions and conduct regular assessments of our rewards structure.

Our employees' health is also central to our ongoing success. We support the physical, mental and financial wellbeing of our global workforce and their families by offering programs focusing on awareness, prevention and access. Offerings vary by location and include: health care and insurance benefits, mental health resources, flexible spending and health savings accounts, paid time-off, flexible work schedules, family leave, child and elder care resources, financial help with fertility, adoption and surrogacy, and tuition assistance, among many others. Onsite services in our principal locations include health centers, mental health counseling, fitness centers and physical therapy.

In 2023, we further enhanced our family support, women's health, mental health and wellbeing offerings. Our Global Wellbeing Board, comprised of senior management across the Firm's businesses and geographies, continues to shape and advance our wellbeing strategy. For more detailed information on our human capital programs and initiatives, see "People and Culture" in our 2022 ESG Report: Diversity & Inclusion, Climate, and Sustainability (found on our website). The reports and information elsewhere on our website are not incorporated by reference into, and do not form any part of, this Annual Report.

Human Capital Metrics

Category		Metric	At December 31, 2023
Employees	Employees by geography (thousands)	Americas	**53**
		Asia	**17**
		EMEA	**10**
Culture	Employee engagement[1]	% Proud to work at Morgan Stanley	**92 %**
Diversity and Inclusion	Global gender representation	% Women	**40 %**
		% Women officer[2]	**29 %**
	U.S. ethnic diversity representation	% Ethnically diverse[3]	**35 %**
		% Ethnically diverse officer[2,3]	**28 %**
Retention	Voluntary attrition in 2023	% Global	**8 %**
	Tenure	Management Committee average length of service (years)	**21**
		All employees average length of service (years)	**7**
Compensation	Compensation and benefits	Total compensation and benefits expense in 2023 (millions)	**$ 24,558**

1. The percentage disclosed is based on the 2023 biennial employee engagement survey results, which reflect responses from 89% of employees.
2. Officer includes Managing Directors, Executive Directors and Vice Presidents.
3. U.S. ethnically diverse designations align with the Equal Employment Opportunity Commission's ethnicity and race categories and include American Indian or Native Alaskan, Asian, Black or African American, Hispanic or Latino, Native Hawaiian or Pacific Islander, and two or more races.

Information about Our Executive Officers

The executive officers of Morgan Stanley and their age and titles as of February 22, 2024 are set forth below. Business experience is provided in accordance with SEC rules.

Mandell L. Crawley (48). Executive Vice President and Chief Human Resources Officer (since February 2021). Head of Private Wealth Management (June 2017 to January 2021). Chief Marketing Officer (September 2014 to June 2017). Head of National Business Development and Talent Management for Wealth Management (June 2011 to September 2014). Divisional Business Development Officer (May 2010 to June 2011). Regional Business Development Officer (May 2009 to May 2010). Head of Field Sales and Marketing (February 2008 to May 2009). Head of Fixed Income Capital Markets Sales and Distribution for Wealth Management (April 2004 to February 2008).

James P. Gorman (65). Executive Chairman of the Board of Directors (since January 2012). Chief Executive Officer of Morgan Stanley (January 2012 to December 2023). President (January 2010 to December 2011) and member of the Board of Directors (since January 2010). Co-President (December 2007 to December 2009) and Co-Head of Strategic Planning (October 2007 to December 2009). President and Chief Operating Officer of Wealth Management (February 2006 to April 2008).

Eric F. Grossman (57). Executive Vice President and Chief Legal Officer of Morgan Stanley (since January 2012) and Chief Administrative Officer (since July 2022). Global Head of Legal (September 2010 to January 2012). Global Head of Litigation (January 2006 to September 2010) and General Counsel of the Americas (May 2009 to September 2010). General Counsel of Wealth Management (November 2008 to September 2010). Partner at the law firm of Davis Polk & Wardwell LLP (June 2001 to December 2005).

Edward Pick (55). Chief Executive Officer of Morgan Stanley (since January 2024). Co-President and Co-Head of Corporate Strategy (June 2021 to December 2023). Head of Institutional Securities (July 2018 to December 2023). Global Head of Sales and Trading (October 2015 to July 2018). Head of Global Equities (March 2011 to October 2015). Co-Head of Global Equities (April 2009 to March 2011). Co-Head of Global Capital Markets (July 2008 to April 2009). Co-Head of Global Equity Capital Markets (December 2005 to July 2008).

Andrew M. Saperstein (57). Co-President (since June 2021). Head of Wealth Management (April 2019 to December 2023). Co-Head of Wealth Management (January 2016 to April 2019). Co-Chief Operating Officer of Institutional Securities (March 2015 to January 2016). Head of Investment Products and Services (June 2012 to March 2015).

Daniel A. Simkowitz (58). Co-President (since January 2024). Head of Investment Management (October 2015 to December 2023) and Co-Head of Corporate Strategy (June 2021 to December 2023). Co-Head of Global Capital Markets (March 2013 to September 2015). Chairman of Global Capital Markets (November 2009 to March 2013). Managing Director in Global Capital Markets (December 2000 to November 2009).

Charles A. Smith (57). Executive Vice President and Chief Risk Officer of Morgan Stanley (since May 2023). Head of Institutional Securities Business Development (March 2017 to May 2023). Chief Financial Officer of Institutional Securities (August 2012 to May 2017). President of Morgan Stanley Bank, N.A. and Morgan Stanley Private Bank, N.A. (September 2011 to August 2012). Head of Firm Strategy and Execution (May 2008 to September 2011). Managing Director in the Investment Banking Division (December 2005 to May 2008).

Sharon Yeshaya (44). Executive Vice President and Chief Financial Officer (since June 2021). Head of Investor Relations (June 2016 to May 2021). Chief of Staff in the Office of the Chairman and CEO (January 2015 to May 2016). Co-Head of New Product Origination for Derivative Structured Products (December 2012 to December 2014).

Risk Factors

For a discussion of the risks and uncertainties that may affect our future results and strategic objectives, see "Forward-Looking Statements" preceding "Business" and "Return on Tangible Common Equity Goal" in "Management's Discussion and Analysis of Financial Condition and Results of Operations."

Market Risk

Market risk refers to the risk that a change in the level of one or more market prices, rates, spreads, indices, volatilities, correlations or other market factors, such as market liquidity, will result in losses for a position or portfolio. We have direct exposure to market risk. In addition, market risk may also impact our clients and markets in a manner that may indirectly impact us. For more information on how we monitor and manage market risk, see "Quantitative and Qualitative Disclosures about Risk—Market Risk."

Our results of operations may be materially affected by market fluctuations and by global financial market and economic conditions and other factors.

Our results of operations have been in the past and may, in the future, be materially affected by global financial market and economic conditions, including in particular by periods of low or slowing economic growth in the United States and other major markets, both directly and indirectly through their impact on client activity levels. These include the level and volatility of equity, fixed income and commodity prices; the level, term structure and volatility of interest rates; inflation and currency values; the level of other market indices, fiscal or monetary policies established by central banks and financial regulators; and uncertainty concerning the future path of interest rates, government shutdowns, debt ceilings or funding, which may be driven by economic conditions, recessionary fears, market uncertainty or lack of confidence among investors and clients due to the effects of widespread events such as global pandemics, natural disasters, climate-related incidents, acts of war or aggression, geopolitical instability, changes in U.S. presidential administrations or Congress, changes to global trade policies, supply chain complications and the implementation of tariffs or protectionist trade policies and other factors, or a combination of these or other factors.

The results of our Institutional Securities business segment, particularly results relating to our involvement in primary and secondary markets for all types of financial products, are subject to substantial market fluctuations due to a variety of factors that we cannot control or predict with great certainty. These fluctuations impact results by causing variations in business flows and activity and in the fair value of securities and other financial products. Fluctuations also occur due to the level of global market activity, which, among other things, can be impacted by market uncertainty or lack of investor and client confidence due to unforeseen economic, geopolitical or market conditions that in turn affect the size, number and timing of investment banking client assignments and transactions and the realization of returns from our principal investments.

Periods of unfavorable market or economic conditions, including equity market levels and the level and pace of changes in interest rates and asset valuation, may have adverse impacts on the level of individual investor confidence and participation in the global markets and/or the level of and mix of client assets, including deposits, which would negatively impact the results of our Wealth Management business segment.

Substantial market fluctuations could also cause variations in the value of our investments in our funds, the flow of investment capital into or from AUM, and the way customers allocate capital among money market, equity, fixed income or other investment alternatives, which could negatively impact the results of our Investment Management business segment.

The value of our financial instruments may be materially affected by market fluctuations. Market volatility, illiquid market conditions and disruptions in the markets may make it difficult to value and monetize certain of our financial instruments, particularly during periods of market uncertainty or displacement. Subsequent valuations in future periods, in light of factors then prevailing, may result in significant changes in the value of these instruments and may adversely impact historical or prospective fees and performance-based income (also known as incentive fees, which include carried interest) in respect of certain businesses. In addition, at the time of any sales and settlements of these financial instruments, the price we ultimately realize will depend on the demand and liquidity in the market at that time and may be materially lower than their current fair value. Any of these factors could cause a decline in the value of our financial instruments, which may adversely affect our results of operations in future periods.

In addition, financial markets are susceptible to severe events evidenced by rapid depreciation in asset values accompanied by a reduction in asset liquidity. Under these extreme conditions, hedging and other risk management strategies may not be as effective at mitigating trading losses as they would be under more normal market conditions. Moreover, under these conditions, market participants are particularly exposed to trading strategies employed by many market participants simultaneously and on a large scale, which could lead to increased individual counterparty risk for our businesses. Although our risk management and monitoring processes seek to quantify and mitigate risk to more extreme market moves, severe market events have historically been difficult to predict, and we could realize significant losses if extreme market events were to occur.

Holding large and concentrated positions may expose us to losses.

Concentration of risk may reduce revenues or result in losses in our market-making, investing, underwriting (including block trading) and lending businesses (including margin lending) in the event of unfavorable market movements. We commit substantial amounts of capital to these businesses, which often results in our taking large positions in the securities of, or making large loans to, a particular issuer or issuers in a particular industry, country or region. In the event we hold a concentrated position larger than those held by competitors, we may incur larger losses. For further information regarding our country risk exposure, see also "Quantitative and Qualitative Disclosures about Risk—Country Risks."

Credit Risk

Credit risk refers to the risk of loss arising when a borrower, counterparty or issuer does not meet its financial obligations to us. For more information on how we monitor and manage credit risk, see "Quantitative and Qualitative Disclosures about Risk—Credit Risk."

We are exposed to the risk that third parties that are indebted to us will not perform their obligations.

We incur significant credit risk exposure through our Institutional Securities business segment. This risk may arise from a variety of business activities, including, but not limited to: extending credit to clients through various lending commitments; entering into swap or other derivative contracts under which counterparties have obligations to make payments to us; acting as clearing broker for listed and over-the-counter derivatives whereby we guarantee client performance to clearinghouses; providing short- or long-term funding that is secured by physical or financial collateral, including, but not limited to, real estate and marketable securities, whose value may at times be insufficient to fully cover the loan repayment amount; posting margin and/or collateral and other commitments to clearinghouses, clearing agencies, exchanges, banks, securities firms and other financial counterparties; and investing and trading in securities and loan pools, whereby the value of these assets may fluctuate based on realized or expected defaults on the underlying obligations or loans.

We also incur credit risk in our Wealth Management business segment lending to mainly individual investors, including, but not limited to, margin- and securities-based loans collateralized by securities, residential mortgage loans, including home equity lines of credit ("HELOCs"), and structured loans to ultra-high net worth clients, that are in most cases secured by various types of collateral whose value may at times be insufficient to fully cover the loan repayment amount, including marketable securities, private investments, commercial real estate and other financial assets.

Our valuations related to, and reserves for losses on, credit exposures rely on complex models, estimates and subjective judgments about the future. While we believe current valuations and reserves adequately address our perceived levels of risk, future economic conditions, including inflation and changes in real estate and other asset values, that differ from or are more severe than forecast, inaccurate models or assumptions, or external factors such as global pandemics, natural disasters, or geopolitical events, could lead to inaccurate measurement of or deterioration of credit quality of our borrowers and counterparties or the value of collateral and result in unexpected losses. We may also incur higher-than-anticipated credit losses as a result of (i) disputes with counterparties over the valuation of collateral or (ii) actions taken by other lenders that may negatively impact the valuation of collateral. In cases where we foreclose on collateral, sudden declines in the value or liquidity of collateral may result in significant losses to us despite our (i) credit monitoring, (ii) over-collateralization, (iii) ability to call for additional collateral or (iv) ability to force repayment of the underlying obligation, especially where there is a single type of collateral supporting the obligation. In addition, in the longer term, climate change may have a negative impact on the financial condition of our clients, which may decrease revenues from those clients and increase the credit risk associated with loans and other credit exposures to those clients. Certain of our credit exposures may be concentrated by counterparty, product, sector, portfolio, industry or geographic region. Although our models and estimates account for correlations among related types of exposures, a change in the market or economic environment for a concentrated product or an external factor impacting a concentrated counterparty, sector, portfolio, industry or geographic region may result in credit losses in excess of amounts forecast. For further information regarding our country risk exposure, see also "Quantitative and Qualitative Disclosures about Risk—Country Risks."

In addition, as a clearing member of several central counterparties, we are responsible for the defaults or misconduct of our customers and could incur financial losses in the event of default by other clearing members. Although we regularly review our credit exposures, default risk may arise from events or circumstances that are difficult to detect or foresee.

A default by a large financial institution could adversely affect financial markets.

The commercial soundness of many financial institutions and certain other large financial services firms may be closely interrelated as a result of credit, trading, clearing or other relationships among such entities. Increased centralization of trading activities through particular clearinghouses, central agents or exchanges may increase our concentration of risk with respect to these entities. As a result, concerns about, or a default or threatened default by, one or more such entities could lead to significant market-wide liquidity and credit problems, losses or defaults by other institutions, or require

financial commitments to multi-lateral actions intended to support market stability. This is sometimes referred to as systemic risk and may adversely affect financial intermediaries, such as clearinghouses, clearing agencies, exchanges, banks and securities firms, with which we interact on a daily basis and, therefore, could adversely affect us. See also “Systemic Risk Regime” under “Business—Supervision and Regulation—Financial Holding Company.”

Operational Risk

Operational risk refers to the risk of loss, or of damage to our reputation, resulting from inadequate or failed processes or systems, from human factors (e.g., inappropriate or unlawful conduct) or from external events (e.g., cyberattacks or third-party vulnerabilities) that may manifest as, for example, loss of information, business disruption, theft and fraud, legal, regulatory and compliance risks, or damage to physical assets. We may incur operational risk across the full scope of our business activities, including revenue-generating activities and support and control groups (e.g., information technology ("IT") and trade processing). Legal, regulatory and compliance risk is included in the scope of operational risk and is discussed below under “Legal, Regulatory and Compliance Risk.” For more information on how we monitor and manage operational risk, see “Quantitative and Qualitative Disclosures about Risk—Operational Risk.”

We are subject to operational risks, including a failure, breach or other disruption of our operations or security systems or those of our third parties (or third parties thereof), as well as human error or malfeasance, which could adversely affect our businesses or reputation.

Our businesses are highly dependent on our ability to process and report, on a daily basis, a large number of transactions across numerous and diverse markets in many currencies. We may introduce new products or services or change processes or reporting, including in connection with new regulatory requirements, or integration of processes or systems of acquired companies, resulting in new operational risk that we may not fully appreciate or identify.

The trend toward direct access to automated, electronic markets and the move to more automated trading platforms has resulted in the use of increasingly complex technology that relies on the continued effectiveness of the programming code and integrity of the data to process the trades. We rely on the ability of our employees, our consultants, our internal systems and systems at technology centers maintained by unaffiliated third parties to operate our different businesses and process a high volume of transactions. Unusually high trading volumes or site usage could cause our systems to operate at an unacceptably slow speed or even fail. Disruptions to, destruction of, instability of or other failure to effectively maintain our IT systems or external technology that allows our clients and customers to use our products and services (including our self-directed brokerage platform) could harm our business and our reputation.

As a major participant in the global capital markets, we face the risk of incorrect valuation or risk management of our trading positions due to flaws in data, models, electronic trading systems or processes, or due to fraud or cyberattack. We also face the risk of operational failure or disruption of any of the clearing agents, exchanges, clearinghouses or other financial intermediaries we use to facilitate our lending, securities and derivatives transactions. In addition, in the event of a breakdown or improper operation or disposal of our or a direct or indirect third party’s systems (or third parties thereof), processes or information assets, or improper or unauthorized action by third parties, including consultants and subcontractors or our employees, we have received in the past and may receive in the future regulatory sanctions, and could suffer financial loss, an impairment to our liquidity position, a disruption of our businesses or damage to our reputation.

In addition, the interconnectivity of multiple financial institutions with central agents, exchanges and clearinghouses, and the increased importance of these entities, increases the risk that an operational failure at one institution or entity may cause an industrywide operational failure that could materially impact our ability to conduct business. Furthermore, the concentration of Firm and personal information held by a small number of third parties increases the risk that a breach or disruption at a key third party may cause an industrywide event that could significantly increase the cost and risk of conducting business. These risks may be heightened to the extent that we rely on third parties that are concentrated in a geographic area.

There can be no assurance that our business contingency and security response plans fully mitigate all potential risks to us. Our ability to conduct business may be adversely affected by a disruption in the infrastructure that supports our businesses and the communities where we are located. This may include a disruption involving physical site access; software flaws and vulnerabilities; cybersecurity incidents; terrorist activities; political unrest; disease pandemics; catastrophic events; climate-related incidents and natural disasters (such as earthquakes, tornadoes, floods, hurricanes and wildfires); electrical outages; environmental hazards; computer servers; communication platforms or other services we use; new technologies (such as generative artificial intelligence); and our employees or third parties with whom we conduct business. Although we employ backup systems for our data, those backup systems may be unavailable following a disruption, the affected data may not have been backed up or may not be recoverable from the backup, or the backup data may be costly to recover, which could adversely affect our business.

Notwithstanding evolving technology and technology-based risk and control systems, our businesses ultimately rely on people, including our employees and those of third parties with whom we conduct business. As a result of human error or engagement in violations of applicable policies, laws, rules or procedures, certain errors or violations are not always discovered immediately by our technological processes or by

our controls and other procedures that are intended to prevent and detect such errors or violations. These can include calculation or input errors, inadvertent or duplicate payments, mistakes in addressing emails or other communications, errors in software or model development or implementation, or errors in judgment, as well as intentional efforts to disregard or circumvent applicable policies, laws, rules or procedures. Our use of new technologies may be undermined by such human errors or misconduct due to undetected flaws or biases in the algorithms or data utilized by such technologies. Human errors and malfeasance, even if promptly discovered and remediated, can result in material losses and liabilities for us, and negatively impact our reputation in the future.

We conduct business in various jurisdictions outside the U.S., including jurisdictions that may not have comparable levels of protection for their corporate assets, such as intellectual property, trademarks, trade secrets, know-how, and customer information and records. The protection afforded in those jurisdictions may be less established and/or predictable than in the U.S. or other jurisdictions in which we operate. As a result, there may also be heightened risks associated with the potential theft of their data, technology and intellectual property in those jurisdictions by domestic or foreign actors, including private parties and those affiliated with or controlled by state actors. Additionally, we are subject to complex and evolving U.S. and international laws and regulations governing cybersecurity, privacy and data governance, transfer and protection, which may differ and potentially conflict, in various jurisdictions. Any theft of data, technology or intellectual property may negatively impact our operations and reputation, including disrupting the business activities of our subsidiaries, affiliates, joint ventures or clients conducting business in those jurisdictions.

A cyberattack, information or security breach or a technology failure of ours or a third party could adversely affect our ability to conduct our business or manage our exposure to risk, or result in disclosure or misuse of personal, confidential or proprietary information and otherwise adversely impact our results of operations, liquidity and financial condition, as well as cause reputational harm.

Cybersecurity risks for financial institutions have significantly increased in recent years in part because of the proliferation of new technologies; the use of the internet, mobile telecommunications and cloud technologies to conduct financial transactions; and the increased sophistication and activities of organized crime, hackers, terrorists, nation-states, state-sponsored actors and other parties. Any of these parties may also attempt to fraudulently induce employees, customers, clients, vendors or other third parties or users of our systems to disclose sensitive information in order to gain access to our networks, systems or data or those of our employees or clients, and such parties may see their effectiveness enhanced by the use of artificial intelligence. Global events and geopolitical instability have also led to increased nation-state targeting of financial institutions in the U.S. and abroad.

Information security risks may also derive from human error, fraud or malice on the part of our employees or third parties, software bugs, server malfunctions, software or hardware failure or other technological failure. For example, human error has led to the loss of the Firm's physical data-bearing devices in the past. These risks may be heightened by several factors, including remote work, reliance on new technologies (such as generative artificial intelligence) or as a result of the integration of acquisitions and other strategic initiatives that may subject us to new technology, customers or third-party providers. In addition, third parties with whom we do business or share information, and each of their service providers, our regulators and the third parties with whom our customers and clients share information used for authentication, may also be sources of cybersecurity and information security risks, particularly where activities of customers are beyond our security and control systems. There is no guarantee that the measures we take will provide absolute security or recoverability given that the techniques used in cyberattacks are complex, frequently change and are difficult to anticipate.

Like other financial services firms, the Firm, its third-party providers and its clients continue to be the subject of unauthorized access attacks; mishandling, loss, theft or misuse of information; computer viruses or malware; cyberattacks designed to obtain confidential information, destroy data, disrupt or degrade service, sabotage systems or networks or cause other damage; ransomware; denial of service attacks; data breaches; social engineering attacks; phishing attacks; and other events. There can be no assurance that such unauthorized access, mishandling or misuse of information, or cybersecurity incidents will not occur in the future and they could occur more frequently and on a more significant scale.

We maintain a significant amount of personal and confidential information on our customers, clients and certain counterparties that we are required to protect under various state, federal and international data protection and privacy laws. These laws may be in conflict with one another or courts and regulators may interpret them in ways that we had not anticipated or that adversely affect our business. A cyberattack, information or security breach, or a technology failure of ours or of a third party could jeopardize our or our clients', employees', partners', vendors' or counterparties' personal, confidential, proprietary or other information processed and stored in, and transmitted through, our and our third parties' computer systems and networks. Furthermore, such events could cause interruptions or malfunctions in our, our clients', employees', partners', vendors', counterparties' or third parties' operations, as well as the unauthorized release, gathering, monitoring, misuse, loss or destruction of personal, confidential, proprietary and other information of ours, our employees, our customers or of other third parties. Any of these events could result in reputational damage with

our clients and the market, client dissatisfaction, additional costs to us to maintain and update our operational and security systems and infrastructure, violation of the applicable data protection and privacy laws, regulatory investigations and enforcement actions, litigation exposure, or fines or penalties, any of which could adversely affect our business, financial condition or results of operations.

Given our global footprint and the high volume of transactions we process; the large number of clients, partners, vendors and counterparties with which we do business; and the increasing sophistication of cyberattacks, a cyberattack or information or security breach could occur and persist for an extended period of time without detection. It could take considerable time for us to determine the scope, extent, amount and type of information compromised, and the impact of such an attack may not be fully understood. During such time we would not necessarily know the extent of the harm or how best to remediate it, and certain errors or actions could be repeated or compounded before they are discovered and remediated, if at all, all or any of which would further increase the costs and consequences of a cyberattack or information security incident.

While many of our agreements with partners and third-party vendors include indemnification provisions, we may not be able to recover sufficiently, or at all, under such provisions to adequately offset any losses we may incur. In addition, although we maintain insurance coverage that may, subject to policy terms and conditions, cover certain aspects of cyber and information security risks, such insurance coverage may be insufficient to cover any or all losses we may incur, and we cannot be sure that such insurance will continue to be available to us on commercially reasonable terms, or at all, or that our insurers will not deny coverage as to any future claim.

We continue to make investments with a view toward maintaining and enhancing our cybersecurity, resilience and information security posture, including investments in technology and associated technology risk management activities. The cost of managing cybersecurity and information security risks and attacks along with complying with new, increasingly expansive and evolving regulatory requirements could adversely affect our results of operations and business.

Liquidity Risk

Liquidity risk refers to the risk that we will be unable to finance our operations due to a loss of access to the capital markets or difficulty in liquidating our assets. Liquidity risk also encompasses our ability (or perceived ability) to meet our financial obligations without experiencing significant business disruption or reputational damage that may threaten our viability as a going concern, as well as the associated funding risks triggered by the market or idiosyncratic stress events that may negatively affect our liquidity and may impact our ability to raise new funding. For more information on how we monitor and manage liquidity risk, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources" and "Quantitative and Qualitative Disclosures about Risk—Liquidity Risk."

Liquidity is essential to our businesses and we rely on external sources to finance a significant portion of our operations.

Liquidity is essential to our businesses. Our liquidity could be negatively affected by our inability to raise funding in the long-term or short-term debt capital markets, our inability to access the secured lending markets, our inability to attract and retain deposits, or unanticipated outflows of cash or collateral by customers or clients. Factors that we cannot control, such as disruption of the financial markets or negative views about the financial services industry generally, including concerns regarding fiscal matters in the U.S. and other geographic areas, could impair our ability to raise funding.

In addition, our ability to raise funding could be impaired if investors, depositors or lenders develop a negative perception of our long-term or short-term financial prospects due to factors such as an incurrence of large trading, credit or operational losses, a downgrade by the rating agencies, a decline in the level of our business activity, if regulatory authorities take significant action against us or our industry, or if we discover significant employee misconduct or illegal activity.

If we are unable to raise funding using the methods described above, we would likely need to finance or liquidate unencumbered assets, such as our investment portfolios or trading assets, to meet maturing liabilities or other obligations. We may be unable to sell some of our assets or we may have to sell assets at a discount to market value, either of which could adversely affect our results of operations, cash flows and financial condition.

Our borrowing costs and access to the debt capital markets depend on our credit ratings.

The cost and availability of unsecured financing generally are impacted by (among other things) our long-term and short-term credit ratings. The rating agencies continue to monitor certain Firm-specific and industrywide factors that are important to the determination of our credit ratings. These include governance, capital adequacy, the level and quality of earnings, liquidity and funding, risk appetite and management, asset quality, strategic direction, business mix, regulatory or legislative changes, macroeconomic environment and perceived levels of support, and it is possible that the rating agencies could downgrade our ratings and those of similar institutions.

Our credit ratings also can have an adverse impact on certain trading revenues, particularly in those businesses where longer-term counterparty performance is a key consideration,

such as OTC and other derivative transactions, including credit derivatives and interest rate swaps. In connection with certain OTC trading agreements and certain other agreements associated with our Institutional Securities business segment, we may be required to provide additional collateral to, or immediately settle any outstanding liability balance with, certain counterparties in the event of a credit rating downgrade.

Termination of our trading agreements could cause us to sustain losses and impair our liquidity by requiring us to find other sources of financing or to make significant payments in the form of cash or securities. The additional collateral or termination payments that may occur in the event of a future credit rating downgrade vary by contract and can be based on ratings by Moody's Investors Service, Inc., S&P Global Ratings and/or other rating agencies. See also "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Credit Ratings—Incremental Collateral or Terminating Payments."

We are a holding company and depend on payments from our subsidiaries.

The Parent Company has no business operations and depends on dividends, distributions, loans and other payments from its subsidiaries to fund dividend payments and to fund all payments on its obligations, including debt obligations. Regulatory restrictions, tax restrictions or elections and other legal restrictions may limit our ability to transfer funds freely, either to or from our subsidiaries. In particular, many of our subsidiaries, including our bank and broker-dealer subsidiaries, are subject to laws, regulations and self-regulatory organization rules that, in certain circumstances, limit, as well as permit regulatory bodies to block or reduce, the flow of funds to the Parent Company, or that prohibit such transfers or dividends altogether, including steps to "ring fence" entities by regulators outside the U.S. to protect clients and creditors of such entities in the event of financial difficulties involving such entities.

These laws, regulations and rules may hinder our ability to access funds that we may need to make payments on our obligations. Furthermore, as a BHC, we may become subject to a prohibition or to limitations on our ability to pay dividends. The Federal Reserve, the OCC and the FDIC have the authority, and under certain circumstances the duty, to prohibit or to limit the payment of dividends or other capital actions by the banking organizations they supervise, including us and our U.S. Bank Subsidiaries. See "We may be prevented from paying dividends or taking other capital actions because of regulatory constraints or revised regulatory capital requirements" under "Legal, Regulatory and Compliance Risk" herein.

Our liquidity and financial condition have in the past been, and in the future could be, adversely affected by U.S. and international markets and economic conditions.

Our ability to raise funding in the long-term or short-term debt capital markets or the equity markets, or to access secured lending markets, has in the past been, and could in the future be, adversely affected by conditions in the U.S. and international markets and economies.

In particular, our cost and availability of funding in the past have been, and may in the future be, adversely affected by illiquid credit markets, interest rates and wider credit spreads. Significant turbulence in the U.S., the E.U. and other international markets and economies could adversely affect our liquidity and financial condition and the willingness of certain counterparties and customers to do business with us.

Legal, Regulatory and Compliance Risk

Legal, regulatory and compliance risk includes the risk of legal or regulatory sanctions; material financial loss, including fines, penalties, judgments, damages and/or settlements; limitations on our business; or loss to reputation we may suffer as a result of our failure to comply with laws, regulations, rules, related self-regulatory organization standards and codes of conduct applicable to our business activities. This risk also includes contractual and commercial risk, such as the risk that a counterparty's performance obligations will be unenforceable. It also includes compliance with AML, terrorist financing and anti-corruption rules and regulations. For more information on how we monitor and manage legal, regulatory and compliance risk, see "Quantitative and Qualitative Disclosures about Risk—Legal, Regulatory and Compliance Risk."

The financial services industry is subject to extensive regulation, and changes in regulation will impact our business.

Like other major financial services firms, we are subject to extensive regulation by U.S. federal and state regulatory agencies and securities exchanges and by regulators and exchanges in each of the major markets where we conduct our business, including an increasing number of complex sanctions and disclosure regimes. These laws and regulations, which continue to increase in volume and complexity, significantly affect the way and costs of doing business and can restrict the scope of our existing businesses and limit our ability to expand our product offerings and pursue certain investments.

The Firm and its employees are subject to wide-ranging regulation and supervision, which, among other things, subject us to intensive scrutiny of our businesses and any plans for expansion of those businesses through acquisitions or otherwise, limitations on activities, a systemic risk regime that imposes heightened capital and liquidity and funding requirements and other enhanced prudential standards,

resolution regimes and resolution planning requirements, requirements for maintaining minimum amounts of TLAC and external long-term debt, restrictions on activities and investments imposed by the Volcker Rule, comprehensive derivatives regulation, interest rate benchmark requirements, commodities regulation, market structure regulation, consumer protection regulation, tax regulations and interpretations, antitrust laws, trade and transaction reporting obligations, broadened fiduciary obligations and disclosure requirements.

New laws, rules, regulations and guidelines, as well as ongoing implementation of, our efforts to comply with, and/or changes to laws, rules, regulations and guidelines, including changes in the breadth, application, interpretation or enforcement of laws, rules, regulations and guidelines, could materially impact the profitability of our businesses and the value of assets we hold, impact our income tax provision and effective tax rate, expose us to additional theories of liability and additional costs, require changes to business practices or force us to discontinue businesses, adversely affect our ability to pay dividends and repurchase our stock or require us to raise capital, including in ways that may adversely impact our shareholders or creditors.

In addition, regulatory requirements that are imposed by foreign policymakers and regulators may be inconsistent or conflict with regulations that we are subject to in the U.S. and may adversely affect us.

The application of regulatory requirements and strategies in the U.S. or other jurisdictions to facilitate the orderly resolution of large financial institutions may pose a greater risk of loss for our security holders and subject us to other restrictions.

We are required to submit once every two years to the Federal Reserve and the FDIC a resolution plan that describes our strategy for a rapid and orderly resolution under the U.S. Bankruptcy Code in the event of material financial distress or failure. If the Federal Reserve and the FDIC were to jointly determine that our resolution plan submission was not credible or would not facilitate an orderly resolution, and if we were unsuccessful in addressing any deficiencies identified by the regulators, we or any of our subsidiaries may be subject to more stringent capital, leverage, or liquidity requirements or restrictions on our growth, activities or operations, or after a two-year period, we may be required to divest assets or operations.

In addition, provided that certain procedures are met, we can be subject to a resolution proceeding under the orderly liquidation authority under Title II of the Dodd-Frank Act with the FDIC being appointed as receiver instead of being resolved under the U.S. Bankruptcy Code. The FDIC's power under the orderly liquidation authority to disregard the priority of creditor claims and treat similarly situated creditors differently in certain circumstances, subject to certain limitations, could adversely impact holders of our unsecured debt. See "Business—Supervision and Regulation" and "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources—Regulatory Requirements."

Further, because both our resolution plan contemplates an SPOE strategy under the U.S. Bankruptcy Code and the FDIC has proposed an SPOE strategy through which it may apply its orderly liquidation authority powers, we believe that the application of an SPOE strategy is the reasonably likely outcome if either our resolution plan were implemented or a resolution proceeding were commenced under the orderly liquidation authority. An SPOE strategy generally contemplates the provision of adequate capital and liquidity by the Parent Company to certain of its subsidiaries so that such subsidiaries have the resources necessary to implement the resolution strategy, and the Parent Company has entered into a secured amended and restated support agreement with such entities, pursuant to which it would provide such capital and liquidity to such entities.

In addition, a wholly owned, direct subsidiary of the Parent Company, Morgan Stanley Holdings LLC ("Funding IHC"), serves as a resolution funding vehicle. The Parent Company has transferred, and has agreed to transfer on an ongoing basis, certain assets to the Funding IHC. In the event of a resolution scenario, the Parent Company would be obligated to contribute all of its material assets that can be contributed under the terms of the amended and restated support agreement (other than shares in subsidiaries of the Parent Company and certain other assets) to the Funding IHC. The Funding IHC would be obligated to provide capital and liquidity, as applicable, to certain supported subsidiaries, pursuant to the terms of the secured amended and restated support agreement.

The obligations of the Parent Company and of the Funding IHC, respectively, under the amended and restated support agreement are in most cases secured on a senior basis by the assets of the Parent Company (other than shares in subsidiaries of the Parent Company and certain other assets), and the assets of the Funding IHC, as applicable. As a result, claims of certain supported subsidiaries, including the Funding IHC, against the assets of the Parent Company with respect to such secured assets are effectively senior to unsecured obligations of the Parent Company.

Although an SPOE strategy, whether applied pursuant to our resolution plan or in a resolution proceeding under the orderly liquidation authority, is intended to result in better outcomes for creditors overall, there is no guarantee that the application of an SPOE strategy, including the provision of support to the Parent Company's supported subsidiaries pursuant to the secured amended and restated support agreement, will not result in greater losses for holders of our securities compared with a different resolution strategy for us.

Regulators have taken and proposed various actions to facilitate an SPOE strategy under the U.S. Bankruptcy Code,

the orderly liquidation authority and other resolution regimes. For example, the Federal Reserve requires top-tier BHCs of U.S. G-SIBs, including the Firm, to maintain adequate TLAC, including equity and eligible long-term debt, in order to ensure that such institutions have enough loss-absorbing resources at the point of failure to be recapitalized through the conversion of debt to equity or otherwise by imposing losses on eligible TLAC where the SPOE strategy is used. The combined implication of the SPOE resolution strategy and the TLAC requirement is that our losses will be imposed on the holders of eligible long-term debt and other forms of eligible TLAC issued by the Parent Company before any losses are imposed on the creditors of our supported subsidiaries without requiring taxpayer or government financial support.

In addition, certain jurisdictions, including the U.K. and E.U. jurisdictions, have implemented, or are in the process of implementing, changes to resolution regimes to provide resolution authorities with the ability to recapitalize a failing entity organized in such jurisdiction by writing down certain unsecured liabilities or converting certain unsecured liabilities into equity. Such "bail-in" powers are intended to enable the recapitalization of a failing institution by allocating losses to its shareholders and unsecured creditors. This may increase the overall level of capital and liquidity required by us on a consolidated basis and may result in limitations on our ability to efficiently distribute capital and liquidity among our affiliated entities, including in times of stress. Non-U.S. regulators are also considering requirements that certain subsidiaries of large financial institutions maintain minimum amounts of TLAC that would pass losses up from the subsidiaries to the Parent Company and, ultimately, to security holders of the Parent Company in the event of failure.

We may be prevented from paying dividends or taking other capital actions because of regulatory constraints or revised regulatory capital requirements.

We are subject to comprehensive consolidated supervision, regulation and examination by the Federal Reserve, including with respect to regulatory capital requirements, stress testing and capital planning. We submit, on at least an annual basis, a capital plan to the Federal Reserve describing proposed dividend payments to shareholders, proposed repurchases of our outstanding securities and other proposed capital actions that we intend to take. Our ability to take capital actions described in the capital plan is dependent on, among other factors, the results of supervisory stress tests conducted by the Federal Reserve and our compliance with regulatory capital requirements imposed by the Federal Reserve.

In addition, the Federal Reserve may change regulatory capital requirements to impose higher requirements that restrict our ability to take capital actions or may modify or impose other regulatory standards or restrictions that increase our operating expenses or constrain our ability to take capital actions. For additional information, see "Management's Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources."

The financial services industry faces substantial litigation and is subject to extensive regulatory and law enforcement investigations, and we may face damage to our reputation and legal liability.

As a global financial services firm, we face the risk of investigations and proceedings by governmental and self-regulatory organizations in all countries in which we conduct our business. These investigations and proceedings, as well as the amount of penalties and fines sought, continue to impact the financial services industry. Certain U.S. and international governmental entities have brought criminal actions against, or have sought criminal convictions, pleas, deferred prosecution agreements or non-prosecution agreements from financial institutions. Significant regulatory or law enforcement action against us could materially adversely affect our business, reputation, financial condition or results of operations, and increase our exposure to civil litigation.

Investigations and proceedings initiated by these authorities may result in adverse judgments, settlements, fines, penalties, disgorgement, restitution, forfeiture, injunctions or other relief, and have included and may in the future include requirements that the Firm admit certain conduct, which may result in increased exposure to civil litigation. In addition, these measures have caused and may in the future cause collateral consequences. For example, such matters could impact our ability to engage in, or impose limitations on, certain of our businesses.

As part of the resolution of certain investigations and proceedings, the Firm has been and may in the future be required to undertake certain measures and failure to do so may result in adverse consequences, such as further investigations or proceedings—both civil and criminal—and additional penalties, fines, judgments or other relief.

The Dodd-Frank Act also provides compensation to whistleblowers who present the SEC or CFTC with information related to securities or commodities law violations that leads to a successful enforcement action. As a result of this compensation, it is possible we could face an increased number of investigations by the SEC or CFTC.

We have been named, from time to time, as a defendant in various legal actions, including arbitrations, class actions and other litigation, as well as investigations or proceedings brought by regulatory agencies, arising in connection with our activities as a global diversified financial services institution. Certain of the actual or threatened legal or regulatory actions include claims for substantial compensatory and/or punitive damages or claims for indeterminate amounts of damages, or may result in material penalties, fines or other results adverse to us.

In some cases, the third-party entities that would otherwise be the primary defendants in such cases are bankrupt, in financial distress or may not honor applicable indemnification

obligations. In other cases, including antitrust litigation, we may be subject to claims for joint and several liability with other defendants for treble damages or other relief related to alleged conspiracies involving other institutions. Like any large corporation, we are also subject to risk from potential employee misconduct, including noncompliance with policies, laws, rules and regulations, and improper use or disclosure of confidential information, or improper sales practices or other conduct.

We may be responsible for representations and warranties associated with commercial and residential real estate loans and may incur losses in excess of our reserves.

We originate loans secured by commercial and residential properties. Further, we securitize and trade in a wide range of commercial and residential real estate and real estate-related assets and products. In connection with these activities, we have provided, or otherwise agreed to be responsible for, certain representations and warranties. Under certain circumstances, we may be required to repurchase such assets or make other payments related to such assets if such representations and warranties were breached, and may incur losses as a result. We have also made representations and warranties in connection with our role as an originator of certain loans that we securitized in CMBS and RMBS. For additional information, see Note 14 to the financial statements.

A failure to address conflicts of interest appropriately could adversely affect our businesses and reputation.

As a global financial services firm that provides products and services to a large and diversified group of clients, including corporations, governments, financial institutions and individuals, we face potential conflicts of interest in the normal course of business. For example, potential conflicts can occur when there is a divergence of interests between us and a client, among clients, between an employee on the one hand and us or a client on the other, or situations in which we may be a creditor of a client. Moreover, we utilize multiple brands and business channels, including those resulting from our acquisitions, and continue to enhance the collaboration across business segments, which may heighten the potential conflicts of interest or the risk of improper sharing of information.

We have policies, procedures and controls that are designed to identify and address potential conflicts of interest, and we utilize various measures, such as the use of disclosure, to manage these potential conflicts. However, identifying and mitigating potential conflicts of interest can be complex and challenging and can become the focus of media and regulatory scrutiny. Indeed, actions that merely appear to create a conflict can put our reputation at risk even if the likelihood of an actual conflict has been mitigated. It is possible that potential conflicts could give rise to litigation or enforcement actions, which may lead to our clients being less willing to enter into transactions in which a conflict may occur and could adversely affect our businesses and reputation.

Our regulators also have the ability to scrutinize our activities for potential conflicts of interest, including through detailed examinations of specific transactions. For example, our status as a BHC supervised by the Federal Reserve subjects us to direct Federal Reserve scrutiny with respect to transactions between our U.S. Bank Subsidiaries and their affiliates. Further, the Volcker Rule subjects us to regulatory scrutiny regarding certain transactions between us and our clients.

Risk Management

Our risk management strategies, models and processes may not be fully effective in mitigating our risk exposures in all market environments or against all types of risk, which could result in unexpected losses.

We have devoted significant resources to develop our risk management capabilities and expect to continue to do so in the future. Nonetheless, our risk management strategies, models and processes, including our use of various risk models for assessing market, credit, liquidity and operational exposures and hedging strategies, stress testing and other analysis, may not be fully effective in mitigating our risk exposure in all market environments or against all types of risk, including risks that are unidentified or unanticipated.

As our businesses change and grow, including through acquisitions and the introduction and application of new technologies, such as artificial intelligence, and the markets in which we operate evolve, our risk management strategies, models and processes may not always adapt with those changes. Some of our methods of managing risk are based upon our use of observed historical market behavior and management’s judgment. As a result, these methods may not predict future risk exposures, which could be significantly greater than the historical measures indicate.

In addition, many models we use are based on assumptions or inputs regarding correlations among prices of various asset classes or other market indicators and, therefore, cannot anticipate sudden, unanticipated, or unidentified market or economic movements, such as the impact of a pandemic or a sudden geopolitical conflict, which could cause us to incur losses.

Management of market, credit, liquidity, operational, model, legal, regulatory and compliance risks requires, among other things, policies and procedures to record properly and verify a large number of transactions and events, and these policies and procedures may not be fully effective. Our trading risk management strategies and techniques also seek to balance our ability to profit from trading positions with our exposure to potential losses.

While we employ a broad and diversified set of risk monitoring and risk mitigation techniques, those techniques and the judgments that accompany their application cannot

anticipate every economic and financial outcome or the timing of such outcomes. For example, to the extent that our trading or investing activities involve less liquid trading markets or are otherwise subject to restrictions on sales or hedging, we may not be able to reduce our positions and, therefore, reduce our risk associated with such positions. We may, therefore, incur losses in the course of our trading or investing activities. For more information on how we monitor and manage market and certain other risks and related strategies, models and processes, see "Quantitative and Qualitative Disclosures about Risk—Market Risk."

Climate change manifesting as physical or transition risks could result in increased costs and risks and adversely affect our operations, businesses and clients.

There continues to be increasing concern over the risks of climate change and related environmental sustainability matters. The physical risks of climate change include harm to people and property arising from acute, climate-related events, such as floods, hurricanes, heatwaves, droughts, and wildfires and chronic, longer-term shifts in climate patterns, such as higher global average temperatures, rising sea levels and long-term droughts. Such events could disrupt our operations or those of our clients or third parties on which we rely, including through direct damage to physical assets and indirect impacts from supply chain disruption and market volatility. These events could impact the ability of certain of our clients or customers to repay their obligations, reduce the value of collateral, increase costs, including the cost or availability of insurance coverage, and result in other adverse effects.

The transition risks of climate change include policy, legal, technology and market changes. Examples of these transition risks include changes in consumer and business sentiment, related technologies, shareholder preferences and any additional regulatory and legislative requirements, including increased disclosure or carbon taxes. These risks could increase our expenses and adversely impact our strategies, including by limiting our ability to pursue certain business activities or offer certain products and services. Negative impacts to certain of our clients, such as decreased profitability and asset write-downs, could also lead to increased credit, counterparty and liquidity risk to us.

In addition, our reputation and client relationships may be adversely impacted as a result of our, or our clients', involvement in certain practices that may have, or are associated with having, an adverse impact on climate change. Legislative or regulatory change regarding climate-related risks, including inconsistent requirements and uncertainties, could result in loss of revenue, or increased credit, market, liquidity, regulatory, compliance, reputational and other risks and costs.

Our ability to achieve our climate-related targets and commitments and the way we go about this could also result in reputational harm as a result of public sentiment, legislative and regulatory scrutiny (including from U.S. federal and state governments and foreign policymakers and regulators), litigation and reduced investor and stakeholder confidence. If we are unable to achieve our objectives relating to climate change or our current response to climate change is perceived to be ineffective or insufficient, or the way we respond is perceived negatively, our business and reputation may suffer.

The risks associated with, and the perspective of regulators, governments, shareholders, employees and other stakeholders regarding, climate change, as well as geopolitical events, continue to evolve rapidly, making it difficult to assess the ultimate impact on us of climate-related risks and uncertainties. As climate risk is interconnected with other risks, we have developed and continue to enhance processes to embed climate risk considerations into our risk management practices and governance structures. Despite our risk management practices, the unpredictability surrounding the timing and severity of climate-related events and societal or political changes in reaction to them make it difficult to predict, identify, monitor and mitigate climate risks.

In addition, the methodologies and data used to manage and monitor climate risk continue to evolve. Current approaches utilize information and estimates that have been derived from information or factors released by third-party sources, which may not reflect the latest or most accurate data. Climate-related data, particularly greenhouse gas emissions for clients and counterparties, remains limited in availability and varies in quality. Certain third-party information may also change over time as methodologies evolve and are refined. While we believe this information is the best available at the time, we may only be able to complete limited validation. Furthermore, modeling capabilities and methodologies to analyze climate-related risks, although improving, remain nascent and emerging. These and other factors could cause results to differ materially, which could impact our ability to manage climate-related risks.

Replacement or reform of certain interest rate benchmarks could adversely affect our business, securities, financial condition and results of operations.

Central banks around the world, including the Federal Reserve, have sponsored initiatives in recent years to replace LIBOR and replace or reform certain other interest rate benchmarks (collectively, the "IBORs"). A transition away from use of the IBORs to alternative rates and other potential interest rate benchmark reforms has been underway for a number of years.

These reforms have caused and may in the future cause such rates to perform differently than in the past, or to cease entirely, or have other consequences that are contrary to market expectations.

The ongoing market transition away from these interest rate benchmarks to alternative reference rates is complex and

could have a range of adverse impacts on our business, securities, financial condition and results of operations, including:

- Adversely impacting the pricing, liquidity, value of, return on and trading for a broad array of financial products, including any securities, loans and derivatives that are included in our financial assets and liabilities that are linked to these interest rate benchmarks;
- Inquiries, reviews or other actions from regulators in respect of our (or the market's) preparation, readiness, transition plans and actions regarding the replacement of a legacy interest rate benchmark with one or more alternative reference rates;
- Disputes, litigation or other actions with clients, counterparties and investors in various scenarios, such as regarding the interpretation and enforceability of provisions in IBOR-based products such as fallback language or other related provisions, including in the case of fallbacks to the alternative reference rates, any economic, legal, operational or other impact resulting from the fundamental differences between the IBORs and the various alternative reference rates or regarding the interpretation of applicable legislation, regulations or rules; and
- Causing us to incur additional costs in relation to any of the above factors.

Other factors include the pace of the transition to the alternative reference rates, timing mismatches between cash and derivative markets, the specific terms and parameters for and market acceptance of any alternative reference rate, market conventions for the use of any alternative reference rate in connection with a particular product (including the timing and market adoption of any conventions proposed or recommended by any industry or other group), prices of and the liquidity of trading markets for products based on alternative reference rates, and our ability to further transition and develop appropriate systems and analytics for one or more alternative reference rates.

See also "Management's Discussion and Analysis of Financial Condition and Results of Operations—Regulatory Requirements—Regulatory Developments and Other Matters."

Competitive Environment

We face strong competition from financial services firms and others, which could lead to pricing pressures that could materially adversely affect our revenues and profitability.

The financial services industry and all aspects of our businesses are intensely competitive, and we expect them to remain so. We compete with commercial banks, investment banking firms, brokerage firms, insurance companies, exchanges, electronic trading and clearing platforms, financial data repositories, investment advisers and sponsors of mutual funds, hedge funds, real assets funds and private credit and equity funds, energy companies, financial technology firms and other companies offering financial and ancillary services in the U.S. and globally, including, in certain instances, through the internet. We also compete with companies that provide online trading and banking services, investment advisory services, robo-advice capabilities, access to digital asset capabilities and services, and other financial products and services. We compete on the basis of several factors, including transaction execution, capital or access to capital, products and services, innovation, technology, reputation, risk appetite and price.

Over time, certain sectors of the financial services industry have become more concentrated, as institutions involved in a broad range of financial services have left businesses, been acquired by or merged into other firms, or have declared bankruptcy. Such changes could result in our remaining competitors gaining greater capital and other resources, such as the ability to offer a broader range of products and services and geographic diversity, or new competitors may emerge.

We have experienced and may continue to experience pricing pressures as a result of these factors and as some of our competitors seek to obtain market share by reducing prices, eliminating commissions or other fees, or providing more favorable terms of business. In addition, certain of our competitors may be subject to different and, in some cases, less stringent, legal and regulatory regimes than we are, thereby putting us at a competitive disadvantage. Some new competitors in the financial technology sector have sought to target existing segments of our businesses that could be susceptible to disruption by innovative or less regulated business models. For more information regarding the competitive environment in which we operate, see "Business—Competition" and "Business—Supervision and Regulation."

Automated trading markets and the introduction and application of new technologies may adversely affect our business and may increase competition.

We continue to experience price competition in some of our businesses. In particular, the ability to execute securities, derivatives and other financial instrument trades electronically on exchanges, swap execution facilities and other automated trading platforms, and the introduction and application of new technologies, including generative artificial intelligence, will likely continue the pressure on revenues. The trend toward direct access to automated, electronic markets will likely continue as additional markets move to more automated trading platforms. We have experienced and will likely continue to experience competitive pressures in these and other areas in the future.

Our ability to retain and attract qualified employees is critical to the success of our business and the failure to do so may materially adversely affect our performance.

Our people are our most important asset. We compete with various other companies in attracting and retaining qualified

and skilled personnel. If we are unable to continue to attract, integrate and retain highly qualified employees or successfully transition key roles, or do so at levels or in forms necessary to maintain our competitive position, our performance, including our competitive position and results of operations, could be materially adversely affected. Our ability to attract and retain qualified and skilled personnel depends on numerous factors, some of which are outside of our control.

Compensation costs required to attract and retain employees may increase or the competitive market for talent may further intensify due to factors such as low unemployment, a strong job market and changes in employees' expectations, concerns and preferences. The financial industry has experienced and may continue to experience more stringent regulation of employee compensation than other industries, which may or may not impact competitors. These more stringent regulations have shaped our compensation practices, which could have an adverse effect on our ability to hire or retain the most qualified employees.

International Risk

We are subject to numerous political, economic, legal, tax, operational, franchise and other risks as a result of our international operations that could adversely impact our businesses in many ways.

We are subject to numerous political, economic, legal, tax, operational, franchise and other risks that are inherent in operating in many countries, including risks of possible nationalization, expropriation, price controls, capital controls, exchange controls, increased taxes and levies, minimum global tax regimes, cybersecurity, data transfer and outsourcing restrictions, regulatory scrutiny regarding the use of new technologies, prohibitions on certain types of foreign and capital market activities, limitations on cross-border listings and other restrictive governmental actions, as well as the outbreak of hostilities or political and governmental instability, including tensions between China and the U.S., the expansion or escalation of hostilities between Russia and Ukraine or in the Middle East or the initiation or escalation of hostilities or terrorist activity around the world and the potential associated impacts on global and local economies and our operations. In many countries, the laws and regulations applicable to the securities and financial services industries and multinational corporations are uncertain, evolving and subject to sudden change or may be inconsistent with U.S. law. It may also be difficult for us to determine the exact requirements of local laws in every market or adapt to changes in law, which could adversely impact our businesses. Our inability to remain in compliance with local laws in a particular market could have a significant and negative effect not only on our business in that market but also on our reputation generally. We are also subject to the risk that transactions we structure might not be legally enforceable in all cases.

Various emerging market countries have experienced severe political, economic or financial disruptions, including significant devaluations of their currencies, defaults or potential defaults on sovereign debt, capital and currency exchange controls, high rates of inflation and low or negative growth rates in their economies. Crime and corruption, as well as issues of security and personal safety, also exist in certain of these countries. These conditions could adversely impact our businesses and increase volatility in financial markets generally.

A disease pandemic, such as COVID-19 and its variants, or other widespread health emergencies, natural disasters, climate-related incidents, terrorist activities or military actions, or social or political tensions, could create economic and financial disruptions in emerging markets or in other areas of the global economy that could adversely affect our businesses, or could lead to operational difficulties, including travel limitations and supply chain complications, that could impair our ability to manage or conduct our businesses around the world.

As a U.S. company, we are required to comply with the economic sanctions and embargo programs administered by OFAC and similar multinational bodies and governmental agencies worldwide, which may be inconsistent with local law. We and certain of our subsidiaries are also subject to applicable AML and/or anti-corruption laws in the U.S., as well as in the jurisdictions in which we operate, including the Bank Secrecy Act, the U.S. Foreign Corrupt Practices Act and the U.K. Bribery Act. A violation of a sanction, embargo program, AML or anti-corruption law could subject us, and individual employees, to a regulatory enforcement action, as well as significant civil and criminal penalties.

Acquisition, Divestiture and Joint Venture Risk

We may be unable to fully capture the expected value from acquisitions, divestitures, joint ventures, partnerships, minority stakes or strategic alliances, and certain acquisitions may subject our business to new or increased risk.

In connection with past or future acquisitions, divestitures, joint ventures, partnerships, minority stakes or strategic alliances (including with Mitsubishi UFJ Financial Group, Inc. ("MUFG")), we face numerous risks and uncertainties in combining, transferring, separating or integrating the relevant businesses and systems that may present operational and other risks, including the need to combine or separate accounting, data processing and other systems, management controls and legal entities, and to integrate relationships with clients, trading counterparties and business partners. Certain of these strategic initiatives, and integration thereof, may cause us to incur incremental expenses and may also require incremental financial, management and other resources.

In the case of joint ventures, partnerships and minority stakes, we are subject to additional risks and uncertainties because

we may be dependent upon, and subject to liability, losses or reputational damage relating to systems, controls and personnel that are not under our control, and conflicts or disagreements between us and any of our joint venture partners or partners may negatively impact the benefits to be achieved by the relevant joint venture or partnership, respectively.

There is no assurance that any of our acquisitions, divestitures or investments will be successfully integrated or disaggregated or yield all of the positive benefits and synergies anticipated. If we are not able to integrate or disaggregate successfully our past and future acquisitions or dispositions, including aligning the processes, policies and procedures of the acquired entities with our standards, there is a risk that our results of operations, financial condition and cash flows may be materially and adversely affected.

Certain of our business initiatives, including expansions of existing businesses, may change our client or account profile or bring us into contact, directly or indirectly, with individuals and entities that are not within our traditional client and counterparty base and may expose us to new asset classes, services, competitors and new markets. These business activities expose us to new and enhanced risks, greater regulatory scrutiny of these activities, increased credit-related, sovereign, compliance and operational risks, as well as franchise and reputational concerns regarding the manner in which these assets are being operated or held, or services are being delivered.

For more information regarding the regulatory environment in which we operate, see also “Business—Supervision and Regulation.”

Cybersecurity

Risk management and strategy

We, our businesses, and the broader financial services industry face an increasingly complex and evolving threat environment. We have made and continue to make substantial investments in cybersecurity and fraud prevention technology, and employ experienced talent to lead our Cybersecurity and Information Security organizations and program under the oversight of our Board of Directors ("Board") and the Operations and Technology Committee of the Board ("BOTC"). See "Risk Factors—Operational Risk" for information on risks to the Firm from cybersecurity threats.

As part of our enterprise risk management ("ERM") framework, we have implemented and maintain a program to assess, identify and manage risks arising from the cybersecurity threats confronting the Firm ("Cybersecurity Program"). Our Cybersecurity Program helps protect our clients, customers, employees, property, products, services and reputation by seeking to preserve the confidentiality, integrity and availability of information, enable the secure delivery of financial services, and protect the business and the safe operation of our technology systems. We continually adjust our Cybersecurity Program to address the evolving cybersecurity threat landscape and comply with extensive legal and regulatory expectations.

Processes for assessing, identifying and managing material risks from cybersecurity threats

Our Cybersecurity Program takes into account industry best practices and addresses risks from cybersecurity threats to our network, infrastructure, computing environment and the third parties that we rely on. We periodically assess the design of our cybersecurity controls against the Cyber Risk Institute Cyber Profile, which is based on the National Institute of Standards and Technology ("NIST") Cybersecurity Framework for Improving Critical Infrastructure Cybersecurity, as well as global cybersecurity regulations, and develop improvements to those controls in response to that assessment. Our Cybersecurity Program also includes cybersecurity and information security policies, procedures and technologies that are designed to address regulatory requirements and protect our clients', employees' and own data against unauthorized disclosure, modification and misuse. These policies, procedures and technologies cover a broad range of areas, including: identification of internal and external threats, access control, data security, protective controls, detection of malicious or unauthorized activity, incident response, and recovery planning.

Our threat intelligence function within the Cybersecurity Program actively engages in private and public information sharing communities and leverages both commercial and proprietary products to collect a wide variety of industry and governmental information regarding the latest cybersecurity threats, which informs our cybersecurity risk assessments and strategy. This information is also provided to an internal forensics team, which develops and implements technologies designed to help detect these cybersecurity threats across our environment. Where a potential threat is identified in our environment, our incident response team evaluates the potential impact to the Firm and coordinates remediation where required. These groups, as well as the Operational Risk Department, review external cybersecurity incidents that may be relevant to the Firm, and the outcomes of these incidents further inform the design of our Cybersecurity Program. In addition, we maintain a robust global training program on cybersecurity risks and requirements and conduct regular phishing email simulations for our employees and consultants.

Our processes are designed to help oversee, identify and mitigate cybersecurity risks associated with our use of third-party vendors. We maintain a third-party risk management program that includes evaluation of, and response to, cybersecurity risks at our third-party vendors. Prior to engaging third-party vendors to provide services to the Firm, we conduct assessments of the third-party vendors' cybersecurity programs to identify the impact of their services on the cybersecurity risks to the Firm. Once on-boarded, third-party vendors' cybersecurity programs are subject to risk-based oversight, which may include security questionnaires, submission of independent security audit reports or a Firm audit of the third-party vendor's security program, and, with limited exceptions, third-party vendors are required to meet our cybersecurity standards. Where a third-party vendor cannot meet those standards, its services, and the residual risk to the Firm, are subject to review, challenge and escalation through our risk management processes and ERM committees, which may ultimately result in requesting increased security measures or ceasing engagement with such third-party vendor.

Our Cybersecurity Program is regularly assessed by the Internal Audit Department ("IAD") through various assurance activities, with the results reported to the Audit Committee of the Board ("BAC") and the BOTC. Annually, certain elements of the Cybersecurity Program are subject to an audit by an independent consultant, as well as an assessment by a separate, independent third party, the results of which, including opportunities identified for improvement and related remediation plans, are reviewed with the BOTC. Our Cybersecurity Program is also examined regularly by the Firm's prudential and conduct regulators within the scope of their jurisdiction.

Governance

Management's role in assessing and managing material risks from cybersecurity threats

Our Cybersecurity Program is operated and maintained by management, including the Chief Information Officer of Cyber, Data, Risk and Resilience ("CIO") and the Chief Information Security Officer ("CISO"). These senior officers

are responsible for assessing and managing the Firm's cybersecurity risks. Our Cybersecurity Program strategy, which is set by the CISO and overseen by the Head of Operational Risk, is informed by various risk and control assessments, control testing, external assessments, threat intelligence, and public and private information sharing. Our Cybersecurity Program also includes processes for escalating and considering the materiality of incidents that impact the Firm, including escalation to senior management and the Board, which are periodically tested through tabletop exercises.

The members of management that lead our Cybersecurity Program and strategy have extensive experience in technology, cybersecurity and information security. The CIO has over 30 years of experience in various engineering, IT, operations and information security roles. The CISO has over 25 years of experience leading cybersecurity teams at financial institutions, including in the areas of IT strategy, risk management and information security. The Head of Operational Risk has over 20 years of experience in technology, security and compliance roles, including experience in government security agencies.

Risk levels and mitigating measures are presented to and monitored by dedicated management-level cybersecurity risk committees. These committees include representatives from Firm management as well as business and control stakeholders who review, challenge and, where appropriate, consider exceptions to our policies and procedures. Significant cybersecurity risks are escalated from these committees to our Non-Financial Risk Committee. The CIO and the Head of Operational Risk report on the status of our Cybersecurity Program, including significant cybersecurity risks; review metrics related to the program; and discuss the status of regulatory and remedial actions and incidents to the Firm Risk Committee, the BOTC and the Board, as appropriate. For more information regarding the Firm's ERM framework, see "Quantitative and Qualitative Disclosures about Risk—Risk Management."

Board of Directors' oversight of risks from cybersecurity threats

As discussed above, material cybersecurity risks are addressed by management-level ERM committees with escalation to the BOTC and Board, as appropriate. The BOTC has primary responsibility for assisting the Board in its oversight of significant operational risk exposures of the Firm and its business units, including IT, information security, fraud, third-party oversight, business disruption and resilience, and cybersecurity risks (including review of cybersecurity risks against established risk management methodologies) and the steps management has taken to monitor and control such exposures.

In accordance with its charter, the BOTC receives quarterly reports from (i) the Technology Department ("Technology"), including the CIO or the CISO; (ii) the Operations Department ("Operations"); and (iii) the Non-Financial Risk Management Department ("NFR"). Such reporting includes updates on our Cybersecurity Program, risks from cybersecurity threats, our programs to address and mitigate the risks associated with the evolving cybersecurity threat environment, and the Operational Risk Department's assessment of cybersecurity risks. Senior officers in Technology and NFR also provide an annual report to the BOTC on the status of our Cybersecurity Program, including a discussion of risks arising from cybersecurity threats, in compliance with the Gramm-Leach-Bliley Act. At least annually, these senior management representatives discuss the status of the Cybersecurity Program and key cybersecurity risks with the Board. The BOTC also receives an annual independent assessment of key aspects of our Cybersecurity Program from an external party and holds joint meetings with the BAC and Risk Committee of the Board ("BRC"), as necessary and appropriate. In addition, members of the BOTC periodically participate in incident response tabletop exercises and the BOTC periodically receives reports from incident response tabletop exercises performed by and for management.

At least annually, the BOTC or the Board reviews and approves the Global Cybersecurity Program Policy, the Global Information Security Program Policy, the Global Third-Party Risk Management Policy, and the Global Technology Policy. The chair of the BOTC regularly reports to the Board on risks from cybersecurity threats and other matters reviewed by the BOTC. In accordance with the Board's Corporate Governance Policies, all Board members are invited to attend BOTC meetings and have access to meeting materials.

Senior management, including the senior officers mentioned above, discuss cybersecurity developments with the chair of the BOTC between Board and committee meetings, as necessary. The BOTC meets regularly in executive session with management, including the Head of NFR, and senior officers from Technology and Operations.

Management's Discussion and Analysis of Financial Condition and Results of Operations

Introduction

Morgan Stanley is a global financial services firm that maintains significant market positions in each of its business segments—Institutional Securities, Wealth Management and Investment Management. Morgan Stanley, through its subsidiaries and affiliates, provides a wide variety of products and services to a large and diversified group of clients and customers, including corporations, governments, financial institutions and individuals. Unless the context otherwise requires, the terms "Morgan Stanley," "Firm," "us," "we" or "our" mean Morgan Stanley (the "Parent Company") together with its consolidated subsidiaries. See the "Glossary of Common Terms and Acronyms" for the definition of certain terms and acronyms used throughout this Form 10-K. For an analysis of 2022 results compared with 2021 results, see Part II, Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations" in the annual report on Form 10-K for the year-ended December 31, 2022 filed with the SEC.

A description of the clients and principal products and services of each of our business segments is as follows:

Institutional Securities provides a variety of products and services to corporations, governments, financial institutions and ultra-high net worth clients. Investment Banking services consist of capital raising and financial advisory services, including the underwriting of debt, equity securities and other products, as well as advice on mergers and acquisitions, restructurings and project finance. Our Equity and Fixed Income businesses include sales, financing, prime brokerage, market-making, Asia wealth management services and certain business-related investments. Lending activities include originating corporate loans and commercial real estate loans, providing secured lending facilities, and extending securities-based and other financing to customers. Other activities include research.

Wealth Management provides a comprehensive array of financial services and solutions to individual investors and small to medium-sized businesses and institutions covering: financial advisor-led brokerage, custody, administrative and investment advisory services; self-directed brokerage services; financial and wealth planning services; workplace services, including stock plan administration; securities-based lending, residential real estate loans and other lending products; banking; and retirement plan services.

Investment Management provides a broad range of investment strategies and products that span geographies, asset classes, and public and private markets to a diverse group of clients across institutional and intermediary channels. Strategies and products, which are offered through a variety of investment vehicles, include equity, fixed income, alternatives and solutions, and liquidity and overlay services. Institutional clients include defined benefit/defined contribution plans, foundations, endowments, government entities, sovereign wealth funds, insurance companies, third-party fund sponsors and corporations. Individual clients are generally served through intermediaries, including affiliated and non-affiliated distributors.

Management's Discussion and Analysis includes certain metrics that we believe to be useful to us, investors, analysts and other stakeholders by providing further transparency about, or an additional means of assessing, our financial condition and operating results. Such metrics, when used, are defined and may be different from or inconsistent with metrics used by other companies.

The results of operations in the past have been, and in the future may continue to be, materially affected by: competition; risk factors; legislative, legal and regulatory developments; and other factors. These factors also may have an adverse impact on our ability to achieve our strategic objectives. Additionally, the discussion of our results of operations herein may contain forward-looking statements. These statements, which reflect management's beliefs and expectations, are subject to risks and uncertainties that may cause actual results to differ materially. For a discussion of the risks and uncertainties that may affect our future results, see "Forward-Looking Statements," "Business—Competition," "Business—Supervision and Regulation," "Risk Factors" and "Liquidity and Capital Resources—Regulatory Requirements" herein.

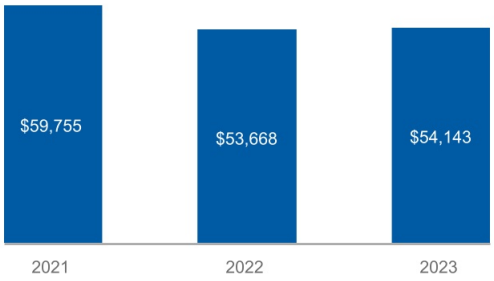
Executive Summary

Overview of Financial Results

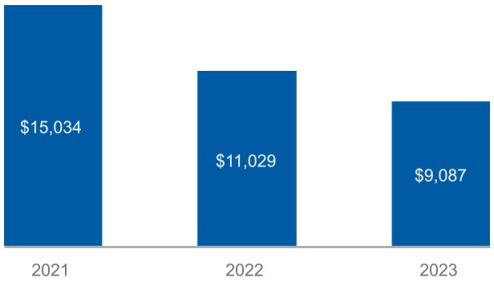
Consolidated Results—Full Year Ended December 31, 2023

- The Firm reported net revenues of $54.1 billion and net income of $9.1 billion against a mixed market backdrop and a number of headwinds.
- The Firm delivered ROE of 9.4% and ROTCE of 12.8% (see "Selected Non-GAAP Financial Information" herein).
- The Firm expense efficiency ratio was 77%. The ratio was negatively impacted by severance costs of $353 million, an FDIC special assessment of $286 million, higher legal expenses relating to a specific matter of $249 million and integration-related expenses of $293 million.
- At December 31, 2023, the Firm's Standardized Common Equity Tier 1 capital ratio was 15.2%.
- Institutional Securities reported net revenues of $23.1 billion reflecting lower completed activity in Investment Banking and lower results in Equity and Fixed Income on reduced client activity and a less favorable market environment compared to a year ago.
- Wealth Management delivered net revenues of $26.3 billion, reflecting mark-to-market gains on investments associated with certain employee deferred cash-based compensation plans ("DCP investments") compared with losses in the prior year and higher Net interest revenues. The pre-tax margin was 24.9%. The business added net new assets of $282.3 billion, representing a 6.7% annualized growth rate from beginning period assets.
- Investment Management reported net revenues of $5.4 billion and AUM increased to $1.5 trillion.

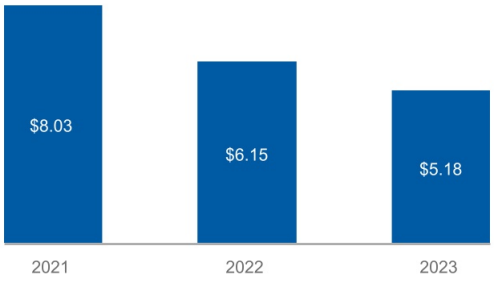
Net Revenues
($ in millions)



Net Income Applicable to Morgan Stanley
($ in millions)



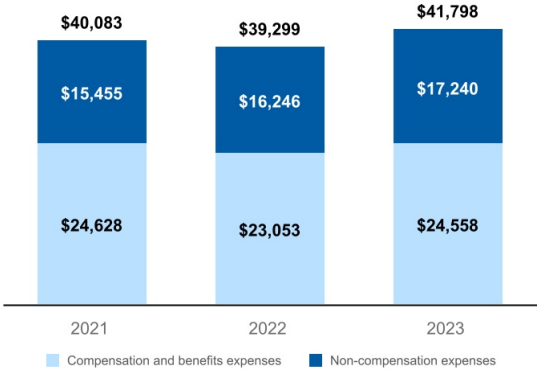
Earnings per Diluted Common Share



2023 Compared with 2022

- We reported net revenues of $54.1 billion in 2023 compared with $53.7 billion in 2022. For 2023, net income applicable to Morgan Stanley was $9.1 billion, or $5.18 per diluted common share, compared with $11.0 billion, or $6.15 per diluted common share in 2022.

Non-Interest Expenses
($ in millions)



- Compensation and benefits expenses of $24,558 million in 2023 increased 7% from the prior year, primarily due to higher expenses related to certain employee deferred cash-based compensation plans linked to investment performance ("DCP") and higher salary expenses, partially offset by lower expenses related to outstanding deferred equity compensation.

  2023 Compensation and benefits expenses included $353 million of severance costs, primarily associated with the employee action recorded in the second quarter of 2023.

- Non-compensation expenses of $17,240 million in 2023 increased 6% from the prior year, primarily driven by an FDIC special assessment of $286 million, increased spend on technology, higher costs related to exits of real estate and higher legal expenses, including $249 million related to a specific matter.

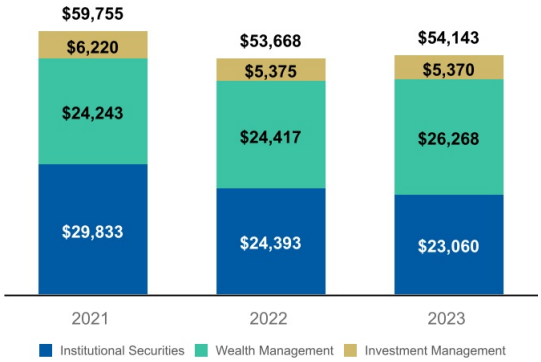
Provision for Credit Losses

The Provision for credit losses on loans and lending commitments of $532 million in 2023 was primarily related to deteriorating conditions in the commercial real estate sector, including provisions for certain specific loans, mainly in the office portfolio, and modest growth in certain other loan portfolios. The Provision for credit losses on loans and lending commitments of $280 million in 2022 was due to portfolio growth and deterioration in the macroeconomic outlook.

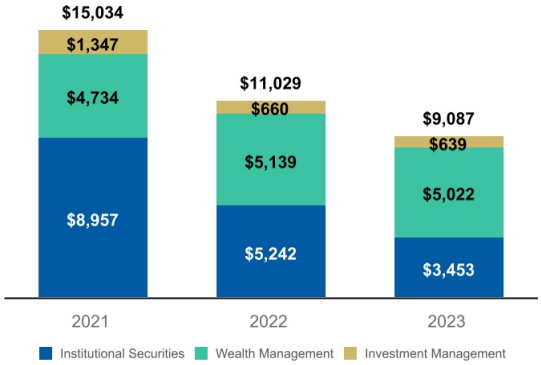
For further information on the Provision for credit losses, see "Credit Risk" herein.

Business Segment Results

Net Revenues by Segment[1]
($ in millions)



Net Income Applicable to Morgan Stanley by Segment[1]
($ in millions)



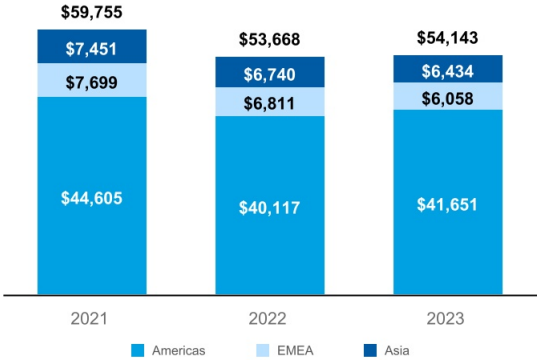
1. The amounts in the charts represent the contribution of each business segment to the total of the applicable financial category and may not sum to the total presented on top of the bars due to intersegment eliminations. See Note 22 to the financial statements for details of intersegment eliminations.

- Institutional Securities net revenues of $23,060 million in 2023 decreased 5% from the prior year, primarily reflecting lower results across businesses.

- Wealth Management net revenues of $26,268 million in 2023 increased 8% from the prior year, primarily reflecting gains on DCP investments compared with losses in the prior year and higher Net interest revenues.

- Investment Management net revenues of $5,370 million in 2023 were relatively unchanged from the prior year, reflecting a decrease in Asset management and related fees revenues offset by an increase in Performance based income and other revenues.

Net Revenues by Region[1]
($ in millions)



1. For a discussion of how the geographic breakdown of net revenues is determined, see Note 22 to the financial statements.

- Americas net revenues in 2023 increased 4%, primarily driven by results within the Wealth Management business segment and Other net revenues within the Institutional Securities business segment, partially offset by lower results across businesses within the Institutional Securities business segment.
- EMEA net revenues in 2023 decreased 11%, primarily driven by lower results across businesses within the Institutional Securities business segment.
- Asia net revenues in 2023 decreased 5%, primarily driven by lower results across businesses within the Institutional Securities business segment.

Selected Financial Information and Other Statistical Data

$ in millions, except per share data	**2023**	2022	2021
Consolidated results			
Net revenues	**$ 54,143**	$ 53,668	$ 59,755
Earnings applicable to Morgan Stanley common shareholders	**$ 8,530**	$ 10,540	$ 14,566
Earnings per diluted common share	**$ 5.18**	$ 6.15	$ 8.03
Consolidated financial measures			
Expense efficiency ratio[1]	**77 %**	73 %	67 %
ROE[2]	**9.4 %**	11.2 %	15.0 %
ROTCE[2,3]	**12.8 %**	15.3 %	19.8 %
Pre-tax margin[4]	**22 %**	26 %	33 %
Effective tax rate	**21.9 %**	20.7 %	23.1 %
Pre-tax margin by segment[4]			
Institutional Securities	**19 %**	28 %	40 %
Wealth Management	**25 %**	27 %	25 %
Investment Management	**16 %**	15 %	27 %

$ in millions, except per share data, worldwide employees and client assets	**At December 31, 2023**	At December 31, 2022
Average liquidity resources for three months ended[5]	**$ 314,504**	$ 312,250
Loans[6]	**$ 226,828**	$ 222,182
Total assets	**$ 1,193,693**	$ 1,180,231
Deposits	**$ 351,804**	$ 356,646
Borrowings	**$ 263,732**	$ 238,058
Common shareholders' equity	**$ 90,288**	$ 91,391
Tangible common shareholders' equity[3]	**$ 66,527**	$ 67,123
Common shares outstanding	**1,627**	1,675
Book value per common share[7]	**$ 55.50**	$ 54.55
Tangible book value per common share[3,7]	**$ 40.89**	$ 40.06
Worldwide employees (in thousands)	**80**	82
Client assets[8] (in billions)	**$ 6,588**	$ 5,492
Capital ratios[9]		
Common Equity Tier 1 capital—Standardized	**15.2 %**	15.3 %
Tier 1 capital—Standardized	**17.1 %**	17.2 %
Common Equity Tier 1 capital—Advanced	**15.5 %**	15.6 %
Tier 1 capital—Advanced	**17.4 %**	17.6 %
Tier 1 leverage	**6.7 %**	6.7 %
SLR	**5.5 %**	5.5 %

1. The expense efficiency ratio represents total non-interest expenses as a percentage of net revenues.
2. ROE and ROTCE represent earnings applicable to Morgan Stanley common shareholders as a percentage of average common equity and average tangible common equity, respectively.
3. Represents a non-GAAP financial measure. See "Selected Non-GAAP Financial Information" herein.
4. Pre-tax margin represents income before provision for income taxes as a percentage of net revenues.
5. For a discussion of Liquidity resources, see "Liquidity and Capital Resources— Balance Sheet—Liquidity Risk Management Framework—Liquidity Resources" herein.
6. Includes loans held for investment, net of ACL, loans held for sale and also includes loans at fair value, which are included in Trading assets in the balance sheet.
7. Book value per common share and tangible book value per common share equal common shareholders' equity and tangible common shareholders' equity, respectively, divided by common shares outstanding.
8. Client assets represents Wealth Management client assets and Investment Management AUM. Certain Wealth Management client assets are invested in Investment Management products and are also included in Investment Management's AUM.
9. For a discussion of our capital ratios, see "Liquidity and Capital Resources—Regulatory Requirements" herein.

Economic and Market Conditions

The market environment in 2023 remained mixed, characterized by inflationary pressures and uncertainty regarding the future path of interest rates, which remained persistently high. Towards the end of the year, the market environment improved from prior quarters with the expectation of lower interest rates going into 2024. However, there is continued uncertainty regarding the timing and pace of these rate reductions along with concerns regarding heightened geopolitical risks that could impact the capital markets in 2024. The market environment impacted our businesses in 2023, as discussed further in "Business Segments" herein, and, to the extent that it continues to remain uncertain, could adversely impact client confidence and related activity.

For more information on economic and market conditions, and the potential effects of geopolitical events and acts of war or aggression on our future results, refer to "Risk Factors" and "Forward-Looking Statements."

Selected Non-GAAP Financial Information

We prepare our financial statements using U.S. GAAP. From time to time, we may disclose certain "non-GAAP financial measures" in this document or in the course of our earnings releases, earnings and other conference calls, financial presentations, definitive proxy statements and other public disclosures. A "non-GAAP financial measure" excludes, or includes, amounts from the most directly comparable measure calculated and presented in accordance with U.S. GAAP. We consider the non-GAAP financial measures we disclose to be useful to us, investors, analysts and other stakeholders by providing further transparency about, or an alternate means of assessing or comparing our financial condition, operating results and capital adequacy.

These measures are not in accordance with, or a substitute for, U.S. GAAP and may be different from or inconsistent with non-GAAP financial measures used by other companies. Whenever we refer to a non-GAAP financial measure, we will also generally define it or present the most directly comparable financial measure calculated and presented in accordance with U.S. GAAP, along with a reconciliation of the differences between the U.S. GAAP financial measure and the non-GAAP financial measure.

We present certain non-GAAP financial measures that exclude the impact of mark-to-market gains and losses on DCP investments from net revenues and compensation expenses. The impact of DCP is primarily reflected in our Wealth Management business segment results. These measures allow for better comparability of period-to-period underlying operating performance and revenue trends, especially in our Wealth Management business segment. By excluding the impact of these items, we are better able to describe the business drivers and resulting impact to net revenues and corresponding change to the associated compensation expenses.

Compensation expense for DCP awards is calculated based on the notional value of the award granted, adjusted for changes in the fair value of the referenced investments that employees select. Compensation expense is recognized over the vesting period relevant to each separately vesting portion of deferred awards.

We invest directly, as principal, in financial instruments and other investments to economically hedge certain of our obligations under these DCP awards. Changes in the fair value of such investments, net of financing costs, are recorded in net revenues, and included in Transactional revenues in the Wealth Management business segment. Although changes in compensation expense resulting from changes in the fair value of the referenced investments will generally be offset by changes in the fair value of investments recognized in net revenues, there is typically a timing difference between the immediate recognition of gains and losses on our investments and the deferred recognition of the related compensation expense over the vesting period. While this timing difference may not be material to our Income before provision for income taxes in any individual period, it may impact the Wealth Management business segment reported ratios and operating metrics in certain periods due to potentially significant impacts to net revenues and compensation expenses. For additional information on DCP, refer to "Other Matters" herein.

The principal non-GAAP financial measures presented in this document are set forth in the following tables.

Reconciliations from U.S. GAAP to Non-GAAP Consolidated Financial Measures

$ in millions	**2023**	2022	2021
Net revenues	**$ 54,143**	$ 53,668	$ 59,755
Adjustment for mark-to-market losses (gains) on DCP[1]	**(434)**	1,198	(389)
Adjusted Net revenues—non-GAAP	**$ 53,709**	$ 54,866	$ 59,366
Compensation expense	**$ 24,558**	$ 23,053	$ 24,628
Adjustment for mark-to-market losses (gains) on DCP[1]	**(668)**	716	(526)
Adjusted Compensation expense—non-GAAP	**$ 23,890**	$ 23,769	$ 24,102
Wealth Management Net revenues	**$ 26,268**	$ 24,417	$ 24,243
Adjustment for mark-to-market losses (gains) on DCP[1]	**(282)**	858	(210)
Adjusted Wealth Management Net revenues—non-GAAP	**$ 25,986**	$ 25,275	$ 24,033
Wealth Management Compensation expense	**$ 13,972**	$ 12,534	$ 13,090
Adjustment for mark-to-market losses (gains) on DCP[1]	**(412)**	530	(293)
Adjusted Wealth Management Compensation expense—non-GAAP	**$ 13,560**	$ 13,064	$ 12,797

	At December 31,		
$ in millions	**2023**	2022	2021
Tangible equity			
Common shareholders' equity	**$ 90,288**	$ 91,391	$ 97,691
Less: Goodwill and net intangible assets	**(23,761)**	(24,268)	(25,192)
Tangible common shareholders' equity—non-GAAP	**$ 66,527**	$ 67,123	$ 72,499

	Average Monthly Balance		
$ in millions	**2023**	2022	2021
Tangible equity			
Common shareholders' equity	**$ 90,819**	$ 93,873	$ 97,094
Less: Goodwill and net intangible assets	**(24,013)**	(24,789)	(23,392)
Tangible common shareholders' equity—non-GAAP	**$ 66,806**	$ 69,084	$ 73,702

Non-GAAP Financial Measures by Business Segment

$ in billions	**2023**	2022	2021
Average common equity[2]			
Institutional Securities	**$ 45.6**	$ 48.8	$ 43.5
Wealth Management	**28.8**	31.0	28.6
Investment Management	**10.4**	10.6	8.8
ROE[3]			
Institutional Securities	**7 %**	10 %	20 %
Wealth Management	**17 %**	16 %	16 %
Investment Management	**6 %**	6 %	15 %
Average tangible common equity[2]			
Institutional Securities	**$ 45.2**	$ 48.3	$ 42.9
Wealth Management	**14.8**	16.3	13.4
Investment Management	**0.7**	0.8	0.9
ROTCE[3]			
Institutional Securities	**7 %**	10 %	20 %
Wealth Management	**33 %**	31 %	34 %
Investment Management	**88 %**	86 %	144 %

1. Net revenues and compensation expense are adjusted for DCP for both Firm and Wealth Management business segment. See "Other Matters" herein for more information.
2. Average common equity and average tangible common equity for each business segment is determined using our Required Capital framework (see "Liquidity and Capital Resources—Regulatory Requirements—Attribution of Average Common Equity According to the Required Capital Framework" herein). The sums of the segments' Average common equity and Average tangible common equity do not equal the Consolidated measures due to Parent Company equity.
3. The calculation of ROE and ROTCE by segment uses net income applicable to Morgan Stanley by segment less preferred dividends allocated to each segment as a percentage of average common equity and average tangible common equity, respectively, allocated to each segment.

Return on Tangible Common Equity Goal

We have an ROTCE goal of 20%. Our ROTCE goal is a forward-looking statement that is based on a normal market environment and may be materially affected by many factors.

See "Risk Factors" and "Forward-Looking Statements" herein for further information on market and economic conditions and their potential effects on our future operating results.

ROTCE represents a non-GAAP financial measure. For further information on non-GAAP measures, see "Selected Non-GAAP Financial Information" herein.

Business Segments

Substantially all of our operating revenues and operating expenses are directly attributable to our business segments. Certain revenues and expenses have been allocated to each business segment, generally in proportion to its respective net revenues, non-interest expenses or other relevant measures. See Note 22 to the financial statements for segment net revenues by income statement line item and information on intersegment transactions.

Net Revenues

Investment Banking

Investment banking revenues are derived from client engagements in which we act as an advisor, underwriter or distributor of capital.

Within the Institutional Securities business segment, these revenues are primarily composed of fees earned from underwriting equity and fixed income securities, syndicating loans and advisory services in relation to mergers and acquisitions, divestitures and corporate restructurings.

Within the Wealth Management business segment, these revenues are derived from the distribution of newly issued securities.

Trading

Trading revenues include the realized gains and losses from transactions in financial instruments, unrealized gains and losses from ongoing changes in the fair value of our positions, and gains and losses from financial instruments used to economically hedge compensation expense related to DCP.

Within the Institutional Securities business segment, Trading revenues arise from transactions in cash instruments and derivatives in which we act as a market maker for our clients. In this role, we stand ready to buy, sell or otherwise transact with customers under a variety of market conditions and to provide firm or indicative prices in response to customer requests. Our liquidity obligations can be explicit in some cases, and in others, customers expect us to be willing to transact with them. In order to most effectively fulfill our market-making function, we engage in activities across all of our trading businesses that include, but are not limited to:

- taking positions in anticipation of, and in response to, customer demand to buy or sell and—depending on the liquidity of the relevant market and the size of the position—to hold those positions for a period of time;
- building, maintaining and rebalancing inventory held to facilitate client activity through trades with other market participants;
- managing and assuming basis risk (risk associated with imperfect hedging) between risks incurred from the facilitation of client transactions and the standardized products available in the market to hedge those risks;
- trading in the market to remain current on pricing and trends; and
- engaging in other activities to provide efficiency and liquidity for markets.

In many markets, the realized and unrealized gains and losses from purchase and sale transactions will include any spreads between bids and offers. Certain fees received on loans carried at fair value and dividends from equity securities are also recorded in Trading revenues since they relate to positions carried at fair value.

Within the Wealth Management business segment, Trading revenues primarily include revenues from customers' purchases and sales of fixed income instruments in which we act as principal, as well as gains and losses related to DCP investments.

Investments

Investments revenues are composed of realized and unrealized gains and losses derived from investments, including those associated with employee deferred compensation and co-investment plans. Estimates of the fair value of the investments that produce these revenues may involve significant judgment and may fluctuate significantly over time in light of business, market, economic and financial conditions, generally or in relation to specific transactions.

Within the Institutional Securities segment, gains and losses are primarily from business-related investments. Certain investments are subject to sale restrictions.

Within the Investment Management business segment, Investments revenues are primarily from performance-based fees in the form of carried interest, a portion of which is subject to reversal, and gains and losses from investments. The business is entitled to receive carried interest when the return in certain funds exceeds specified performance targets. Additionally, we consolidate certain sponsored Investment Management funds where revenues are primarily attributable to holders of noncontrolling interests.

Commissions and Fees

Commissions and fees result from arrangements in which the client is charged a fee for executing transactions related to securities, services related to sales and trading activities, and sales of other products.

Within the Institutional Securities business segment, commissions and fees include fees earned from market-making activities, such as executing and clearing client transactions on major stock and derivative exchanges, as well as from OTC derivatives.

Within the Wealth Management business segment, commissions and fees arise from client transactions primarily in equity securities, insurance products, mutual funds, alternative investments, futures and options. Wealth Management also earns revenues from order flow payments for directing customer orders to broker-dealers, exchanges and market centers for execution.

Asset Management

Asset management revenues include fees associated with the management and supervision of assets and the distribution of funds and similar products.

Within the Wealth Management business segment, Asset management revenues are related to advisory services associated with fee-based assets, account service and administration, as well as distribution of products. These revenues are generally based on the net asset value of the account in which a client is invested.

Within the Investment Management business segment, Asset management revenues are primarily composed of fees received from investment vehicles on the basis of assets under management. Performance-based fees, not in the form of carried interest, are earned on certain products and separately managed accounts as a percentage of appreciation in value and, in certain cases, are based upon the achievement of performance criteria. These performance fees are generally recognized on a quarterly or annual basis.

Net Interest

Interest income and Interest expense are functions of the level and mix of total assets and liabilities, including Trading assets and Trading liabilities, Investment securities, Securities borrowed or purchased under agreements to resell, Securities loaned or sold under agreements to repurchase, Loans, Deposits and Borrowings.

Within the Institutional Securities business segment, Net interest is a function of market-making strategies, client activity, and the prevailing level, term structure and volatility of interest rates. Net interest is impacted by market-making, lending and financing activities as we generally earn interest on securities held by the Firm, Securities borrowed, Securities purchased under agreements to resell, Loans and margin loans, while Borrowings, Securities loaned and Securities sold under agreements to repurchase generally incur interest expense.

Within the Wealth Management business segment, Interest income is driven by assets held including Investment securities, Loans and margin loans. Interest expense is driven by Deposits and other funding.

Other

Other revenues for Institutional Securities include revenues and losses from equity method investments, fees earned in association with lending activities, mark-to-market gains and losses on loans and lending commitments held for sale, as well as gains and losses on economic derivative hedges associated with certain held-for-sale and held-for-investment loans and lending commitments.

Other revenues for Wealth Management include realized gains and losses on AFS securities, account handling fees, referral fees and other miscellaneous revenues.

Provision for Credit Losses

The Provision for credit losses includes the provision for credit losses for loans and lending commitments held for investment.

Institutional Securities—Fixed Income and Equities

Fixed income and Equities net revenues are composed of Trading revenues, Commissions and fees, Asset management revenues, Net interest, and certain Investments and Other

revenues directly attributable to those businesses. These revenues, which can be affected by a variety of interrelated factors, including market volumes, bid-offer spreads and the impact of market conditions on inventory held to facilitate client activity, as well as the effect of hedging activity, are viewed in the aggregate when assessing the performance and profitability of our businesses.

Following is a description of the revenue-generating activities within our equity and fixed income businesses, as well as how their results impact the income statement line items.

Equity—Financing. We provide financing, prime brokerage and fund administration services to our clients active in the equity markets through a variety of products, including margin lending, securities lending and swaps. Results from this business are largely driven by the difference between financing income earned and financing and liquidity costs incurred, which are reflected in Net interest for securities lending products, and in Trading revenues for derivative products. Fees for providing fund administration services are reflected in Asset management revenues.

Equity—Execution services. A significant portion of the results for this business is generated by commissions and fees from executing and clearing client transactions on major stock and derivative exchanges, as well as from OTC transactions. We make markets for our clients principally in equity-related securities and derivative products, including those that provide liquidity and are utilized for hedging. Market-making also generates gains and losses on inventory held to facilitate client activity, which are reflected in Trading revenues. Execution services also includes certain Investments and Other revenues.

Fixed income—Within fixed income, we make markets in various flow and structured products in order to facilitate client activity as part of the following products and services:

- *Global macro products.* We make markets for our clients in interest rate, foreign exchange and emerging market products, including exchange-traded and OTC securities and derivative instruments. The results of this market-making activity are primarily driven by gains and losses from buying and selling positions to stand ready for and satisfy client demand and are recorded in Trading revenues.
- *Credit products.* We make markets in credit-sensitive products, such as corporate bonds and mortgage securities and other securitized products, and related derivative instruments. The values of positions in this business are sensitive to changes in credit spreads and interest rates, which result in gains and losses reflected in Trading revenues. We undertake lending activities, which include commercial mortgage lending, secured lending facilities and financing extended to sales and trading customers. Due to the amount and type of the interest-bearing securities and loans making up this business, a significant portion of the results is also reflected in Net interest revenues.
- *Commodities products and Other.* We make markets in various commodity products related primarily to electricity, natural gas, oil and metals. Other activities primarily include results from the centralized management of our fixed income derivative counterparty exposures and the management of derivative counterparty risk. These activities are primarily recorded in Trading revenues.

Fixed income also includes certain Investments and Other revenues.

Institutional Securities—Other Net Revenues

Other net revenues include impacts from certain treasury functions, such as liquidity and funding costs and gains and losses on economic hedges related to certain borrowings. Other net revenues also include mark-to-market gains and losses on held-for-sale corporate loans and lending commitments, as well as net interest and gain and losses on economic hedges associated with held-for-sale and held-for-investment corporate loans and lending commitments. Also included are gains and losses from financial instruments used to economically hedge compensation expense related to certain DCP, income and losses from the equity method investment related to our Japanese securities joint venture with MUFG, as well as Investments and Other revenues that are not directly attributable to Fixed income and Equities businesses.

Compensation Expense

Compensation and benefits expenses include base salaries and fixed allowances, formulaic programs, discretionary incentive compensation, amortization of deferred cash and equity awards, changes in the fair value of DCP investments, including the Firm's share price for certain awards, carried interest allocated to employees, severance costs, and other items such as health and welfare benefits.

The factors that drive compensation for our employees vary from period to period, from segment to segment and within a segment. For certain revenue-producing employees in the Wealth Management and Investment Management business segments, compensation is largely paid on the basis of formulaic payouts that link employee compensation to revenues. Compensation for other employees, including revenue-producing employees in the Institutional Securities business segment, include base salary and benefits and may also include incentive compensation that is determined following the assessment of the performance of the Firm, business unit and individual.

Compensation expense for DCP is recognized over the relevant vesting period and is adjusted based on the fair value of the referenced investments until distribution. Although changes in compensation expense resulting from changes in the fair value of the referenced investments will generally be offset by changes in the fair value of investments made by the Firm, there is typically a timing difference between the

immediate recognition of gains and losses on the Firm's investments and the compensation expense recognized over the vesting period.

Income Taxes

The Income tax provision for our business segments is generally determined based on the revenues, expenses and activities directly attributable to each business segment. Certain items have been allocated to each business segment, generally in proportion to its respective net revenues or other relevant measures.

Institutional Securities

Income Statement Information

$ in millions	2023	2022	2021	% Change 2023	% Change 2022
Revenues					
Advisory	**$ 2,244**	$ 2,946	$ 3,487	**(24)%**	(16)%
Equity	**889**	851	4,437	**4 %**	(81)%
Fixed income	**1,445**	1,438	2,348	**— %**	(39)%
Total Underwriting	**2,334**	2,289	6,785	**2 %**	(66)%
Total Investment banking	**4,578**	5,235	10,272	**(13)%**	(49)%
Equity	**9,986**	10,769	11,435	**(7)%**	(6)%
Fixed income	**7,673**	9,022	7,516	**(15)%**	20 %
Other	**823**	(633)	610	**N/M**	N/M
Net revenues	**23,060**	24,393	29,833	**(5)%**	(18)%
Provision for credit losses	**401**	211	(7)	**90 %**	N/M
Compensation and benefits	**8,369**	8,246	9,165	**1 %**	(10)%
Non-compensation expenses	**9,814**	9,221	8,861	**6 %**	4 %
Total non-interest expenses	**18,183**	17,467	18,026	**4 %**	(3)%
Income before provision for income taxes	**4,476**	6,715	11,814	**(33)%**	(43)%
Provision for income taxes	**884**	1,308	2,746	**(32)%**	(52)%
Net income	**3,592**	5,407	9,068	**(34)%**	(40)%
Net income applicable to noncontrolling interests	**139**	165	111	**(16)%**	49 %
Net income applicable to Morgan Stanley	**$ 3,453**	$ 5,242	$ 8,957	**(34)%**	(41)%

Investment Banking

Investment Banking Volumes

$ in billions	2023	2022	2021
Completed mergers and acquisitions[1]	**$ 655**	$ 881	$ 1,107
Equity and equity-related offerings[2, 3]	**31**	23	117
Fixed income offerings[2, 4]	**235**	229	371

Source: Refinitiv data as of January 2, 2024. Transaction volumes may not be indicative of net revenues in a given period. In addition, transaction volumes for prior periods may vary from amounts previously reported due to the subsequent withdrawal, change in value or change in timing of certain transactions.
1. Includes transactions of $100 million or more. Based on full credit to each of the advisors in a transaction.
2. Based on full credit for single book managers and equal credit for joint book managers.
3. Includes Rule 144A issuances and registered public offerings of common stock, convertible securities and rights offerings.
4. Includes Rule 144A and publicly registered issuances, non-convertible preferred stock, mortgage-backed and asset-backed securities, and taxable municipal debt. Excludes leveraged loans and self-led issuances.

Investment Banking Revenues

Net revenues of $4,578 million in 2023 decreased 13% compared with the prior year, primarily reflecting lower Advisory revenues.

- Advisory revenues decreased primarily due to fewer completed M&A transactions on lower market volumes.
- Equity underwriting revenues increased on higher volumes, primarily in secondary offerings and convertible issuances, partially offset by lower revenues from initial public offerings.
- Fixed income underwriting revenues were relatively unchanged from the prior year, primarily reflecting higher investment-grade loan and bond issuances, offset by lower non-investment grade loan issuances.

Investment Banking continues to operate in a market environment characterized by lower completed M&A and underwriting activity amid market uncertainty, including the future path of interest rates.

See "Investment Banking Volumes" herein.

Equity, Fixed Income and Other Net Revenues

Equity and Fixed Income Net Revenues

$ in millions	2023 Trading	2023 Fees[1]	2023 Net Interest[2]	2023 All Other[3]	2023 Total
Financing	**$ 7,206**	**$ 524**	**$ (2,886)**	**$ 66**	**$ 4,910**
Execution services	**2,919**	**2,235**	**(190)**	**112**	**5,076**
Total Equity	**$ 10,125**	**$ 2,759**	**$ (3,076)**	**$ 178**	**$ 9,986**
Total Fixed income	**$ 7,848**	**$ 375**	**$ (975)**	**$ 425**	**$ 7,673**

$ in millions	2022 Trading	2022 Fees[1]	2022 Net Interest[2]	2022 All Other[3]	2022 Total
Financing	$ 5,223	$ 535	$ (257)	$ 36	$ 5,537
Execution services	2,947	2,462	(81)	(96)	5,232
Total Equity	$ 8,170	$ 2,997	$ (338)	$ (60)	$ 10,769
Total Fixed income	$ 7,711	$ 341	$ 922	$ 48	$ 9,022

$ in millions	2021 Trading	2021 Fees[1]	2021 Net Interest[2]	2021 All Other[3]	2021 Total
Financing	$ 4,110	$ 508	$ 520	$ 8	$ 5,146
Execution services	3,327	2,648	(226)	540	6,289
Total Equity	$ 7,437	$ 3,156	$ 294	$ 548	$ 11,435
Total Fixed income	$ 5,098	$ 307	$ 1,835	$ 276	$ 7,516

1. Includes Commissions and fees and Asset management revenues.
2. Includes funding costs, which are allocated to the businesses based on funding usage.
3. Includes Investments and Other revenues.

Equity

Net revenues of $9,986 million in 2023 decreased 7% compared with the prior year, reflecting decreases in Financing and Execution services.

- Financing revenues decreased primarily due to higher funding and liquidity costs compared with the prior year.
- Execution services revenues decreased primarily due to lower gains on inventory held to facilitate client activity in derivatives and cash equities and lower client activity in cash equities, partially offset by mark-to-market gains on business-related investments compared with losses in the prior year.

Fixed Income

Net revenues of $7,673 million in 2023 decreased 15% compared with the prior year, primarily reflecting a decrease in foreign exchange and commodities products.

- Global macro products revenues decreased primarily due to a decline in foreign exchange products.
- Credit products revenues decreased primarily due to lower client activity across products.

- Commodities products and other fixed income revenues decreased compared to elevated results in the prior year, primarily due to lower gains on inventory held to facilitate client activity and lower client activity.

Other Net Revenues

Other net revenues were $823 million in 2023 compared with losses of $633 million in the prior year, primarily due to lower mark-to-market losses on corporate loans held for sale, inclusive of hedges, and higher net interest income and fees on corporate loans, mark-to-market gains compared with losses in the prior year on DCP investments and impacts from liquidity and funding costs.

Provision for Credit Losses

In 2023, the Provision for credit losses on loans and lending commitments of $401 million was primarily related to deteriorating conditions in the commercial real estate sector, including provisions for certain specific loans, mainly in the office portfolio, and modest growth in certain other loan portfolios. The Provision for credit losses on loans and lending commitments of $211 million in 2022 was primarily driven by portfolio growth and deterioration in the macroeconomic outlook.

For further information on the Provision for credit losses, see "Credit Risk" herein.

Non-Interest Expenses

Non-interest expenses of $18,183 million in 2023 increased 4% compared with the prior year due to higher Non-compensation expenses and Compensation and benefits expenses.

- Compensation and benefits expenses increased primarily due to higher expenses related to DCP and higher stock-based compensation expenses driven by the Firm's share price movement in the prior year, partially offset by lower expenses related to outstanding deferred equity compensation.
- Non-compensation expenses increased primarily due to increased spend on technology, an FDIC special assessment of $121 million, higher legal expenses, including $249 million related to a specific matter, higher execution-related and marketing and business development expenses.

Wealth Management

Income Statement Information

$ in millions	2023	2022	2021	% Change 2023	% Change 2022
Revenues					
Asset management	**$ 14,019**	$ 13,872	$ 13,966	**1 %**	(1)%
Transactional[1]	**3,556**	2,473	4,259	**44 %**	(42)%
Net interest	**8,118**	7,429	5,393	**9 %**	38 %
Other[1]	**575**	643	625	**(11)%**	3 %
Net revenues	**26,268**	24,417	24,243	**8 %**	1 %
Provision for credit losses	**131**	69	11	**90 %**	N/M
Compensation and benefits	**13,972**	12,534	13,090	**11 %**	(4)%
Non-compensation expenses	**5,635**	5,231	4,961	**8 %**	5 %
Total non-interest expenses	**19,607**	17,765	18,051	**10 %**	(2)%
Income before provision for income taxes	**6,530**	6,583	6,181	**(1)%**	7 %
Provision for income taxes	**1,508**	1,444	1,447	**4 %**	— %
Net income applicable to Morgan Stanley	**$ 5,022**	$ 5,139	$ 4,734	**(2)%**	9 %

1. Transactional includes Investment banking, Trading, and Commissions and fees revenues. Other includes Investments and Other revenues.

Wealth Management Metrics

$ in billions	At December 31, 2023	At December 31, 2022
Total client assets[1]	**$ 5,129**	$ 4,187
U.S. Bank Subsidiary loans	**$ 147**	$ 146
Margin and other lending[2]	**$ 21**	$ 22
Deposits[3]	**$ 346**	$ 351
Annualized weighted average cost of deposits[4]		
Period end	**2.92%**	1.59%
Period average	**2.43%**	0.53%

	2023	2022	2021
Net new assets	**$ 282.3**	$ 311.3	$ 437.7

1. Client assets represent those for which Wealth Management is providing services including financial advisor-led brokerage, custody, administrative and investment advisory services; self-directed brokerage and investment advisory services; financial and wealth planning services; workplace services, including stock plan administration, and retirement plan services. See "Advisor-Led Channel" and "Self-Directed Channel" herein for additional information.
2. Margin and other lending represents margin lending arrangements, which allow customers to borrow against the value of qualifying securities and other lending which includes non-purpose securities-based lending on non-bank entities.
3. Deposits reflect liabilities sourced from Wealth Management clients and other sources of funding on our U.S. Bank Subsidiaries. Deposits include sweep deposit programs, savings and other, and time deposits. As of December 31, 2023, there were no off-balance sheet amounts excluded from deposits. As of December 31, 2022, approximately $6 billion off-balance sheet amounts were excluded from deposits.
4. Annualized weighted average represents the total annualized weighted average cost of the various deposit products, excluding the effect of related hedging derivatives. The period end cost of deposits is based upon balances and rates as of December 31, 2023 and December 31, 2022. The period average is based on daily balances and rates for the year.

Net New Assets (NNA)

NNA represent client asset inflows, inclusive of interest, dividends and asset acquisitions, less client asset outflows, and exclude the impact of business combinations/divestitures and the impact of fees and commissions. The level of NNA in a given period is influenced by a variety of factors, including macroeconomic factors that impact client investment and spending behaviors, our ability to attract and retain financial advisors and clients, and timing of large idiosyncratic flows. Macroeconomic factors have had an impact on our NNA in recent periods. Should these factors continue, the growth rate of our NNA may be impacted.

Advisor-Led Channel

$ in billions	At December 31, 2023	At December 31, 2022
Advisor-led client assets[1]	**$ 3,979**	$ 3,392
Fee-based client assets[2]	**$ 1,983**	$ 1,678
Fee-based client assets as a percentage of advisor-led client assets	**50%**	49%

	2023	2022	2021
Fee-based asset flows[3]	**$ 109.2**	$ 162.8	$ 179.3

1. Advisor-led client assets represent client assets in accounts that have a Wealth Management representative assigned.
2. Fee-based client assets represent the amount of assets in client accounts where the basis of payment for services is a fee calculated on those assets.
3. Fee-based asset flows include net new fee-based assets (including asset acquisitions), net account transfers, dividends, interest and client fees, and exclude institutional cash management related activity. For a description of the Inflows and Outflows included in Fee-based asset flows, see Fee-based client assets herein.

Self-Directed Channel

	At December 31, 2023	At December 31, 2022
Self-directed assets (in billions)[1]	**$ 1,150**	$ 795
Self-directed households (in millions)[2]	**8.1**	8.0

	2023	2022	2021
Daily average revenue trades ("DARTs") (in thousands)[3]	**759**	864	1,161

1. Self-directed client assets represent active accounts which are not advisor led. Active accounts are defined as having at least $25 in assets.
2. Self-directed households represent the total number of households that include at least one active account with self-directed assets. Individual households or participants that are engaged in one or more of our Wealth Management channels are included in each of the respective channel counts.
3. DARTs represent the total self-directed trades in a period divided by the number of trading days during that period.

Workplace Channel[1]

	At December 31, 2023	At December 31, 2022
Workplace unvested assets (in billions)[2]	**$ 416**	$ 302
Number of participants (in millions)[3]	**6.6**	6.3

1. The workplace channel includes equity compensation solutions for companies, their executives and employees.
2. Stock plan unvested assets represent the market value of public company securities at the end of the period. The stock plan vested asset retention rate within the workplace channel, which represents the percentage of stock plan assets retained in either the self-directed or advisor-led channels following vesting, is 29%, 34% and 24% for 2023, 2022 and 2021, respectively. The rate is derived using the stock plan inflows for the previous year, less related outflows for the previous year and reported year, and dividing the result by the previous year inflows.
3. Stock plan participants represent total accounts with vested and/or unvested stock plan assets in the workplace channel. Individuals with accounts in multiple plans are counted as participants in each plan.

Net Revenues

Asset Management

Asset management revenues of $14,019 million in 2023 increased 1% compared with the prior year, reflecting the cumulative impact of positive fee-based flows, partially offset by a reduction driven by changes in client and product mix and lower average fee-based client asset levels due to declines in the markets.

See "Fee-Based Client Assets Rollforwards" herein.

Transactional Revenues

Transactional revenues of $3,556 million in 2023 increased 44% compared with the prior year, primarily due to $282 million of gains on DCP investments compared with $858 million of losses in the prior year, partially offset by lower client activity.

For further information on the impact of DCP, see "Selected Non-GAAP Financial Information" herein.

Net Interest

Net interest revenues of $8,118 million in 2023 increased 9% compared with the prior year, primarily due to the net effect of higher interest rates, partially offset by changes in deposit mix.

The level and pace of interest rate changes and other macroeconomic factors continued to impact client preferences for cash allocation to higher-yielding products and the pace of reallocation of client balances, resulting in changes in the deposit mix and associated interest expense, as well as client demand for loans. If these trends persist, net interest income could be impacted in future periods.

Provision for Credit Losses

The Provision for credit losses on loans and lending commitments of $131 million in 2023 was primarily related to deteriorating conditions in the commercial real estate sector, including provisions for certain specific loans, mainly in the office portfolio. The Provision for credit losses on loans and lending commitments was $69 million in 2022, primarily driven by portfolio growth in Residential real estate loans and deteriorating conditions in the commercial real estate sector.

For further information on the Provision for credit losses, see "Credit Risk" herein.

Non-Interest Expenses

Non-interest expenses of $19,607 million in 2023 increased 10% compared with the prior year, as a result of higher Compensation and benefits expense and higher Non-compensation expense.

- Compensation and benefits expenses increased, primarily due to higher expenses related to DCP and higher salaries driven by hiring mix.

  For further information on the impact of expenses related to DCP, see "Selected Non-GAAP Financial Information" herein.

- Non-compensation expenses increased, primarily driven by an FDIC special assessment of $165 million, increased spend on technology and costs related to exits of real estate.

Fee-Based Client Assets Rollforwards

$ in billions	At December 31, 2022	Inflows[1]	Outflows[2]	Market Impact[3]	At December 31, 2023
Separately managed[4]	$ 501	**$ 70**	**$ (23)**	**$ 41**	**$ 589**
Unified managed	408	**96**	**(56)**	**53**	**501**
Advisor	167	**29**	**(32)**	**24**	**188**
Portfolio manager	552	**98**	**(73)**	**68**	**645**
Subtotal	$ 1,628	**$ 293**	**$ (184)**	**$ 186**	**$ 1,923**
Cash management	50	**60**	**(50)**	**—**	**60**
Total fee-based client assets	$ 1,678	**$ 353**	**$ (234)**	**$ 186**	**$ 1,983**

$ in billions	At December 31, 2021	Inflows[1,5]	Outflows[2]	Market Impact[3]	At December 31, 2022
Separately managed[4]	$ 479	$ 141	$ (25)	$ (94)	$ 501
Unified managed	467	76	(50)	(85)	408
Advisor	211	29	(35)	(38)	167
Portfolio manager	636	94	(67)	(111)	552
Subtotal	$ 1,793	$ 340	$ (177)	$ (328)	$ 1,628
Cash management	46	38	(34)	—	50
Total fee-based client assets	$ 1,839	$ 378	$ (211)	$ (328)	$ 1,678

$ in billions	At December 31, 2020	Inflows[1,6]	Outflows[2]	Market Impact[3]	At December 31, 2021
Separately managed[4]	$ 359	$ 86	$ (20)	$ 54	$ 479
Unified managed	379	100	(54)	42	467
Advisor	177	42	(30)	22	211
Portfolio manager	509	113	(58)	72	636
Subtotal	$ 1,424	$ 341	$ (162)	$ 190	$ 1,793
Cash management	48	30	(32)	—	46
Total fee-based client assets	$ 1,472	$ 371	$ (194)	$ 190	$ 1,839

1. Inflows include new accounts, account transfers, deposits, dividends and interest.
2. Outflows include closed or terminated accounts, account transfers, withdrawals and client fees.
3. Market impact includes realized and unrealized gains and losses on portfolio investments.
4. Includes non-custody account values based on asset values reported on a quarter lag by third-party custodians.
5. Includes $75 billion of fee-based assets acquired in an asset acquisition in the first quarter of 2022, reflected in Separately managed.
6. Includes $43 billion of fee-based assets acquired in an asset acquisition in the third quarter of 2021, reflected in Separately managed.

Average Fee Rates[1]

Fee rate in bps	**2023**	2022	2021
Separately managed	**12**	12	14
Unified managed	**92**	94	95
Advisor	**80**	81	82
Portfolio manager	**91**	92	93
Subtotal	**65**	66	72
Cash management	**6**	6	5
Total fee-based client assets	**64**	65	70

1. Based on Asset management revenues related to advisory services associated with fee-based assets.

Asset management revenues within the Wealth Management segment are primarily generated from the following types of accounts:

- *Separately managed*—accounts by which third party and affiliated asset managers are engaged to manage clients' assets with investment decisions made by the asset

manager. Only one third-party asset manager strategy can be held per account.

- *Unified managed*—accounts that provide the client with the ability to combine separately managed accounts, mutual funds and exchange-traded funds, all in one aggregate account. Investment decisions and discretionary authority may be exercised by the client, financial advisor or portfolio manager. Also includes accounts that give the client the ability to systematically allocate assets across a wide range of mutual funds, for which the investment decisions are made by the client.
- *Advisor*—accounts where the investment decisions must be approved by the client, and the financial advisor must obtain approval each time a change is made to the account or its investments.
- *Portfolio manager*—accounts where a financial advisor has discretion (contractually approved by the client) to make ongoing investment decisions without the client's approval for each individual change.
- *Cash management*—accounts where the financial advisor provides discretionary cash management services to institutional clients, whereby securities or proceeds are invested and reinvested in accordance with the client's investment criteria. Generally, the portfolio will be invested in short-term fixed income and cash equivalent investments.

Investment Management

Income Statement Information

$ in millions	2023	2022	2021	% Change 2023	% Change 2022
Revenues					
Asset management and related fees	**$ 5,231**	$ 5,332	$ 5,576	**(2)%**	(4)%
Performance-based income and other[1]	**139**	43	644	**N/M**	(93)%
Net revenues	**5,370**	5,375	6,220	**— %**	(14)%
Compensation and benefits	**2,217**	2,273	2,373	**(2)%**	(4)%
Non-compensation expenses	**2,311**	2,295	2,169	**1 %**	6 %
Total non-interest expenses	**4,528**	4,568	4,542	**(1)%**	1 %
Income before provision for income taxes	**842**	807	1,678	**4 %**	(52)%
Provision for income taxes	**199**	162	356	**23 %**	(54)%
Net income	**643**	645	1,322	**— %**	(51)%
Net income applicable to noncontrolling interests	**4**	(15)	(25)	**127 %**	40 %
Net income applicable to Morgan Stanley	**$ 639**	$ 660	$ 1,347	**(3)%**	(51)%

1. Includes Investments, Trading, Commissions and fees, Net interest and Other revenues.

Net Revenues

Asset Management and Related Fees

Asset management and related fees of $5,231 million in 2023 decreased 2% compared with the prior year, primarily due to a shift in the mix of average AUM, driven by the cumulative effect of net flows.

Asset management revenues are influenced by the level, relative mix of AUM and related fee rates. The market environment and client preferences in recent quarters have impacted the mix of our average Long-Term AUM level across certain asset classes. To the extent these conditions continue, we would expect our Asset management revenue to continue to be negatively impacted.

See "Assets Under Management or Supervision" herein.

Performance-based Income and Other

Performance-based income and other revenues increased to $139 million in 2023, from $43 million in the prior year, primarily due to mark-to-market gains in 2023 compared with losses in the prior year on DCP investments and investments in public funds, partially offset by lower accrued carried interest in certain private funds.

Non-Interest Expenses

Non-interest expenses of $4,528 million in 2023 decreased 1% from the prior year, primarily due to lower Compensation and benefits expenses.

- Compensation and benefits expenses decreased primarily due to lower expenses related to compensation associated with carried interest, partially offset by higher expenses related to DCP.
- Non-compensation expenses were relatively unchanged for the current year.

Assets Under Management or Supervision

Rollforwards

$ in billions	At Dec 31, 2022	Inflows[1]	Outflows[2]	Market Impact[3]	Other[4,5]	At Dec 31, 2023
Equity	$ 259	**$ 40**	**$ (57)**	**$ 57**	**$ (4)**	**$ 295**
Fixed Income	173	**56**	**(62)**	**11**	**(7)**	**171**
Alternatives and Solutions	431	**108**	**(91)**	**57**	**3**	**508**
Long-Term AUM	$ 863	**$ 204**	**$ (210)**	**$ 125**	**$ (8)**	**$ 974**
Liquidity and Overlay Services	442	**2,282**	**(2,244)**	**20**	**(15)**	**485**
Total	$ 1,305	**$ 2,486**	**$ (2,454)**	**$ 145**	**$ (23)**	**$ 1,459**

$ in billions	At Dec 31, 2021	Inflows[1]	Outflows[2]	Market Impact[3]	Other[4]	At Dec 31, 2022
Equity	$ 395	$ 56	$ (74)	$ (106)	$ (12)	$ 259
Fixed Income	207	66	(78)	(16)	(6)	173
Alternatives and Solutions	466	102	(83)	(47)	(7)	431
Long-Term AUM	$ 1,068	$ 224	$ (235)	$ (169)	$ (25)	$ 863
Liquidity and Overlay Services	497	2,224	(2,268)	(6)	(5)	442
Total	$ 1,565	$ 2,448	$ (2,503)	$ (175)	$ (30)	$ 1,305

$ in billions	At Dec 31, 2020	Inflows[1]	Outflows[2]	Market Impact[3]	Other[4,6]	At Dec 31, 2021
Equity	$ 242	$ 100	$ (85)	$ 34	$ 104	$ 395
Fixed Income	98	67	(55)	—	97	207
Alternatives and Solutions	153	95	(78)	51	245	466
Long-Term AUM	$ 493	$ 262	$ (218)	$ 85	$ 446	$ 1,068
Liquidity and Overlay Services	288	1,940	(1,852)	6	115	497
Total	$ 781	$ 2,202	$ (2,070)	$ 91	$ 561	$ 1,565

1. Inflows represent investments or commitments from new and existing clients in new or existing investment products, including reinvestments of client dividends and increases in invested capital. Inflows exclude the impact of exchanges, whereby a client changes positions within the same asset class.
2. Outflows represent redemptions from clients' funds, transition of funds from the committed capital period to the invested capital period and decreases in invested capital. Outflows exclude the impact of exchanges, whereby a client changes positions within the same asset class.
3. Market impact includes realized and unrealized gains and losses on portfolio investments. This excludes any funds where market impact does not impact management fees.
4. Other contains both distributions and foreign currency impact for all periods. Distributions represent decreases in invested capital due to returns of capital after the investment period of a fund. It also includes fund dividends that the client has not reinvested. Foreign currency impact reflects foreign currency changes for non-U.S. dollar dominated funds.
5. In 2023, our Retail Municipal and Corporate Fixed Income business ("FIMS") was combined with our Parametric retail customized solutions business. The impact of the change was a $6 billion movement in AUM from Fixed Income to the Alternatives and Solutions asset class included in Other.
6. The 2021 Other amounts primarily include AUM additions related to the Eaton Vance Corp. ("Eaton Vance") acquisition.

Average AUM

$ in billions	**2023**	2022	2021
Equity	**$ 279**	$ 298	$ 362
Fixed income	**170**	186	181
Alternatives and Solutions	**466**	435	380
Long-Term AUM Subtotal	**915**	919	923
Liquidity and Overlay Services	**464**	462	430
Total AUM	**$ 1,379**	$ 1,381	$ 1,353

Average Fee Rates[1]

Fee rate in bps	**2023**	2022	2021
Equity	**71**	70	74
Fixed income	**35**	35	38
Alternatives and Solutions	**32**	34	36
Long-Term AUM	**44**	46	51
Liquidity and Overlay Services	**13**	11	5
Total AUM	**34**	34	37

1. Based on Asset management revenues, net of waivers, excluding performance-based fees and other non-management fees. For certain non-U.S. funds, it includes the portion of advisory fees that the advisor collects on behalf of third-party distributors. The payment of those fees to the distributor is included in Non-compensation expenses in the income statement.

Asset management and other related fees within the Investment Management segment are primarily generated from Equity, Fixed Income and the following products:

Alternatives and Solutions. Includes products in fund of funds, real estate, infrastructure, private equity and credit strategies and multi-asset portfolios, as well as systematic strategies that create custom investment solutions.

Liquidity and Overlay Services. Includes liquidity fund products, as well as overlay services, which represent investment strategies that use passive exposure instruments to obtain, offset or substitute specific portfolio exposures, beyond those provided by the underlying holdings of the fund.

Supplemental Financial Information

U.S. Bank Subsidiaries

Our U.S. Bank Subsidiaries accept deposits, provide loans to a variety of customers, including large corporate and institutional clients, as well as high to ultra-high net worth individuals, and invest in securities. Lending activity in our U.S. Bank Subsidiaries from the Institutional Securities business segment primarily includes Secured lending facilities, Commercial and Residential real estate and Corporate loans. Lending activity in our U.S. Bank Subsidiaries from the Wealth Management business segment primarily includes Securities-based lending, which allows clients to borrow money against the value of qualifying securities, and Residential real estate loans.

For a further discussion of our credit risks, see "Quantitative and Qualitative Disclosures about Risk—Credit Risk" herein. For a further discussion about loans and lending commitments, see Notes 9 and 14 to the financial statements.

U.S. Bank Subsidiaries' Supplemental Financial Information[1]

$ in billions	**At December 31, 2023**	At December 31, 2022
Investment securities:		
Available-for-sale at fair value	**$ 66.6**	$ 66.9
Held-to-maturity	**51.4**	56.4
Total Investment securities	**$ 118.0**	$ 123.3
Wealth Management Loans[2]		
Residential real estate	**$ 60.3**	$ 54.4
Securities-based lending and Other[3]	**86.2**	91.7
Total, net of ACL	**$ 146.5**	$ 146.1
Institutional Securities Loans[2]		
Corporate	**$ 10.1**	$ 6.9
Secured lending facilities	**40.8**	37.1
Commercial and Residential real estate	**10.7**	10.2
Securities-based lending and Other	**4.1**	6.0
Total, net of ACL	**$ 65.7**	$ 60.2
Total Assets	**$ 396.1**	$ 391.0
Deposits[4]	**$ 346.1**	$ 350.6

1. Amounts exclude transactions between the bank subsidiaries, as well as deposits from the Parent Company and affiliates.
2. For a further discussion of loans in the Wealth Management and Institutional Securities business segments, see "Quantitative and Qualitative Disclosures about Risk—Credit Risk" herein.
3. Other loans primarily include tailored lending. For a further discussion of Other loans, see "Quantitative and Qualitative Disclosures about Risk—Credit Risk" herein.
4. For further information on deposits, see "Liquidity and Capital Resources—Funding Management—Balance Sheet—Unsecured Financing" herein.

Other Matters

Deferred Cash-Based Compensation

The Firm sponsors a number of deferred cash-based compensation programs for current and former employees, which generally contain vesting, clawback and cancellation provisions.

Employees are permitted to allocate the value of their deferred awards among a menu of notional investments, whereby the value of their awards will track the performance of the referenced notional investments. The menu of investments, which is selected by the Firm, includes fixed income, equity, commodity and money market funds.

Compensation expense for DCP awards is calculated based on the notional value of the award granted, adjusted for changes in the fair value of the referenced investments that employees select. Compensation expense is recognized over the vesting period relevant to each separately vesting portion of deferred awards.

We invest directly, as principal, in financial instruments and other investments to economically hedge certain of our obligations under these DCP awards. Changes in the fair value of such investments, net of financing costs, are recorded in net revenues, and included in Transactional revenues in the Wealth Management business segment. Although changes in compensation expense resulting from changes in the fair value of the referenced investments will generally be offset by changes in the fair value of investments recognized in net revenues, there is typically a timing difference between the immediate recognition of gains and losses on our investments and the deferred recognition of the related compensation expense over the vesting period. While this timing difference may not be material to our Income before provision for income taxes in any individual period, it may impact the Wealth Management business segment reported ratios and operating metrics in certain periods due to potentially significant impacts to net revenues and compensation expenses. At December 31, 2023 and December 31, 2022, substantially all employee referenced investments that subjected the Firm to price risk were economically hedged.

Amounts Recognized in Compensation Expense

$ in millions	**2023**	2022	2021
Deferred cash-based awards	**$ 693**	$ 761	$ 810
Return on referenced investments	**668**	(716)	526
Total recognized in compensation expense	**$ 1,361**	$ 45	$ 1,336

Amounts Recognized in Compensation Expense by Segment

$ in millions	**2023**	2022	2021
Institutional Securities	**$ 162**	$ (97)	$ 372
Wealth Management	**984**	11	798
Investment Management	**215**	131	166
Total recognized in compensation expense	**$ 1,361**	$ 45	$ 1,336

Projected Future Compensation Obligation[1]

$ in millions		
Award liabilities at December 31, 2023[2, 3]	$	5,331
Fully vested amounts to be distributed by the end of February 2024[4]		(905)
Unrecognized portion of prior awards at December 31, 2023[3]		1,373
2023 performance year awards granted in 2024[3]		357
Total[5]	$	6,156

1. Amounts relate to performance years 2023 and prior.
2. Balance is reflected in Other liabilities and accrued expenses in the balance sheet as of December 31, 2023.
3. Amounts do not include assumptions regarding forfeitures or assumptions about future market conditions with respect to referenced investments.
4. Distributions after February of each year are generally immaterial.
5. Of the total projected future compensation obligation, approximately 20% relates to Institutional Securities, approximately 70% relates to Wealth Management and approximately 10% relates to Investment Management.

The previous table presents a rollforward of the Firm's estimated projected future compensation obligation for existing deferred cash-based compensation awards, exclusive of any assumptions about future market conditions with respect to referenced investments.

Projected Future Compensation Expense[1]

$ in millions		
Estimated to be recognized in:		
2024	$	534
2025		337
Thereafter		859
Total	$	1,730

1. Amounts relate to performance years 2023 and prior, and do not include assumptions regarding forfeitures or assumptions about future market conditions with respect to referenced investments.

The previous table sets forth an estimate of compensation expense associated with the projected future compensation obligation. Our projected future compensation obligation and expense for DCP for performance years 2023 and prior are forward-looking statements subject to uncertainty. Actual results may be materially affected by various factors, including, among other things: the performance of each participant's referenced investments; changes in market conditions; participants' allocation of their deferred awards; and participant cancellations or accelerations. See "Forward-Looking Statements" and "Risk Factors" for additional information.

For further information on the Firm's deferred stock-based plans and carried interest compensation, which are excluded from the previous tables, see Notes 2 and 19 to the financial statements.

Accounting Development Updates

The Financial Accounting Standards Board has issued certain accounting updates that apply to us. Accounting updates not listed below were assessed and determined to be either not applicable or to not have a material impact on our financial condition or results of operations upon adoption.

We adopted the following accounting update on January 1, 2024, with no material impact on our financial condition or results of operations upon adoption:

- *Investments—Tax Credit Structures*. This accounting update permits an election to account for tax equity investments using the proportional amortization method if certain conditions are met. Under the proportional amortization method, the initial cost of the investment is amortized in proportion to the income tax credits and other income tax benefits received and recognized net in the income statement as a component of provision for income taxes. The update requires a separate accounting policy election to be made for each tax credit program. Additional disclosures are required regarding (i) the nature of our tax equity investments and (ii) the effect of our tax equity investments and related income tax credits on the financial condition and results of operations.

We are currently evaluating the following accounting updates; however, we do not expect a material impact on our financial condition or results of operations upon adoption:

- *Income Tax Disclosures.* This accounting update requires disclosure of additional information in relation to income taxes, including additional disaggregation of the income tax rate reconciliation and income taxes paid. For the income tax rate reconciliation, this update requires (1) disclosure of specific categories of reconciling items; and (2) providing additional information for reconciling items that meet a quantitative threshold (if the effect of those reconciling items is equal to or greater than 5 percent of the amount computed by multiplying pretax income (or loss) by the applicable statutory income tax rate). For income taxes paid, this update requires disclosure of information, including (1) the amount of income taxes paid (net of refunds received) disaggregated by federal, state, and foreign taxes; and (2) the amount of income taxes paid (net of refunds received), disaggregated by individual jurisdictions in which income taxes paid (net of refunds received) is equal to or greater than 5 percent of total income taxes paid (net of refunds received). Additionally, the update requires disclosure of (1) income (or loss) before income taxes, disaggregated between domestic and foreign; and (2) income taxes disaggregated by federal, state and foreign. The accounting update is effective for annual periods beginning January 1, 2025, with early adoption permitted.

- *Segment Reporting.* This accounting update requires additional reportable segment disclosures on an annual and interim basis, primarily about significant segment expenses and other segment items that are regularly provided to the

chief operating decision maker and included within the reported measure of segment profit or loss. This update does not change how operating segments are identified or aggregated, or how quantitative thresholds are applied to determine the reportable segments. The accounting update is effective for fiscal years beginning January 1, 2024, and interim periods within fiscal years beginning January 1, 2025, with early adoption permitted.

Critical Accounting Estimates

Our financial statements are prepared in accordance with U.S. GAAP, which requires us to make estimates and assumptions (see Note 1 to the financial statements). We believe that of our significant accounting policies (see Note 2 to the financial statements), the following policies involve a higher degree of judgment and complexity.

Fair Value

Financial Instruments Measured at Fair Value

A significant number of our financial instruments are carried at fair value. The use of fair value to measure financial instruments is fundamental to our risk management practices and is our most critical accounting estimate. We make estimates regarding the valuation of assets and liabilities measured at fair value in preparing the financial statements. These assets and liabilities include, but are not limited to:

- Trading assets and Trading liabilities;
- Investment Securities—AFS;
- Certain Securities purchased under agreements to resell;
- Loans held-for-sale (measured at the lower of amortized cost or fair value);
- Certain Deposits, primarily certificates of deposit;
- Certain Securities sold under agreements to repurchase;
- Certain Other secured financings; and
- Certain Borrowings.

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

In determining fair value, we use various valuation approaches. A hierarchy for inputs is used in measuring fair value that maximizes the use of observable prices and inputs, and minimizes the use of unobservable prices and inputs by requiring that the relevant observable inputs be used when available. The hierarchy is broken down into three levels: wherein Level 1 represents quoted prices in active markets, Level 2 represents valuations based on quoted prices in markets that are not active or for which all significant inputs are observable, and Level 3 consists of valuation techniques that incorporate significant unobservable inputs and, therefore, require the greatest use of judgment. The fair values for the substantial majority of our financial assets and liabilities carried at fair value are based on observable prices and inputs and are classified in level 1 or 2, of the fair value hierarchy. Level 3 financial assets represented 1.2% and 1.4% of our total assets, as of December 31, 2023 and December 31, 2022, respectively.

In periods of market disruption, the observability of prices and inputs, as well as market liquidity, may be reduced for many instruments, which could cause an instrument to be recategorized from Level 1 to Level 2 or from Level 2 to Level 3. In addition, a downturn in market conditions could lead to declines in the valuation of many instruments carried at fair value. Imprecision in estimating unobservable market inputs or other factors can affect the amount of gain or loss recorded for a particular position. The Firm uses various methodologies and assumptions in the determination of fair value. The use of methodologies or assumptions different than those used by the Firm could result in a different estimate of fair value at the reporting date. For further information on the definition of fair value, Level 1, Level 2, Level 3 and related valuation techniques, and quantitative information about and sensitivity of significant unobservable inputs used in Level 3 fair value measurements, see Notes 2 and 4 to the financial statements.

Where appropriate, valuation adjustments are made to account for various factors, such as liquidity risk (bid-ask adjustments), credit quality, model uncertainty, concentration risk and funding, in order to arrive at fair value. For a further discussion of valuation adjustments that we apply, see Note 2 to the financial statements.

Goodwill and Intangible Assets

Goodwill

We test goodwill for impairment on an annual basis as of July 1 and on an interim basis when certain events or circumstances exist. Evaluating goodwill for impairment requires management to make significant judgments, including, in part, the use of unobservable inputs that are subject to uncertainty. Goodwill impairment tests are performed at the reporting unit level, which is generally at the level of or one level below our business segments. Goodwill no longer retains its association with a particular acquisition once it has been assigned to a reporting unit. As such, all the activities of a reporting unit, whether acquired or organically developed, are available to support the value of the goodwill.

For both the annual and interim tests, we have the option to either (i) perform a quantitative impairment test or (ii) first perform a qualitative assessment to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount, in which case, the quantitative test would be performed.

When performing a quantitative impairment test, we compare the fair value of a reporting unit with its carrying amount, including goodwill. If the fair value of the reporting unit is less than its carrying amount, the goodwill impairment loss is equal to the excess of the carrying value over the fair value,

limited by the carrying amount of goodwill allocated to that reporting unit.

The carrying value of each reporting unit is determined based on the capital allocated to the reporting unit. The estimated fair value of the reporting units is derived based on valuation techniques we believe market participants would use for each of the reporting units. The estimated fair value is generally determined by utilizing a discounted cash flow methodology. In certain instances, we may also utilize methodologies that incorporate price-to-book and price-to-earnings multiples of comparable companies.

The discounted cash flow methodology uses projected future cash flows based on the reporting units' earnings forecast. The discount rate used represents an estimate of the cost of equity for that reporting unit based on the Capital Asset Pricing Model.

At each annual goodwill impairment testing date, each of our reporting units with goodwill had a fair value that was substantially in excess of its carrying value.

Intangible Assets

Intangible assets are initially recorded at cost, or in the situation where acquired as part of a business combination, at the fair value determined as part of the acquisition method of accounting. Subsequently, amortizable intangible assets are carried in the balance sheet at amortized cost, where amortization is recognized over their estimated useful lives. Indefinite lived intangible assets are not amortized but are tested for impairment on an annual basis as of July 1 and on an interim basis when certain events or circumstances exist.

On a quarterly basis:

- All intangible assets are assessed for the presence of impairment indicators. Where such indicators are present, an evaluation for impairment is conducted.
- For amortizable intangible assets, an impairment loss exists if the carrying amount of the intangible asset is not recoverable and exceeds its fair value. The carrying amount of the intangible asset is not recoverable if it exceeds the sum of the expected undiscounted cash flows.
- For indefinite-lived intangible assets, an impairment exists if the carrying amount of the intangible asset exceeds its fair value.
- Amortizable intangible assets are assessed for any indication that the remaining useful life or the finite life classification should be revised. In such cases, the remaining carrying amount is amortized prospectively over the revised useful life, unless it is determined that the life of the intangible asset is indefinite, in which case the intangible asset is not amortized.
- Indefinite-lived intangible assets are assessed for any indication that the life of the intangible asset is no longer indefinite; in such cases, the carrying amount of the intangible asset is amortized prospectively over its remaining useful life.

The initial valuation of an intangible asset as part of the acquisition method of accounting and the subsequent valuation of intangible assets as part of an impairment assessment are subjective and based, in part, on inputs that are unobservable and can be subject to uncertainty. These inputs include, but are not limited to, forecasted cash flows, revenue growth rates, customer attrition rates and discount rates.

For both goodwill and intangible assets, to the extent an impairment loss is recognized, the loss establishes the new cost basis of the asset. Subsequent reversal of impairment losses is not permitted. For amortizable intangible assets, the new cost basis is amortized over the remaining useful life of that asset. Unanticipated declines in our revenue generating capability, adverse market or economic events, and regulatory actions, could result in material impairment charges in future periods.

See Notes 2 and 10 to the financial statements for additional information about goodwill and intangible assets.

Legal and Regulatory Contingencies

In the normal course of business, we have been named, from time to time, as a defendant in various legal actions, including arbitrations, class actions and other litigation, arising in connection with our activities as a global diversified financial services institution.

Certain of the actual or threatened legal actions include claims for substantial compensatory and/or punitive damages or claims for indeterminate amounts of damages. In some cases, the third-party entities that are, or would otherwise be, the primary defendants in such cases are bankrupt, in financial distress, or may not honor applicable indemnification obligations. These actions have included, but are not limited to, antitrust claims, claims under various false claims act statutes, and matters arising from our sales and trading businesses and our activities in the capital markets.

We are also involved, from time to time, in other reviews, investigations and proceedings (both formal and informal) by governmental and self-regulatory agencies regarding our business, and involving, among other matters, sales, trading, financing, prime brokerage, market-making activities, investment banking advisory services, capital markets activities, financial products or offerings sponsored, underwritten or sold by us, wealth and investment management services, and accounting and operational matters, certain of which may result in adverse judgments, settlements, fines, penalties, disgorgement, restitution, forfeiture, injunctions, limitations on our ability to conduct certain business, or other relief.

We contest liability and/or the amount of damages as appropriate in each pending matter. Where available information indicates that it is probable a liability had been incurred at the date of the financial statements and we can

reasonably estimate the amount of that loss or the range of loss, we accrue an estimated loss by a charge to income.

In many legal proceedings and investigations, it is inherently difficult to determine whether any loss is probable or reasonably possible, or to estimate the amount of any loss. In addition, even where we have determined that a loss is probable or reasonably possible or an exposure to loss or range of loss exists in excess of the liability already accrued with respect to a previously recognized loss contingency, we are often unable to reasonably estimate the amount of the loss or range of loss. It is particularly difficult to determine if a loss is probable or reasonably possible, or to estimate the amount of loss, where the factual record is being developed or contested or where plaintiffs or government entities seek substantial or indeterminate damages, restitution, forfeiture, disgorgement or penalties. Numerous issues may need to be resolved in an investigation or proceeding before a determination can be made that a loss or additional loss (or range of loss or range of additional loss) is probable or reasonably possible, or to estimate the amount of loss, including through potentially lengthy discovery or determination of important factual matters, determination of issues related to class certification, the calculation of damages or other relief, and consideration of novel or unsettled legal questions relevant to the proceedings or investigations in question.

Significant judgment is required in deciding when and if to make these accruals, and the actual cost of a legal claim or regulatory fine/penalty may ultimately be materially different from the recorded accruals.

See Note 14 to the financial statements for additional information on legal contingencies.

Income Taxes

We are subject to the income tax laws of the U.S., its states and municipalities and those of the foreign jurisdictions in which we have business operations. These tax laws are complex and subject to interpretation by the taxpayer and the relevant governmental taxing authorities. We must make judgments and interpretations about the application of these inherently complex tax laws and make estimates about certain items affecting taxable income when determining the provision for income taxes in the various tax jurisdictions.

Disputes over interpretations of the tax laws may be settled with the taxing authority upon examination or audit. We periodically evaluate the likelihood of assessments in each taxing jurisdiction resulting from current and subsequent years' examinations, and unrecognized tax benefits related to potential losses that may arise from tax audits are established in accordance with the relevant accounting guidance. Once established, unrecognized tax benefits are adjusted when there is more information available or when an event occurs requiring a change.

Our provision for income taxes is composed of current and deferred taxes. Current income taxes approximate taxes to be paid or refunded for the current period. Deferred income taxes reflect the net tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities and are measured using the applicable enacted tax rates and laws that will be in effect when such differences are expected to reverse.

Our deferred tax balances may also include deferred assets related to tax attribute carryforwards, such as net operating losses and tax credits that will be realized through reduction of future tax liabilities and, in some cases, are subject to expiration if not utilized within certain periods. We perform regular reviews to ascertain whether deferred tax assets are realizable. These reviews include management's estimates and assumptions regarding future taxable income and incorporate various tax planning strategies, including strategies that may be available to tax attribute carryforwards before they expire.

Once the deferred tax asset balances have been determined, we may record a valuation allowance against the deferred tax asset balances to reflect the amount we estimate is more likely than not to be realized at a future date. Both current and deferred income taxes may reflect adjustments related to our unrecognized tax benefits.

Significant judgment is required in estimating the consolidated provision for (benefit from) income taxes, current and deferred tax balances (including valuation allowance, if any), accrued interest or penalties and uncertain tax positions. Revisions in estimates and/or the actual costs of a tax assessment may ultimately be materially different from the recorded accruals and unrecognized tax benefits, if any.

See Note 2 to the financial statements for additional information on our significant assumptions, judgments and interpretations associated with the accounting for income taxes and Note 21 to the financial statements for additional information on our tax examinations.

Liquidity and Capital Resources

Our liquidity and capital policies are established and maintained by senior management, with oversight by the Asset/Liability Management Committee and the Board. Through various risk and control committees, senior management reviews business performance relative to these policies, monitors the availability of alternative sources of financing, and oversees the liquidity, interest rate and currency sensitivity of our asset and liability position. Our Corporate Treasury department ("Treasury"), Firm Risk Committee, Asset/Liability Management Committee, and other committees and control groups assist in evaluating, monitoring and managing the impact that our business activities have on our balance sheet, liquidity and capital structure. Liquidity and capital matters are reported regularly to the Board and the BRC.

Balance Sheet

We monitor and evaluate the composition and size of our balance sheet on a regular basis. Our balance sheet management process includes quarterly planning, business-specific thresholds, monitoring of business-specific usage versus key performance metrics and new business impact assessments.

We establish balance sheet thresholds at the consolidated and business segment levels. We monitor balance sheet utilization and review variances resulting from business activity and market fluctuations. On a regular basis, we review current performance versus established thresholds and assess the need to re-allocate our balance sheet based on business segment needs. We also monitor key metrics, including asset and liability size and capital usage.

Total Assets by Business Segment

	At December 31, 2023			
$ in millions	IS	WM	IM	Total
Assets				
Cash and cash equivalents	**$ 72,928**	**$ 16,172**	**$ 132**	**$ 89,232**
Trading assets at fair value	**353,841**	**7,962**	**5,271**	**367,074**
Investment securities	**39,212**	**115,595**	**—**	**154,807**
Securities purchased under agreements to resell	**90,701**	**20,039**	**—**	**110,740**
Securities borrowed	**119,823**	**1,268**	**—**	**121,091**
Customer and other receivables	**47,333**	**31,237**	**1,535**	**80,105**
Loans[1]	**72,110**	**146,526**	**4**	**218,640**
Goodwill	**424**	**10,199**	**6,084**	**16,707**
Intangible assets	**26**	**3,427**	**3,602**	**7,055**
Other assets[2]	**14,108**	**12,743**	**1,391**	**28,242**
Total assets	**$ 810,506**	**$ 365,168**	**$ 18,019**	**$ 1,193,693**

	At December 31, 2022			
$ in millions	IS	WM	IM	Total
Assets				
Cash and cash equivalents	$ 88,362	$ 39,539	$ 226	$ 128,127
Trading assets at fair value	294,884	1,971	4,460	301,315
Investment securities	40,481	119,450	—	159,931
Securities purchased under agreements to resell	102,511	11,396	—	113,907
Securities borrowed	132,619	755	—	133,374
Customer and other receivables	47,515	29,620	1,405	78,540
Loans[1]	67,676	146,105	4	213,785
Goodwill	429	10,202	6,021	16,652
Intangible assets	36	3,911	3,671	7,618
Other assets[2]	15,324	10,356	1,302	26,982
Total assets	$ 789,837	$ 373,305	$ 17,089	$ 1,180,231

1. Amounts include loans held for investment, net of ACL, and loans held for sale but exclude loans at fair value, which are included in Trading assets in the balance sheet (see Note 9 to the financial statements).
2. Other assets primarily includes premises, equipment and software, ROU assets related to leases, other investments and deferred tax assets.

A substantial portion of total assets consists of cash and cash equivalents, liquid marketable securities and short-term receivables. In the Institutional Securities business segment, these arise from market-making, financing and prime brokerage activities, and in the Wealth Management business segment, these arise from banking activities, including management of the investment portfolio. Total assets of $1,194 billion at December 31, 2023 were relatively unchanged from $1,180 billion at December 31, 2022.

Liquidity Risk Management Framework

The primary goal of our Liquidity Risk Management Framework is to ensure that we have access to adequate funding across a wide range of market conditions and time horizons. The framework is designed to enable us to fulfill our financial obligations and support the execution of our business strategies.

The following principles guide our Liquidity Risk Management Framework:

- Sufficient liquidity resources, which consist of HQLA and cash deposits with banks ("Liquidity Resources") should be maintained to cover maturing liabilities and other planned and contingent outflows;
- Maturity profile of assets and liabilities should be aligned, with limited reliance on short-term funding;
- Source, counterparty, currency, region and term of funding should be diversified; and
- Liquidity Stress Tests should anticipate, and account for, periods of limited access to funding.

The core components of our Liquidity Risk Management Framework are the Required Liquidity Framework, Liquidity Stress Tests and Liquidity Resources, which support our target liquidity profile.

Required Liquidity Framework

Our Required Liquidity Framework establishes the amount of liquidity we must hold in both normal and stressed environments to ensure that our financial condition and overall soundness are not adversely affected by an inability (or perceived inability) to meet our financial obligations in a timely manner. The Required Liquidity Framework considers the most constraining liquidity requirement to satisfy all regulatory and internal limits at a consolidated and legal entity level.

Liquidity Stress Tests

We use Liquidity Stress Tests to model external and intercompany liquidity flows across multiple scenarios and a range of time horizons. These scenarios contain various combinations of idiosyncratic and systemic stress events of different severity and duration. The methodology, implementation, production and analysis of our Liquidity Stress Tests are important components of the Required Liquidity Framework.

The assumptions used in our various Liquidity Stress Test scenarios include, but are not limited to, the following:

- No government support;
- No access to equity and limited access to unsecured debt markets;

- Repayment of all unsecured debt maturing within the stress horizon;
- Higher haircuts for and significantly lower availability of secured funding;
- Additional collateral that would be required by trading counterparties, certain exchanges and clearing organizations related to credit rating downgrades;
- Additional collateral that would be required due to collateral substitutions, collateral disputes and uncalled collateral;
- Discretionary unsecured debt buybacks;
- Drawdowns on lending commitments provided to third parties; and
- Client cash withdrawals and reduction in customer short positions that fund long positions.

Liquidity Stress Tests are produced and results are reported at different levels, including major operating subsidiaries and major currencies, to capture specific cash requirements and cash availability across the Firm, including a limited number of asset sales in a stressed environment. The Liquidity Stress Tests assume that subsidiaries will use their own liquidity first to fund their obligations before drawing liquidity from the Parent Company and that the Parent Company will support its subsidiaries and will not have access to subsidiaries' liquidity reserves. In addition to the assumptions underpinning the Liquidity Stress Tests, we take into consideration settlement risk related to intraday settlement and clearing of securities and financing activities.

At December 31, 2023 and December 31, 2022, we maintained sufficient Liquidity Resources to meet current and contingent funding obligations as modeled in our Liquidity Stress Tests.

Liquidity Resources

We maintain sufficient Liquidity Resources to cover daily funding needs and to meet strategic liquidity targets sized by the Required Liquidity Framework and Liquidity Stress Tests. We actively manage the amount of our Liquidity Resources considering the following components: unsecured debt maturity profile; balance sheet size and composition; funding needs in a stressed environment, inclusive of contingent cash outflows; legal entity, regional and segment liquidity requirements; regulatory requirements; and collateral requirements.

The amount of Liquidity Resources we hold is based on our risk appetite and is calibrated to meet various internal and regulatory requirements and to fund prospective business activities. The Liquidity Resources are primarily held within the Parent Company and its major operating subsidiaries. The Total HQLA values in the tables immediately following are different from Eligible HQLA, which, in accordance with the LCR rule, also takes into account certain regulatory weightings and other operational considerations.

Liquidity Resources by Type of Investment

	Average Daily Balance Three Months Ended	
$ in millions	**December 31, 2023**	September 30, 2023
Cash deposits with central banks	**$ 64,205**	$ 66,330
Unencumbered HQLA securities[1]:		
U.S. government obligations	**137,635**	122,110
U.S. agency and agency mortgage-backed securities	**83,733**	86,628
Non-U.S. sovereign obligations[2]	**20,117**	23,416
Other investment grade securities	**678**	693
Total HQLA[1]	**$ 306,368**	$ 299,177
Cash deposits with banks (non-HQLA)	**8,136**	8,190
Total Liquidity Resources	**$ 314,504**	$ 307,367

1. HQLA is presented prior to applying weightings and includes all HQLA held in subsidiaries.
2. Primarily composed of unencumbered French, Japanese, U.K., German and Spanish government obligations.

Liquidity Resources by Bank and Non-Bank Legal Entities

	Average Daily Balance Three Months Ended	
$ in millions	**December 31, 2023**	September 30, 2023
Bank legal entities		
U.S.	**$ 132,870**	$ 132,663
Non-U.S.	**5,359**	6,101
Total Bank legal entities	**138,229**	138,764
Non-Bank legal entities		
U.S.:		
Parent Company	**58,494**	53,681
Non-Parent Company	**56,459**	58,839
Total U.S.	**114,953**	112,520
Non-U.S.	**61,322**	56,083
Total Non-Bank legal entities	**176,275**	168,603
Total Liquidity Resources	**$ 314,504**	$ 307,367

Liquidity Resources may fluctuate from period to period based on the overall size and composition of our balance sheet, the maturity profile of our unsecured debt, and estimates of funding needs in a stressed environment, among other factors.

Regulatory Liquidity Framework

Liquidity Coverage Ratio and Net Stable Funding Ratio

We and our U.S. Bank Subsidiaries are required to maintain a minimum LCR and NSFR of 100%.

The LCR rule requires large banking organizations to have sufficient Eligible HQLA to cover net cash outflows arising from significant stress over 30 calendar days, thus promoting the short-term resilience of the liquidity risk profile of banking organizations. In determining Eligible HQLA for LCR purposes, weightings (or asset haircuts) are applied to HQLA, and certain HQLA held in subsidiaries is excluded.

The NSFR rule requires large banking organizations to maintain an amount of available stable funding, which is their regulatory capital and liabilities subject to standardized weightings, equal to or greater than their required stable

funding, which is their projected minimum funding needs, over a one-year time horizon.

As of December 31, 2023, we and our U.S. Bank Subsidiaries are compliant with the minimum LCR and NSFR requirements of 100%.

Liquidity Coverage Ratio

	Average Daily Balance Three Months Ended	
$ in millions	**December 31, 2023**	September 30, 2023
Eligible HQLA[1]		
Cash deposits with central banks	**$ 58,047**	$ 60,163
Securities[2]	**194,970**	181,010
Total Eligible HQLA[1]	**$ 253,017**	$ 241,173
Net cash outflows	**$ 196,488**	$ 190,336
LCR	**129 %**	127 %

1. Under the LCR rule, Eligible HQLA is calculated using weightings and excluding certain HQLA held in subsidiaries.
2. Primarily includes U.S. Treasuries, U.S. agency mortgage-backed securities, sovereign bonds and investment grade corporate bonds.

Net Stable Funding Ratio

	Average Daily Balance Three Months Ended	
$ in millions	**December 31, 2023**	September 30, 2023
Available stable funding	**$ 555,884**	$ 553,413
Required stable funding	**465,226**	468,290
NSFR	**120 %**	118 %

Funding Management

We manage our funding in a manner that reduces the risk of disruption to our operations. We pursue a strategy of diversification of secured and unsecured funding sources (by product, investor and region) and attempt to ensure that the tenor of our liabilities equals or exceeds the expected holding period of the assets being financed. Our goal is to achieve an optimal mix of durable secured and unsecured financing.

We fund our balance sheet on a global basis through diverse sources. These sources include our equity capital, borrowings, bank notes, securities sold under agreements to repurchase, securities lending, deposits, letters of credit and lines of credit. We have active financing programs for both standard and structured products targeting global investors and currencies.

Treasury allocates interest expense to our businesses based on the tenor and interest rate profile of the assets being funded. Treasury similarly allocates interest income to businesses carrying deposit products and other liabilities across the businesses based on the characteristics of those deposits and other liabilities.

Secured Financing

The liquid nature of the marketable securities and short-term receivables arising principally from sales and trading activities in the Institutional Securities business segment provides us with flexibility in managing the composition of our balance sheet. Secured financing investors principally focus on the quality of the eligible collateral posted. Accordingly, we actively manage our secured financings based on the quality of the assets being funded.

We have established longer-tenor secured funding requirements for less liquid asset classes, for which funding may be at risk in the event of a market disruption. We define highly liquid assets as government-issued or government-guaranteed securities with a high degree of fundability and less liquid assets as those that do not meet these criteria.

To further minimize the refinancing risk of secured financing for less liquid assets, we have established concentration limits to diversify our investor base and reduce the amount of monthly maturities for secured financing of less liquid assets. As a component of the Liquidity Risk Management Framework, we hold a portion of our Liquidity Resources against the potential disruption to our secured financing capabilities.

In general, we maintain a pool of liquid and easily fundable securities, which takes into account HQLA classifications consistent with LCR definitions, and other regulatory requirements, and provides a valuable future source of liquidity.

Collateralized Financing Transactions

$ in millions	**At December 31, 2023**	At December 31, 2022
Securities purchased under agreements to resell and Securities borrowed	**$ 231,831**	$ 247,281
Securities sold under agreements to repurchase and Securities loaned	**$ 77,708**	$ 78,213
Securities received as collateral[1]	**$ 6,219**	$ 9,954

	Average Daily Balance Three Months Ended	
$ in millions	**December 31, 2023**	December 31, 2022
Securities purchased under agreements to resell and Securities borrowed	**$ 235,928**	$ 261,627
Securities sold under agreements to repurchase and Securities loaned	**$ 87,285**	$ 77,268

1. Included within Trading assets in the balance sheet.

See "Total Assets by Business Segment" herein for additional information on the assets shown in the previous table and Notes 2 and 8 to the financial statements for additional information on collateralized financing transactions.

In addition to the collateralized financing transactions shown in the previous table, we engage in financing transactions collateralized by customer-owned securities, which are segregated in accordance with regulatory requirements. Receivables under these financing transactions, primarily margin loans, are included in Customer and other receivables in the balance sheet, and payables under these financing transactions, primarily to prime brokerage customers, are included in Customer and other payables in the balance sheet. Our risk exposure on these transactions is mitigated by

collateral maintenance policies and the elements of our Liquidity Risk Management Framework.

Unsecured Financing

We view deposits and borrowings as stable sources of funding for unencumbered securities and non-security assets. Our unsecured financings include borrowings and certificates of deposit carried at fair value, which are primarily composed of: instruments whose payments and redemption values are linked to the performance of a specific index, a basket of stocks, a specific equity security, a commodity, a credit exposure or basket of credit exposures; and instruments with various interest rate-related features, including step-ups, step-downs and zero coupons. Also included are unsecured contracts that are not classified as OTC derivatives because they fail initial net investment criteria. As part of our asset/liability management strategy, when appropriate, we use derivatives to make adjustments to the interest rate risk profile of our borrowings (see Notes 6 and 13 to the financial statements).

Deposits

$ in millions	**At December 31, 2023**	At December 31, 2022
Savings and demand deposits:		
Brokerage sweep deposits[1]	**$ 148,274**	$ 202,592
Savings and other	**139,978**	117,356
Total Savings and demand deposits	**288,252**	319,948
Time deposits	**63,552**	36,698
Total[2]	**$ 351,804**	$ 356,646

1. Amounts represent balances swept from client brokerage accounts.
2. As of December 31, 2023, there were no off-balance sheet amounts excluded from deposits. As of December 31, 2022, approximately $6 billion of off-balance sheet amounts were excluded from deposits at unaffiliated financial institutions.

Deposits are primarily sourced from our Wealth Management clients and are considered to have stable, low-cost funding characteristics relative to other sources of funding. Each category of deposits presented above has a different cost profile and clients may respond differently to changes in interest rates and other macroeconomic conditions. The decrease in total deposits in 2023 was primarily driven by a continued reduction in Brokerage sweep deposits, largely due to net outflows to alternative cash equivalent and other products, partially offset by an increase in Time deposits and Savings.

Borrowings by Remaining Maturity at December 31, 2023[1]

$ in millions	Parent Company	Subsidiaries	Total
Original maturities of one year or less	**$ —**	**$ 3,188**	**$ 3,188**
Original maturities greater than one year			
2024	**$ 8,915**	**$ 11,236**	**$ 20,151**
2025	**22,030**	**13,493**	**35,523**
2026	**24,516**	**10,907**	**35,423**
2027	**19,282**	**6,056**	**25,338**
2028	**11,432**	**9,807**	**21,239**
Thereafter	**90,635**	**32,235**	**122,870**
Total greater than one year	**$ 176,810**	**$ 83,734**	**$ 260,544**
Total	**$ 176,810**	**$ 86,922**	**$ 263,732**

1. Original maturity in the table is generally based on contractual final maturity. For borrowings with put options, remaining maturity represents the earliest put date.

Borrowings of $264 billion at December 31, 2023 increased from $238 billion at December 31, 2022, primarily due to issuances net of maturities and redemptions and mark-to-market adjustments on equity-linked borrowings driven by market factors.

We believe that accessing debt investors through multiple distribution channels helps provide consistent access to the unsecured markets. In addition, the issuance of borrowings with original maturities greater than one year allows us to reduce reliance on short-term credit-sensitive instruments. Borrowings with original maturities greater than one year are generally managed to achieve staggered maturities, thereby mitigating refinancing risk, and to maximize investor diversification through sales to global institutional and retail clients across regions, currencies and product types.

The availability and cost of financing to us can vary depending on market conditions, the volume of certain trading and lending activities, our credit ratings and the overall availability of credit. We also engage in, and may continue to engage in, repurchases of our borrowings as part of our market-making activities.

For further information on Borrowings, see Note 13 to the financial statements.

Credit Ratings

We rely on external sources to finance a significant portion of our daily operations. Our credit ratings are one of the factors in the cost and availability of financing and can have an impact on certain trading revenues, particularly in those businesses where longer-term counterparty performance is a key consideration, such as certain OTC derivative transactions. When determining credit ratings, rating agencies consider both company-specific and industry-wide factors. See also "Risk Factors—Liquidity Risk."

Parent Company and U.S. Bank Subsidiaries Issuer Ratings at February 16, 2024

	Parent Company		
	Short-Term Debt	Long-Term Debt	Rating Outlook
DBRS, Inc.	**R-1 (middle)**	**A (high)**	**Stable**
Fitch Ratings, Inc.	**F1**	**A+**	**Stable**
Moody's Investors Service, Inc.	**P-1**	**A1**	**Stable**
Rating and Investment Information, Inc.	**a-1**	**A+**	**Stable**
S&P Global Ratings	**A-2**	**A-**	**Stable**

	MSBNA		
	Short-Term Debt	Long-Term Debt	Rating Outlook
Fitch Ratings, Inc.	**F1+**	**AA-**	**Stable**
Moody's Investors Service, Inc.	**P-1**	**Aa3**	**Stable**
S&P Global Ratings	**A-1**	**A+**	**Stable**

	MSPBNA		
	Short-Term Debt	Long-Term Debt	Rating Outlook
Moody's Investors Service, Inc.	**P-1**	**Aa3**	**Stable**
S&P Global Ratings	**A-1**	**A+**	**Stable**

Incremental Collateral or Terminating Payments

In connection with certain OTC derivatives and certain other agreements where we are a liquidity provider to certain financing vehicles associated with the Institutional Securities business segment, we may be required to provide additional collateral, immediately settle any outstanding liability balances with certain counterparties or pledge additional collateral to certain clearing organizations in the event of a future credit rating downgrade irrespective of whether we are in a net asset or net liability position. See Note 6 to the financial statements for additional information on OTC derivatives that contain such contingent features.

While certain aspects of a credit rating downgrade are quantifiable pursuant to contractual provisions, the impact it would have on our business and results of operations in future periods is inherently uncertain and would depend on a number of interrelated factors, including, among other things, the magnitude of the downgrade, the rating relative to peers, the rating assigned by the relevant agency before the downgrade, individual client behavior and future mitigating actions we might take. The liquidity impact of additional collateral requirements is included in our Liquidity Stress Tests.

Capital Management

We view capital as an important source of financial strength and actively manage our consolidated capital position based upon, among other things, business opportunities, risks, capital availability and rates of return together with internal capital policies, regulatory requirements and rating agency guidelines. In the future, we may expand or contract our capital base to address the changing needs of our businesses.

Common Stock Repurchases

in millions, except for per share data	**2023**	2022	2021
Number of shares	**62**	113	126
Average price per share	**$ 85.35**	$ 87.25	$ 91.13
Total	**$ 5,300**	$ 9,865	$ 11,464

For additional information on our common stock repurchases, see "Liquidity and Capital Resources—Regulatory Requirements—Capital Plans, Stress Tests and the Stress Capital Buffer" herein and Note 17 to the financial statements.

For a description of our capital plan, see "Liquidity and Capital Resources—Regulatory Requirements—Capital Plans, Stress Tests and the Stress Capital Buffer" herein.

Common Stock Dividend Announcement

Announcement date	January 16, 2024
Amount per share	$0.85
Date paid	February 15, 2024
Shareholders of record as of	January 31, 2024

For additional information on our common stock dividends, see "Liquidity and Capital Resources—Regulatory Requirements—Capital Plans, Stress Tests and the Stress Capital Buffer" herein.

For additional information on our common stock and information on our preferred stock, see Note 17 to the financial statements.

Off-Balance Sheet Arrangements

We enter into various off-balance sheet arrangements, including through unconsolidated SPEs and lending-related financial instruments (*e.g.*, guarantees and commitments), primarily in connection with the Institutional Securities and Investment Management business segments.

We utilize SPEs primarily in connection with securitization activities. For information on our securitization activities, see Note 15 to the financial statements.

For information on our commitments, obligations under certain guarantee arrangements and indemnities, see Note 14 to the financial statements. For a further discussion of our lending commitments, see "Quantitative and Qualitative Disclosures about Risk—Credit Risk—Loans and Lending Commitments" herein.

Regulatory Requirements

Regulatory Capital Framework

We are an FHC under the BHC Act and are subject to the regulation and oversight of the Federal Reserve. The Federal Reserve establishes capital requirements for us, including "well-capitalized" standards, and evaluates our compliance with such capital requirements. The OCC establishes similar capital requirements and standards for our U.S. Bank

Subsidiaries. The regulatory capital requirements are largely based on the Basel III capital standards established by the Basel Committee and also implement certain provisions of the Dodd-Frank Act. For us to remain an FHC, we must remain well-capitalized in accordance with standards established by the Federal Reserve, and our U.S. Bank Subsidiaries must remain well-capitalized in accordance with standards established by the OCC. In addition, many of our regulated subsidiaries are subject to regulatory capital requirements, including regulated subsidiaries registered as swap dealers with the CFTC or conditionally registered as security-based swap dealers with the SEC or registered as broker-dealers or futures commission merchants. For additional information on regulatory capital requirements for our U.S. Bank Subsidiaries, as well as our subsidiaries that are swap entities, see Note 16 to the financial statements.

Regulatory Capital Requirements

We are required to maintain minimum risk-based and leverage-based capital and TLAC ratios. For additional information on TLAC, see "Total Loss-Absorbing Capacity, Long-Term Debt and Clean Holding Company Requirements" herein.

Risk-Based Regulatory Capital. Risk-based capital ratio requirements apply to Common Equity Tier 1 capital, Tier 1 capital and Total capital (which includes Tier 2 capital), each as a percentage of RWA, and consist of regulatory minimum required ratios plus our capital buffer requirement. Capital requirements require certain adjustments to, and deductions from, capital for purposes of determining these ratios.

Capital Buffer Requirements

	At December 31, 2023	At December 31, 2022	**At December 31, 2023** and December 31, 2022
	Standardized	Standardized	Advanced
Capital buffers			
Capital conservation buffer	**—**	—	**2.5%**
SCB[1]	**5.4%**	5.8%	**N/A**
G-SIB capital surcharge[2]	**3.0%**	3.0%	**3.0%**
CCyB[3]	**0%**	0%	**0%**
Capital buffer requirement	**8.4%**	**8.8%**	**5.5%**

1. For additional information on the SCB, see "Capital Plans, Stress Tests and the Stress Capital Buffer" herein.
2. For a further discussion of the G-SIB capital surcharge, see "G-SIB Capital Surcharge" herein.
3. The CCyB can be set up to 2.5% but is currently set by the Federal Reserve at zero.

The capital buffer requirement represents the amount of Common Equity Tier 1 capital we must maintain above the minimum risk-based capital requirements in order to avoid restrictions on our ability to make capital distributions, including the payment of dividends and the repurchase of stock, and to pay discretionary bonuses to executive officers. Our capital buffer requirement computed under the standardized approaches for calculating credit risk and market RWAs ("Standardized Approach") is equal to the sum of our SCB, G-SIB capital surcharge and CCyB, and our capital buffer requirement computed under the applicable advanced approaches for calculating credit risk, market risk and operational risk RWAs ("Advanced Approach") is equal to our 2.5% capital conservation buffer, G-SIB capital surcharge and CCyB.

Risk-Based Regulatory Capital Ratio Requirements

	Regulatory Minimum	**At December 31, 2023**	At December 31, 2022	**At December 31, 2023** and December 31, 2022
		Standardized	Standardized	Advanced
Required ratios[1]				
Common Equity Tier 1 capital ratio	**4.5 %**	**12.9%**	13.3%	**10.0%**
Tier 1 capital ratio	**6.0 %**	**14.4%**	14.8%	**11.5%**
Total capital ratio	**8.0 %**	**16.4%**	16.8%	**13.5%**

1. Required ratios represent the regulatory minimum plus the capital buffer requirement.

Risk-Weighted Assets. RWA reflects both our on- and off-balance sheet risk, as well as capital charges attributable to the risk of loss arising from the following:

- Credit risk: The failure of a borrower, counterparty or issuer to meet its financial obligations to us;
- Market risk: Adverse changes in the level of one or more market prices, rates, spreads, indices, volatilities, correlations or other market factors, such as market liquidity; and
- Operational risk: Inadequate or failed processes or systems, from human factors or from external events (*e.g.*, fraud, theft, legal and compliance risks, cyber attacks or damage to physical assets).

Our risk-based capital ratios are computed under each of (i) the Standardized Approach and (ii) the Advanced Approach. The credit risk RWA calculations between the two approaches differ in that the Standardized Approach requires calculation of RWA using prescribed risk weights and exposure methodologies, whereas the Advanced Approach utilizes models to calculate exposure amounts and risk weights. At December 31, 2023 and December 31, 2022, the differences between the actual and required ratios were lower under the Standardized Approach.

Leverage-Based Regulatory Capital. Leverage-based capital requirements include a minimum Tier 1 leverage ratio of 4%, a minimum SLR of 3% and an enhanced SLR capital buffer of at least 2%.

CECL Deferral. Beginning on January 1, 2020, we elected to defer the effect of the adoption of CECL on our risk-based and leverage-based capital amounts and ratios, as well as our RWA, adjusted average assets and supplementary leverage exposure calculations, over a five-year transition period. The deferral impacts began to phase in at 25% per year from January 1, 2022 and are phased-in at 50% from January 1, 2023. The deferral impacts will become fully phased-in beginning on January 1, 2025.

Regulatory Capital Ratios

$ in millions	Required Ratio[1]	**At December 31, 2023**	Required Ratio[1]	At December 31, 2022
Risk-based capital—Standardized				
Common Equity Tier 1 capital		**$ 69,448**		$ 68,670
Tier 1 capital		**78,183**		77,191
Total capital		**88,874**		86,575
Total RWA		**456,053**		447,849
Common Equity Tier 1 capital ratio	**12.9 %**	**15.2 %**	13.3 %	15.3 %
Tier 1 capital ratio	**14.4 %**	**17.1 %**	14.8 %	17.2 %
Total capital ratio	**16.4 %**	**19.5 %**	16.8 %	19.3 %

$ in millions	Required Ratio[1]	**At December 31, 2023**	At December 31, 2022
Risk-based capital—Advanced			
Common Equity Tier 1 capital		**$ 69,448**	$ 68,670
Tier 1 capital		**78,183**	77,191
Total capital		**88,190**	86,159
Total RWA		**448,154**	438,806
Common Equity Tier 1 capital ratio	**10.0 %**	**15.5 %**	15.6 %
Tier 1 capital ratio	**11.5 %**	**17.4 %**	17.6 %
Total capital ratio	**13.5 %**	**19.7 %**	19.6 %

$ in millions	Required Ratio[1]	**At December 31, 2023**	At December 31, 2022
Leverage-based capital			
Adjusted average assets[2]		**$ 1,159,626**	$ 1,150,772
Tier 1 leverage ratio	**4.0 %**	**6.7 %**	6.7 %
Supplementary leverage exposure[3]		**$ 1,429,552**	$ 1,399,403
SLR	**5.0 %**	**5.5 %**	5.5 %

1. Required ratios are inclusive of any buffers applicable as of the date presented.
2. Adjusted average assets represents the denominator of the Tier 1 leverage ratio and is composed of the average daily balance of consolidated on-balance sheet assets for the quarters ending on the respective balance sheet dates, reduced by disallowed goodwill, intangible assets, investments in covered funds, defined benefit pension plan assets, after-tax gain on sale from assets sold into securitizations, investments in our own capital instruments, certain deferred tax assets and other capital deductions.
3. Supplementary leverage exposure is the sum of Adjusted average assets used in the Tier 1 leverage ratio and other adjustments, primarily: (i) for derivatives, potential future exposure and the effective notional principal amount of sold credit protection offset by qualifying purchased credit protection; (ii) the counterparty credit risk for repo-style transactions; and (iii) the credit equivalent amount for off-balance sheet exposures.

Regulatory Capital

$ in millions	**At December 31, 2023**	At December 31, 2022	**Change**
Common Equity Tier 1 capital			
Common shareholders' equity	**$ 90,288**	$ 91,391	**$ (1,103)**
Regulatory adjustments and deductions:			
Net goodwill	**(16,394)**	(16,393)	**(1)**
Net intangible assets	**(5,509)**	(6,048)	**539**
Impact of CECL transition	**124**	185	**(61)**
Other adjustments and deductions[1]	**939**	(465)	**1,404**
Total Common Equity Tier 1 capital	**$ 69,448**	$ 68,670	**$ 778**
Additional Tier 1 capital			
Preferred stock	**$ 8,750**	$ 8,750	**$ —**
Noncontrolling interests	**758**	552	**206**
Additional Tier 1 capital	**$ 9,508**	$ 9,302	**$ 206**
Deduction for investments in covered funds	**(773)**	(781)	**8**
Total Tier 1 capital	**$ 78,183**	$ 77,191	**$ 992**
Standardized Tier 2 capital			
Subordinated debt	**$ 8,760**	$ 7,846	**$ 914**
Eligible ACL	**2,051**	1,613	**438**
Other adjustments and deductions	**(120)**	(75)	**(45)**
Total Standardized Tier 2 capital	**$ 10,691**	$ 9,384	**$ 1,307**
Total Standardized capital	**$ 88,874**	$ 86,575	**$ 2,299**
Advanced Tier 2 capital			
Subordinated debt	**$ 8,760**	$ 7,846	**$ 914**
Eligible credit reserves	**1,367**	1,197	**170**
Other adjustments and deductions	**(120)**	(75)	**(45)**
Total Advanced Tier 2 capital	**$ 10,007**	$ 8,968	**$ 1,039**
Total Advanced capital	**$ 88,190**	$ 86,159	**$ 2,031**

1. Other adjustments and deductions used in the calculation of Common Equity Tier 1 capital primarily includes net after-tax DVA, the credit spread premium over risk-free rate for derivative liabilities, defined benefit pension plan assets, after-tax gain on sale from assets sold into securitizations, investments in our own capital instruments and certain deferred tax assets.

RWA Rollforward

$ in millions	Standardized	Advanced
Credit risk RWA		
Balance at December 31, 2022	$ 397,275	$ 285,638
Change related to the following items:		
Derivatives	**6,065**	**660**
Securities financing transactions	**2,924**	**(354)**
Investment securities	**(1,316)**	**385**
Commitments, guarantees and loans	**(2,606)**	**6,903**
Equity investments	**1,621**	**1,964**
Other credit risk	**3,768**	**2,662**
Total change in credit risk RWA	**$ 10,456**	**$ 12,220**
Balance at December 31, 2023	**$ 407,731**	**$ 297,858**
Market risk RWA		
Balance at December 31, 2022	$ 50,574	$ 50,563
Change related to the following items:		
Regulatory VaR	**(3,946)**	**(3,946)**
Regulatory stressed VaR	**(5,017)**	**(5,017)**
Incremental risk charge	**94**	**94**
Comprehensive risk measure	**341**	**231**
Specific risk	**6,276**	**6,276**
Total change in market risk RWA	**$ (2,252)**	**$ (2,362)**
Balance at December 31, 2023	**$ 48,322**	**$ 48,201**
Operational risk RWA		
Balance at December 31, 2022	N/A	$ 102,605
Change in operational risk RWA	**N/A**	**(510)**
Balance at December 31, 2023	**N/A**	**$ 102,095**
Total RWA	**$ 456,053**	**$ 448,154**

Regulatory VaR—VaR for regulatory capital requirements

In 2023, Credit risk RWA increased under the Standardized and Advanced Approaches. Under the Standardized Approach, the increase was primarily driven by higher derivatives, higher securities financing transactions, higher equity investments, as well as an increase in Other credit risk driven by higher deferred tax assets and securitizations. These increases were partially offset by decreases in lending activity. Under the Advanced Approach, the increase was primarily driven by growth in Corporate lending, higher equity investments, higher derivatives, as well as increase in Other credit risk driven by higher deferred tax assets and securitizations.

Market risk RWA decreased in 2023 under both the Standardized and Advanced Approaches, primarily due to lower Regulatory VaR and stressed VaR driven by reductions in macro and commodities businesses, partially offset by higher Specific risk charges on securitization and non-securitization standardized charges.

Operational risk RWA in 2023 remained relatively unchanged.

G-SIB Capital Surcharge

We and other U.S. G-SIBs are subject to an additional risk-based capital surcharge, the G-SIB capital surcharge, which must be satisfied using Common Equity Tier 1 capital and which functions as an extension of the capital conservation buffer. The surcharge is calculated based on the G-SIB's size, interconnectedness, cross-jurisdictional activity, and complexity and substitutability ("Method 1") or use of short-term wholesale funding ("Method 2"), whichever is higher.

Total Loss-Absorbing Capacity, Long-Term Debt and Clean Holding Company Requirements

The Federal Reserve has established external TLAC, long-term debt ("LTD") and clean holding company requirements for top-tier BHCs of U.S. G-SIBs ("covered BHCs"), including the Parent Company. These requirements are designed to ensure that covered BHCs will have enough loss-absorbing resources at the point of failure to be recapitalized through the conversion of eligible LTD to equity or otherwise by imposing losses on eligible LTD or other forms of TLAC where an SPOE resolution strategy is used (see "Business—Supervision and Regulation—Financial Holding Company—Resolution and Recovery Planning" and "Risk Factors—Legal, Regulatory and Compliance Risk").

These TLAC and eligible LTD requirements include various restrictions, such as requiring eligible LTD to: be issued by the covered BHC; be unsecured; have a maturity of one year or more from the date of issuance; and not contain certain embedded features, such as a principal or redemption amount subject to reduction based on the performance of an asset, entity or index, or a similar feature. In addition, the requirements provide permanent grandfathering for debt instruments issued prior to December 31, 2016 that would be eligible LTD but for having impermissible acceleration clauses or being governed by foreign law.

A covered BHC is also required to maintain minimum external TLAC equal to the greater of (i) 18% of total RWA or (ii) 7.5% of its total leverage exposure (the denominator of its SLR). Covered BHCs must also meet a minimum external LTD requirement equal to the greater of (i) total RWA multiplied by the sum of 6% plus the higher of the Method 1 or Method 2 G-SIB capital surcharge applicable to the Parent Company or (ii) 4.5% of its total leverage exposure.

TLAC buffer requirements are imposed on top of both the risk-based and leverage exposure-based external TLAC minimum requirements. The risk-based TLAC buffer is equal to the sum of 2.5%, our Method 1 G-SIB surcharge and the CCyB, if any, as a percentage of total RWA. The leverage exposure-based TLAC buffer is equal to 2% of our total leverage exposure. Failure to maintain the buffers would result in restrictions on our ability to make capital distributions, including the payment of dividends and the repurchase of stock, and to pay discretionary bonuses to executive officers.

Required and Actual TLAC and Eligible LTD Ratios

$ in millions	Regulatory Minimum	Required Ratio[1]	Actual Amount/Ratio At December 31, 2023	Actual Amount/Ratio At December 31, 2022
External TLAC[2]			**$ 250,914**	$ 245,951
External TLAC as a % of RWA	**18.0 %**	**21.5 %**	**55.0 %**	54.9 %
External TLAC as a % of leverage exposure	**7.5 %**	**9.5 %**	**17.6 %**	17.6 %
Eligible LTD[3]			**$ 162,547**	$ 159,444
Eligible LTD as a % of RWA	**9.0 %**	**9.0 %**	**35.6 %**	35.6 %
Eligible LTD as a % of leverage exposure	**4.5 %**	**4.5 %**	**11.4 %**	11.4 %

1. Required ratios are inclusive of applicable buffers.
2. External TLAC consists of Common Equity Tier 1 capital and Additional Tier 1 capital (each excluding any noncontrolling minority interests), as well as eligible LTD.
3. Consists of TLAC-eligible LTD reduced by 50% for amounts of unpaid principal due to be paid in more than one year but less than two years from each respective balance sheet date.

Furthermore, under the clean holding company requirements, a covered BHC is prohibited from incurring any external debt with an original maturity of less than one year or certain other liabilities, regardless of whether the liabilities are fully secured or otherwise senior to eligible LTD, or entering into certain other prohibited transactions. Certain other external liabilities, including those with certain embedded features noted above, are subject to a cap equal to 5% of the covered BHC's outstanding external TLAC amount. Additionally, as of April 1, 2021, we and our U.S. Bank Subsidiaries are required to make certain deductions from regulatory capital for investments in certain unsecured debt instruments (including eligible LTD in the TLAC framework) issued by the Parent Company or other G-SIBs.

We are in compliance with all TLAC requirements as of December 31, 2023 and December 31, 2022.

Capital Plans, Stress Tests and the Stress Capital Buffer

The Federal Reserve has capital planning and stress test requirements for large BHCs, which form part of the Federal Reserve's annual CCAR framework.

We must submit, on at least an annual basis, a capital plan to the Federal Reserve, taking into account the results of separate annual stress tests designed by us and the Federal Reserve, so that the Federal Reserve may assess our systems and processes that incorporate forward-looking projections of revenues and losses to monitor and maintain our internal capital adequacy. As banks with less than $250 billion of total assets, our U.S. Bank Subsidiaries are not subject to company-run stress test regulatory requirements.

The capital plan must include a description of all planned capital actions over a nine-quarter planning horizon, including any issuance or redemption of a debt or equity capital instrument, any capital distribution (*i.e.*, payments of dividends or stock repurchases) and any similar action that the Federal Reserve determines could impact our consolidated capital. The capital plan must include a discussion of how we will maintain capital above the minimum regulatory capital ratios and how we will serve as a source of strength to our U.S. Bank Subsidiaries under supervisory stress scenarios. In addition, the Federal Reserve has issued guidance setting out its heightened expectations for capital planning practices at certain large financial institutions, including us.

As part of its annual capital supervisory stress testing process, the Federal Reserve determines an SCB for each large BHC, including us. The SCB applies only with respect to Standardized Approach risk-based capital requirements and replaced the Common Equity Tier 1 capital conservation buffer of 2.5%. The SCB is the greater of (i) the maximum decline in our Common Equity Tier 1 capital ratio under the severely adverse scenario over the supervisory stress test measurement period plus the sum of the four quarters of planned common stock dividends divided by the projected RWAs from the quarter in which the Firm's projected Common Equity Tier 1 capital ratio reaches its minimum in the supervisory stress test and (ii) 2.5%.

The supervisory stress test assumes that BHCs generally maintain a constant level of assets and RWAs throughout the projection period.

A firm's SCB is subject to revision each year, taking effect from October 1 to reflect the results of the Federal Reserve's annual supervisory stress test. The Federal Reserve has discretion to recalculate a firm's SCB outside of the October 1 annual cycle and to require approval for certain actions, in some circumstances. The Federal Reserve also has the authority to impose restrictions on capital actions as a supervisory matter.

For the 2023 capital planning and stress test cycle, we submitted our capital plan and company-run stress test results to the Federal Reserve on April 5, 2023. On June 28, 2023, the Federal Reserve published summary results of its supervisory stress tests of each large BHC, in which the projected decline in our Common Equity Tier 1 ratio in the severely adverse scenario improved from the prior annual supervisory stress test by 50 basis points, from 4.6% to 4.1%. Following the publication of the supervisory stress test results, and as a result of the increase in our common stock dividend and the resulting dividend add-on, we announced that our SCB will be 5.4% from October 1, 2023 through September 30, 2024. Together with other features of the regulatory capital framework, this SCB results in an aggregate Standardized Approach Common Equity Tier 1 ratio of 12.9%.

We also disclosed a summary of the results of our company-run stress tests on our Investor Relations website and increased our quarterly common stock dividend to $0.85 per share from $0.775, beginning with the common stock dividend announced on July 18, 2023. Additionally, our Board of Directors reauthorized a multi-year common stock repurchase program of up to $20 billion, without a set

expiration date, beginning in the third quarter of 2023, which will be exercised from time to time as conditions warrant.

Attribution of Average Common Equity According to the Required Capital Framework

Our required capital ("Required Capital") estimation is based on the Required Capital framework, an internal capital adequacy measure. Common equity attribution to the business segments is based on capital usage calculated under the Required Capital framework, as well as each business segment's relative contribution to our total Required Capital.

The Required Capital framework is a risk-based and leverage-based capital measure, which is compared with our regulatory capital to ensure that we maintain an amount of going concern capital after absorbing potential losses from stress events, where applicable, at a point in time. The amount of capital allocated to the business segments is generally set at the beginning of each year and remains fixed throughout the year until the next annual reset unless a significant business change occurs (e.g., acquisition or disposition). We define the difference between our total average common equity and the sum of the average common equity amounts allocated to our business segments as Parent Company common equity. We generally hold Parent Company common equity for prospective regulatory requirements, organic growth, potential future acquisitions and other capital needs.

Average Common Equity Attribution under the Required Capital Framework[1]

$ in billions	**2023**	2022	2021
Institutional Securities	**$ 45.6**	$ 48.8	$ 43.5
Wealth Management	**28.8**	31.0	28.6
Investment Management[2]	**10.4**	10.6	8.8
Parent	**6.0**	3.5	16.2
Total	**$ 90.8**	$ 93.9	$ 97.1

1. The attribution of average common equity to the business segments is a non-GAAP financial measure. See "Selected Non-GAAP Financial Information" herein.
2. The total average common equity and the allocation to the Investment Management business segment in 2021 reflect the Eaton Vance acquisition on March 1, 2021.

We continue to evaluate our Required Capital framework with respect to the impact of evolving regulatory requirements, as appropriate.

Resolution and Recovery Planning

We are required to submit once every two years to the Federal Reserve and the FDIC ("Agencies") a resolution plan that describes our strategy for a rapid and orderly resolution under the U.S. Bankruptcy Code in the event of our material financial distress or failure. We submitted our 2021 targeted resolution plan on June 30, 2021. In November 2022, we received joint feedback on our 2021 resolution plan from the Agencies. The feedback indicated that there are no shortcomings or deficiencies in our 2021 resolution plan and that we had successfully addressed a prior shortcoming identified by the Agencies in the review of our 2019 full resolution plan. We submitted our 2023 full resolution plan on June 30, 2023. For more information about resolution planning requirements, see "Business—Supervision and Regulation—Financial Holding Company—Resolution and Recovery Planning."

As described in our most recent resolution plan, our preferred resolution strategy is an SPOE strategy. In line with our SPOE strategy, the Parent Company has transferred, and has agreed to transfer on an ongoing basis, certain assets to its wholly owned, direct subsidiary Morgan Stanley Holdings LLC (the "Funding IHC"). In addition, the Parent Company has entered into an amended and restated support agreement with its material entities (including the Funding IHC) and certain other subsidiaries. In the event of a resolution scenario, the Parent Company would be obligated to contribute all of its contributable assets to our supported entities and/or the Funding IHC. The Funding IHC would be obligated to provide capital and liquidity, as applicable, to our supported entities. The combined implication of the SPOE resolution strategy and the requirement to maintain certain levels of TLAC is that losses in resolution would be imposed on the holders of eligible LTD and other forms of eligible TLAC issued by the Parent Company before any losses are imposed on creditors of our supported entities and without requiring taxpayer or government financial support.

The obligations of the Parent Company and the Funding IHC under the amended and restated support agreement are in most cases secured on a senior basis by the assets of the Parent Company (other than shares in subsidiaries of the Parent Company and certain other assets) and the assets of the Funding IHC. As a result, claims of our supported entities, including the Funding IHC, with respect to the secured assets, are effectively senior to unsecured obligations of the Parent Company.

For more information about resolution and recovery planning requirements and our activities in these areas, including the implications of such activities in a resolution scenario, see "Business—Supervision and Regulation—Financial Holding Company—Resolution and Recovery Planning" and "Risk Factors—Legal, Regulatory and Compliance Risk."

Regulatory Developments and Other Matters

Replacement of London Interbank Offered Rate and Replacement or Reform of Other Interest Rate Benchmarks

Central banks around the world, including the Federal Reserve, have sponsored initiatives in recent years to replace LIBOR and replace or reform certain other interest rate benchmarks (collectively, the "IBORs").

With the cessation of publication of U.S. dollar LIBOR rates on a representative basis as of June 30, 2023, all LIBOR publications have ceased on a representative basis. However, the one-, three- and six-month U.S. dollar LIBOR and three-month sterling LIBOR rates are being published for a limited period for use in legacy transactions on the basis of a

synthetic methodology (known as "synthetic LIBOR"). Publication of the three-month synthetic sterling LIBOR will cease at the end of March 2024 and publication of the one-, three- and six-month synthetic U.S. dollar LIBOR will cease at the end of September 2024.

As of December 31, 2023, a significant majority of our U.S. dollar LIBOR-referenced contracts contained fallback provisions or otherwise had a path that allowed for the transition to an alternative reference rate following the cessation of the applicable U.S. dollar LIBOR rate. We continue to execute against our Firmwide IBOR transition plan to complete the transition in all relevant markets to alternative reference rates.

See also "Risk Factors—Risk Management" for a further discussion of risks related to the planned replacement of the IBORs and/or reform of other interest rate benchmarks and related risks.

FDIC Final Rulemaking on Special Assessment

Following the failures of certain banks and resulting losses to the FDIC's Deposit Insurance Fund in the first half of 2023, the FDIC adopted a final rule on November 16, 2023 to implement a special assessment to recover the cost associated with protecting uninsured depositors. Under the final rule, the assessment base for the special assessment is equal to an IDI's estimated uninsured deposits reported as of December 31, 2022, adjusted to exclude the first $5 billion of uninsured deposits. The $5 billion exclusion is applied once to the aggregate uninsured deposits of our U.S. Bank Subsidiaries. The final rule provides that, starting in 2024, the FDIC will collect the special assessment at a quarterly rate of 3.36 basis points over eight quarterly assessment periods, subject to change depending on any adjustments to the loss estimate, mergers, failures, or amendments to reported estimates of uninsured deposits. We recorded the cost of the entire special assessment of $286 million in Non-interest expenses when the final rule was published in the Federal Register, in the fourth quarter of 2023.

Basel III Endgame Proposal

On July 27, 2023, U.S. banking agencies proposed revisions to risk-based capital and related standards applicable to us and our U.S. Bank Subsidiaries ("Basel III Endgame Proposal"). The proposal would introduce a new measure of RWAs known as "Expanded Total RWAs" (the "Expanded Approach"), reflecting new RWA methodologies that generally align with changes to the global Basel Accord adopted by the Basel Committee. The proposal would eliminate the current capital rule's Advanced Approach and effectively replace it with the Expanded Approach, which more heavily relies on standardized methodologies. As compared with the Standardized Approach, the Expanded Approach includes more granular risk weights for credit risk and introduces a new market risk framework. In addition, unlike the Standardized Approach, the Expanded Approach includes operational risk and credit valuation adjustment RWA components.

The Basel III Endgame Proposal, if adopted as a final rule, would maintain the current capital rule's dual-requirement structure, whereby we and our U.S. Bank Subsidiaries would be required to calculate our risk-based capital ratios under both the Expanded Approach and the Standardized Approach. In addition, the proposal would modify the Standardized Approach by requiring that the new market risk standards from the proposal also be applied in the Standardized Approach.

The Basel III Endgame Proposal would apply the SCB and G-SIB surcharge to risk-based capital requirements calculated under both the Expanded Approach and the Standardized Approach. The proposal includes a proposed effective date of July 1, 2025, with three-year transition arrangements until revised standards are fully phased in on July 1, 2028.

Based on our current understanding of the Basel III Endgame Proposal, we estimate that, if the Expanded Approach had applied on a fully phased-in basis as of December 31, 2023, and in the absence of taking any actions to mitigate its impact, our Expanded Approach RWAs as of that date would have been approximately 40% higher than our actual Standardized Approach RWAs as of that date.

The increase in RWAs resulting from the Expanded Approach would result, assuming all other surcharge elements remained unchanged, in a lower SCB and lower G-SIB Method 2 surcharge as compared with current surcharges, as RWAs are included in the denominators of the relevant calculations for each buffer. Lower surcharges would, therefore, partially decrease the otherwise higher regulatory capital requirements under the Expanded Approach. The proposal would phase in the higher Expanded Approach RWAs on July 1 of each year during the transition, thereby increasing our regulatory capital requirements, with delayed incorporation of the potentially lower SCB and G-SIB Method 2 capital surcharge calculations.

Any estimate of how the Expanded Approach may impact us is a forward-looking statement and subject to uncertainty, as actual results may differ from the anticipated results and may be materially affected by and dependent on a range of factors, including business performance, future capital actions, the results of future supervisory stress tests, and potential modifications to the proposal by the U.S. banking agencies in a final rulemaking. The Firm does not undertake to update any forward-looking statement.

G-SIB Surcharge Proposal

On July 27, 2023, the Federal Reserve proposed revisions to the G-SIB capital surcharge framework applicable to us ("G-SIB Surcharge Proposal"). The G-SIB Surcharge Proposal includes various technical revisions to the G-SIB capital surcharge methodology and would revise the resulting

Method 2 G-SIB capital surcharge from 0.5-percentage point increments to 0.1-percentage point increments. The G-SIB Surcharge Proposal includes a proposed effective date two calendar quarters after the date of adoption of a final rule by the Federal Reserve. We continue to evaluate the G-SIB Surcharge Proposal and the potential impacts, if adopted, on our capital requirements and our Required Capital framework.

Quantitative and Qualitative Disclosures about Risk

Risk Management

Overview

Risk is an inherent part of our businesses and activities. We believe effective risk management is vital to the success of our business activities. Accordingly, we have an ERM framework to integrate the diverse roles of risk management into a holistic enterprise structure and to facilitate the incorporation of risk assessment into decision-making processes across the Firm.

We have policies and procedures in place to identify, measure, monitor, escalate, mitigate and control the principal risks involved in the activities of the Institutional Securities, Wealth Management and Investment Management business segments, as well as at the Parent Company level. The principal risks involved in our business activities are both financial and non-financial and include market (including non-trading risks), credit, liquidity, model, operational (including cybersecurity), compliance (including conduct), financial crime, strategic and reputational risks. Strategic risk is integrated into our business planning, embedded in the evaluation of all principal risks and overseen by the Board.

The cornerstone of our risk management philosophy is the pursuit of risk-adjusted returns through prudent risk taking that protects our capital base and franchise. This philosophy is implemented through the ERM framework. Five key principles underlie this philosophy: integrity, comprehensiveness, independence, accountability and transparency. To help ensure the efficacy of risk management, which is an essential component of our reputation, senior management requires thorough and frequent reporting and the appropriate escalation of risk matters. The fast-paced, complex and constantly evolving nature of global financial markets requires us to maintain a risk management culture that is incisive, knowledgeable about specialized products and markets, and subject to ongoing review and enhancement.

Our risk appetite defines the aggregate level and types of risk that the Firm is willing to accept to achieve its business objectives, taking into account the interests of clients and fiduciary duties to shareholders, as well as capital and other regulatory requirements. This risk appetite is embedded in our risk culture and linked to our short-term and long-term strategic, capital and financial plans, as well as compensation programs. This risk appetite and the related Board-level risk limits and risk tolerance statements are reviewed and approved by the BRC and the Board on at least an annual basis.

Risk Governance Structure

Risk management at the Firm requires independent Firm-level oversight, accountability of our business divisions, and effective communication of risk matters across the Firm, to senior management and ultimately to the Board. Our risk governance structure is set forth in the following chart and also includes risk managers, committees, and groups within and across business segments and operating legal entities. The ERM framework, composed of independent but complementary entities, facilitates efficient and comprehensive supervision of our risk exposures and processes.

RRP—Resolution and Recovery Planning
1. Committees include the Capital Commitment Committee, Global Large Loan Committee, Equity Underwriting Committee, Leveraged Finance Underwriting Committee and Municipal Capital Commitment Committee.
2. Committees include the Securities Risk Committee, Wealth Management Risk Committee and Investment Management Risk Committee.

Morgan Stanley Board of Directors

The Board has oversight of the ERM framework and is responsible for helping to ensure that our risks are managed in a sound manner. The Board has authorized the committees within the ERM framework to help facilitate our risk oversight responsibilities. As set forth in the Board's Corporate Governance Policies, the Board also oversees, and receives reports on, our financial performance, strategy and business plans, as well as our practices and procedures relating to reputational and franchise risk, and culture, values and conduct.

Risk Committee of the Board

The BRC assists the Board in its oversight of the ERM framework; oversees significant financial risk exposures of the Firm, including market, credit, model and liquidity risk, against established risk measurement methodologies and the steps management has taken to monitor and control such exposures; oversees our risk appetite statement, including risk tolerance levels and limits; reviews capital, liquidity and funding strategy and planning and related guidelines and policies; reviews the contingency funding plan and capital planning process; oversees our significant risk governance, risk management and risk assessment guidelines and policies; oversees the performance of the Chief Risk Officer; reviews reports from our Strategic Transactions Committee, CCAR Committee and RRP Committee; reviews significant new product risk, emerging risks, regulatory matters and climate risk; and reviews reports from the Chief Audit Officer regarding the results of reviews and assessments of the risk management, liquidity and capital functions. The BRC reports to the Board on a regular basis and coordinates with the Board and other Board committees with respect to oversight of risk management and risk assessment guidelines.

Audit Committee of the Board

The BAC oversees the integrity of our financial statements, compliance with legal and regulatory requirements, and system of internal controls; oversees risk management and risk assessment guidelines in coordination with the Board and other Board committees; reviews the major legal, compliance and financial crime risk exposures of the Firm and the steps management has taken to monitor and control such exposures; appoints, compensates, retains, oversees, evaluates and, when appropriate, replaces the independent auditor; oversees the qualifications, performance and independence of our independent auditor and pre-approves audit and permitted non-audit services; oversees the performance of our Chief Audit Officer; and, after review, recommends to the Board the acceptance and inclusion of the annual audited financial statements in the Firm's annual report on Form 10-K. The BAC reports to the Board on a regular basis.

Operations and Technology Committee of the Board

The BOTC oversees our operations and technology strategy and significant investments in support of such strategy; oversees operational risk, including information technology, information security, fraud, third-party oversight, business disruption and resilience and cybersecurity risks and the steps management has taken to monitor and control such exposures. The BOTC reviews and approves significant operations and technology policies. The BOTC also reviews risk management and risk assessment guidelines in coordination with the Board and other Board committees, and policies regarding operational risk. The BOTC reports to the Board on a regular basis.

Firm Risk Committee

The Board has also authorized the Firm Risk Committee ("FRC"), a management committee appointed and co-chaired by the Chief Executive Officer and Chief Risk Officer, which includes the most senior officers of the Firm from the business, independent risk functions and control groups, to help oversee the ERM framework. The FRC's responsibilities include: oversight of our risk management principles, procedures, limits and tolerances; the monitoring of capital levels and material market, credit, model, operational, liquidity, legal, compliance and reputational risk matters, and other risks, as appropriate; and the steps management has taken to monitor and manage such risks. The FRC also establishes and communicates risk appetite, including aggregate Firm limits and tolerances, as appropriate. The Governance Process Review Subcommittee of the FRC oversees governance and process issues on behalf of the FRC. The FRC reports to the Board, the BAC, the BOTC and the BRC through the Chief Risk Officer, Chief Financial Officer, Chief Legal Officer and Head of Non-Financial Risk.

Functional Risk and Control Committees

Functional risk and control committees and other committees within the ERM framework facilitate efficient and comprehensive supervision of our risk exposures and processes.

Each business segment has a risk committee that is responsible for helping to ensure that the business segment, as applicable, adheres to established limits for market, credit, operational and other risks; implements risk measurement, monitoring, and management policies, procedures, controls and systems that are consistent with the risk framework established by the FRC; and reviews, on a periodic basis, our aggregate risk exposures, risk exception experience, and the efficacy of our risk identification, measurement, monitoring and management policies and procedures, and related controls.

Chief Risk Officer

The Chief Risk Officer, who is independent of business units, reports to the BRC and the Chief Executive Officer. The Chief Risk Officer oversees compliance with our risk limits; approves exceptions to our risk limits; independently reviews material market, credit, model and liquidity risks; and reviews results of risk management processes with the Board, the BRC, the BOTC and the BAC, as appropriate. The Chief Risk Officer also coordinates with the Head of NFR regarding non-financial risk, the Chief Financial Officer and the Chief Executive Officer regarding capital and liquidity management and works with the Compensation, Management Development and Succession Committee of the Board to help ensure that the structure and design of incentive compensation arrangements do not encourage unnecessary and excessive risk taking.

Head of Non-Financial Risk

The Head of Non-Financial Risk, who is independent of business units, reports to the Chief Legal Officer and Chief Administrative Officer. The Head of Non-Financial Risk oversees the compliance, financial crimes and operational risk management functions; independently reviews non-financial risks, including compliance (including conduct), financial crimes, and operational (including cybersecurity) risks, as well as material regulatory risks; and reviews results of risk management processes with the Board, the BAC, the BOTC and the BRC as appropriate. The Head of Non-Financial Risk also coordinates with the Chief Risk Officer regarding financial risks.

Independent Risk Management Functions

The Financial Risk Management functions (Market Risk, Credit Risk, Model Risk and Liquidity Risk Management Departments) and Non-Financial Risk Management functions (Compliance, Global Financial Crimes, and Operational Risk Departments) are independent of our business units and report to the Chief Risk Officer and Head of Non-Financial Risk, respectively. These functions assist senior management and the FRC in monitoring and controlling our risk through a number of control processes. Each function maintains its own risk governance structure with specified individuals and committees responsible for aspects of managing risk. Further discussion about the responsibilities of the risk management functions may be found under “Market Risk,” “Credit Risk,” “Operational Risk,” “Model Risk” and “Liquidity Risk” and “Legal, Regulatory and Compliance Risk” herein.

Support and Control Groups

Our support and control groups include, but are not limited to, Legal, the Finance Division, Technology, the Operations Division, the Human Capital Management & Global Services Division (“HCMGS”), Firm Strategy and Execution. Our support and control groups coordinate with the business segment control groups to review the risk monitoring and risk management policies and procedures relating to, among other things, controls over financial reporting and disclosure; each business segment’s market, credit and operational risk profile; liquidity risks; model risks; sales practices; reputational, legal enforceability, compliance and regulatory risks; and technological risks. Participation by the senior officers of the Firm and business segment control groups helps ensure that risk policies and procedures, exceptions to risk limits, new products and business ventures, and transactions with risk elements undergo thorough review.

Internal Audit Department

The Internal Audit Department (“IAD”) independently identifies and assesses risks facing the Firm and provides independent, objective and timely assurance to stakeholders about the effectiveness of risk management, governance and controls over key risks within the Firm’s businesses and functions. IAD develops and executes a comprehensive risk-based assurance plan to fulfill its role and purpose, which includes assessing compliance with policies, procedures and laws and regulations. IAD may also conduct other activities, such as retrospective reviews, pre-implementation reviews and investigations as requested by the BAC, senior management or the Firm’s regulators.

IAD executes its activities in accordance with the mandatory elements of The Institute of Internal Auditors’ International Professional Practices Framework as well as the Firm’s Code of Ethics and Business Conduct, regulatory requirements, and IAD’s policies, procedures, standards and guidance. The Chief Audit Officer, who reports functionally to the BAC and administratively to the Firm’s Chief Executive Officer, communicates the results of IAD activities to the BAC on a quarterly basis and periodically to the BRC and BOTC.

Culture, Values and Conduct of Employees

Employees of the Firm are accountable for conducting themselves in accordance with our core values: *Put Clients First, Do the Right Thing, Lead with Exceptional Ideas, Commit to Diversity and Inclusion,* and *Give Back*. We are committed to reinforcing and confirming adherence to our core values through our governance framework, tone from the top, management oversight, risk management and controls, and three lines of defense structure (business, Independent Risk Management functions such as Financial Risk Management and Non-Financial Risk Management, and Internal Audit).

The Board is responsible for overseeing the Firm’s practices and procedures relating to culture, values and conduct, as set forth in the Board’s Corporate Governance Policies. Senior management committees oversee the Firmwide culture, values and conduct program and report regularly to the Board. A fundamental building block of these programs is the Firm’s Code of Conduct, which establishes standards for employee conduct that further reinforce the Firm’s commitment to integrity and ethical conduct. Every new hire and every

employee annually is required to certify to their understanding of and adherence to the Code of Conduct. The Firm's Global Conduct Risk Management Policy also sets out a consistent global framework for managing conduct risk (i.e., the risk arising from misconduct by employees or contingent workers) and conduct risk incidents at the Firm.

The employee annual performance review process includes evaluation of employee conduct related to risk management practices and the Firm's expectations. We also have several mutually reinforcing processes to identify employee conduct that may have an impact on employment status, current-year compensation and/or prior-year compensation. For example, the Global Incentive Compensation Discretion Policy sets forth standards for managers when making annual compensation decisions and specifically provides that managers must consider whether their employees effectively managed and/or supervised risk control practices during the performance year. Control function management meets to discuss employees whose conduct is not in line with our expectations. These results are incorporated into identified employees' performance reviews and compensation and promotion decisions.

The Firm's clawback and cancellation provisions apply to deferred incentive compensation and cover a broad scope of employee conduct, including any act or omission (including with respect to direct supervisory responsibilities) that constitutes a breach of obligation to the Firm or causes a restatement of the Firm's financial results, constitutes a violation of the Firm's global risk management principles, policies and standards, or causes a loss of revenue associated with a position on which the employee was paid and the employee operated outside of risk management policies.

Risk Limits Framework

Risk limits and quantitative metrics provide the basis for monitoring risk-taking activity and avoiding outsized risk taking. Our risk-taking capacity is sized through the Firm's capital planning process where losses are estimated under the Firm's BHC Severely Adverse stress testing scenario. We also maintain a comprehensive suite of risk limits and quantitative metrics to support and implement our risk-appetite statement. Our risk limits support linkages between the overall risk appetite, which is reviewed by the Board, and more granular risk-taking decisions and activities.

Risk limits, once established, are reviewed and updated on at least an annual basis, with more frequent updates as necessary. Board-level risk limits address the most important Firmwide aggregations of risk. Additional risk limits approved by the FRC address more specific types of risk and are bound by the higher-level Board risk limits.

Risk Management Process

In subsequent sections, we discuss our risk management policies and procedures for our primary risks involved in the activities of our Institutional Securities, Wealth Management and Investment Management business segments. These sections and the estimated amounts of our risk exposure generated by our statistical analyses are forward-looking statements. However, the analyses used to assess such risks are not predictions of future events, and actual results may vary significantly from such analyses due to events in the markets in which we operate and certain other factors described in the following paragraphs.

Market Risk

Market risk refers to the risk that a change in the level of one or more market prices, rates, spreads, indices, volatilities, correlations or other market factors, such as market liquidity, will result in losses for a position or portfolio. Generally, we incur market risk as a result of trading, investing and client facilitation activities, principally within the Institutional Securities business segment where the substantial majority of our VaR for market risk exposures is generated. In addition, we incur non-trading market risk, principally within the Wealth Management and Investment Management business segments. The Wealth Management business segment primarily incurs non-trading market risk (including interest rate risk) from lending and deposit-taking activities. The Investment Management business segment primarily incurs non-trading market risk from capital investments in its funds.

Market risk also includes non-trading interest rate risk. Non-trading interest rate risk in the banking book (amounts classified for regulatory capital purposes under the banking book regime) refers to the exposure that a change in interest rates will result in prospective earnings changes for assets and liabilities in the banking book.

Sound market risk management is an integral part of our culture. The various business units and trading desks are responsible for ensuring that market risk exposures are well-managed and prudent. The control groups help ensure that these risks are measured and closely monitored and are made transparent to senior management. The Market Risk Department is responsible for ensuring the transparency of material market risks, monitoring compliance with established limits and escalating risk concentrations to appropriate senior management.

To execute these responsibilities, the Market Risk Department monitors our risk against limits on aggregate risk exposures, performs a variety of risk analyses, routinely reports risk summaries, and maintains our VaR and scenario analysis systems. Market risk is also monitored through various measures: by use of statistics (including VaR and related analytical measures), by measures of position size and sensitivity, and through routine stress testing, which measures the impact on the value of existing portfolios of specified changes in market factors and scenarios designed by the Market Risk Department in collaboration with the business units. The material risks identified by these processes are summarized in reports produced by the Market Risk

Department that are circulated to and discussed with senior management, the FRC, the BRC and the Board.

Trading Risks

Primary Market Risk Exposures and Market Risk Management

We have exposures to a wide range of risks related to interest rates and credit spreads, equity prices, foreign exchange rates and commodity prices as well as the associated implied volatilities, correlations and spreads of the global markets in which we conduct our trading activities.

We are exposed to interest rate and credit spread risk as a result of our market-making activities and other trading in interest rate-sensitive financial instruments (i.e., risk arising from changes in the level or implied volatility of interest rates, the timing of mortgage prepayments, the shape of the yield curve and/or credit spreads). The activities from which those exposures arise and the markets in which we are active include, but are not limited to, the following: derivatives, corporate and government debt across both developed and emerging markets and asset-backed debt, including mortgage-related securities.

We are exposed to equity price, correlation and implied volatility risk as a result of making markets in equity securities and derivatives and maintaining other positions, including positions in non-public entities. Positions in non-public entities may include, but are not limited to, exposures to private equity, venture capital, private partnerships, real estate funds and other funds. Such positions are less liquid, have longer investment horizons and are more difficult to hedge than listed equities.

We are exposed to foreign exchange rate, correlation and implied volatility risk as a result of making markets in foreign currencies and foreign currency derivatives, from maintaining foreign exchange positions and from holding non-U.S. dollar-denominated financial instruments.

We are exposed to commodity price and implied volatility risk as a result of market-making activities in commodity products related primarily to electricity, natural gas, oil and precious metals. Commodity exposures are subject to periods of high price volatility as a result of changes in supply and demand. These changes can be caused by weather conditions, physical production and transportation, or geopolitical and other events that affect the available supply and level of demand for these commodities.

We manage our trading positions by employing a variety of risk-mitigation strategies. These strategies include diversification of risk exposures and hedging. Hedging activities consist of the purchase or sale of positions in related securities and financial instruments, including a variety of derivative products (e.g., futures, forwards, swaps and options). Hedging activities may not always provide effective mitigation against trading losses due to differences in the terms, specific characteristics or other basis risks that may exist between the hedge instrument and the risk exposure that is being hedged.

We manage the market risk associated with our trading activities on a Firmwide basis, on a worldwide trading division level and on an individual product basis. We manage and monitor our market risk exposures in such a way as to maintain a portfolio that we believe is well diversified in the aggregate with respect to market risk factors and that reflects our aggregate risk tolerance as established by our senior management.

Aggregate market risk limits have been approved for the Firm across all divisions worldwide. Additional market risk limits are assigned to trading desks and, as appropriate, products and regions. Trading division risk managers, desk risk managers, traders and the Market Risk Department monitor market risk measures against limits in accordance with policies set by our senior management.

Value-at-Risk

The statistical technique known as VaR is one of the tools we use to measure, monitor and review the market risk exposures of our trading portfolios. The Market Risk Department calculates and distributes daily VaR-based risk measures to various levels of management.

We estimate VaR using a model based on a one-year equal-weighted historical simulation for general market risk factors and name-specific risk in corporate equities and related derivatives, and Monte Carlo simulation for name-specific risk in bonds, loans and related derivatives. The model constructs a distribution of hypothetical daily changes in the value of trading portfolios based on historical observation of daily changes in key market indices or other market risk factors, and information on the sensitivity of the portfolio values to these market risk factor changes.

VaR for risk management purposes (“Management VaR”) is computed at a 95% level of confidence over a one-day time horizon, which is a useful indicator of possible trading losses resulting from adverse daily market moves. The 95%/one-day VaR corresponds to the unrealized loss in portfolio value that, based on historically observed market risk factor movements, would have been exceeded with a frequency of 5%, or five times in every 100 trading days, if the portfolio were held constant for one day.

Our VaR model generally takes into account linear and non-linear exposures to equity and commodity price risk, interest rate risk, credit spread risk and foreign exchange rates. The model also takes into account linear exposures to implied volatility risks for all asset classes and non-linear exposures to implied volatility risks for equity, commodity and foreign exchange referenced products. The VaR model also captures certain implied correlation risks associated with portfolio credit derivatives, as well as certain basis risks (e.g., corporate debt and related credit derivatives).

We use VaR as one of a range of risk management tools. Among their benefits, VaR models permit estimation of a portfolio's aggregate market risk exposure, incorporating a range of varied market risks and portfolio assets. One key element of the VaR model is that it reflects risk reduction due to portfolio diversification or hedging activities. However, VaR has various limitations, which include, but are not limited to: use of historical changes in market risk factors, which may not be accurate predictors of future market conditions and may not fully incorporate the risk of extreme market events that are outsized relative to observed historical market behavior or reflect the historical distribution of results beyond the 95% confidence interval; and reporting of losses in a single day, which does not reflect the risk of positions that cannot be liquidated or hedged in one day. A small proportion of market risk generated by trading positions is not included in VaR.

The modeling of the risk characteristics of some positions relies on approximations that, under certain circumstances, could produce significantly different results from those produced using more precise measures. VaR is most appropriate as a risk measure for trading positions in liquid financial markets and will understate the risk associated with severe events, such as periods of extreme illiquidity. We are aware of these and other limitations and, therefore, use VaR as only one component in our risk management oversight process. This process also incorporates stress testing and scenario analyses and extensive risk monitoring, analysis and control at the trading desk, division and Firm levels.

We update our VaR model in response to changes in the composition of trading portfolios and to improvements in modeling techniques and systems capabilities. We are committed to continuous review and enhancement of VaR methodologies and assumptions in order to capture evolving risks associated with changes in market structure and dynamics. As part of our regular process improvements, additional systematic and name-specific risk factors may be added to improve the VaR model's ability to more accurately estimate risks to specific asset classes or industry sectors.

Since the reported VaR statistics are estimates based on historical data, VaR should not be viewed as predictive of our future revenues or financial performance or of our ability to monitor and manage risk. There can be no assurance that our actual losses on a particular day will not exceed the VaR amounts indicated in the following tables or that such losses will not occur more than five times in 100 trading days for a 95%/one-day VaR. VaR does not predict the magnitude of losses that, should they occur, may be significantly greater than the VaR amount.

VaR statistics are not readily comparable across firms because of differences in the firms' portfolios, modeling assumptions and methodologies. These differences can result in materially different VaR estimates across firms for similar portfolios. The impact of such differences varies depending on the factor history assumptions, the frequency with which the factor history is updated and the confidence level. As a result, VaR statistics are more useful when interpreted as indicators of trends in a firm's risk profile rather than as an absolute measure of risk to be compared across firms.

Our regulators have approved the same VaR model we use for risk management purposes for use in regulatory calculations.

The portfolio of positions used for Management VaR differs from that used for Regulatory VaR. Management VaR contains certain positions that are excluded from Regulatory VaR.

95%/One-Day Management VaR

	2023			
$ in millions	Period End	Average	High[1]	Low[1]
Interest rate and credit spread	**$ 29**	**$ 34**	**$ 43**	**$ 27**
Equity price	**19**	**24**	**38**	**15**
Foreign exchange rate	**6**	**9**	**18**	**5**
Commodity price	**11**	**17**	**35**	**10**
Less: Diversification benefit[2]	**(27)**	**(40)**	**N/A**	**N/A**
Primary Risk Categories	**$ 38**	**$ 44**	**$ 60**	**$ 33**
Credit Portfolio	**25**	**21**	**25**	**18**
Less: Diversification benefit[2]	**(22)**	**(15)**	**N/A**	**N/A**
Total Management VaR	**$ 41**	**$ 50**	**$ 72**	**$ 41**

	2022			
$ in millions	Period End	Average	High[1]	Low[1]
Interest rate and credit spread	$ 37	$ 31	$ 43	$ 21
Equity price	16	23	41	16
Foreign exchange rate	10	8	19	3
Commodity price	26	27	41	15
Less: Diversification benefit[2]	(36)	(40)	N/A	N/A
Primary Risk Categories	$ 53	$ 49	$ 65	$ 31
Credit Portfolio	19	15	19	12
Less: Diversification benefit[2]	(9)	(11)	N/A	N/A
Total Management VaR	$ 63	$ 53	$ 74	$ 32

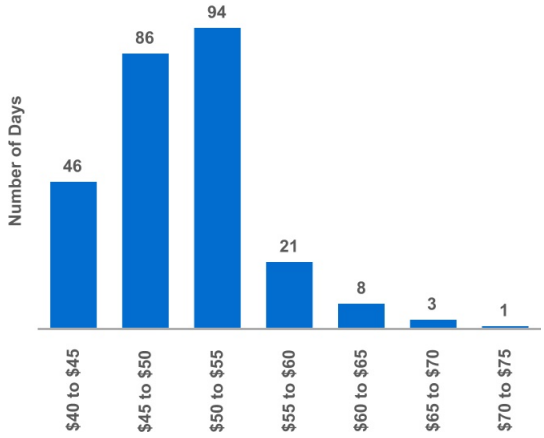
1. The high and low VaR values for the Total Management VaR and each of the component VaRs might have occurred on different days during the quarter, and, therefore, the diversification benefit is not an applicable measure.
2. Diversification benefit equals the difference between the total VaR and the sum of the component VaRs. This benefit arises because the simulated one-day losses for each of the components occur on different days; similar diversification benefits also are taken into account within each component.

Average Total Management VaR and Average Management VaR for the Primary Risk Categories decreased in 2023 from 2022 primarily due to reduced exposure in the Commodity price risk category and lower market volatility.

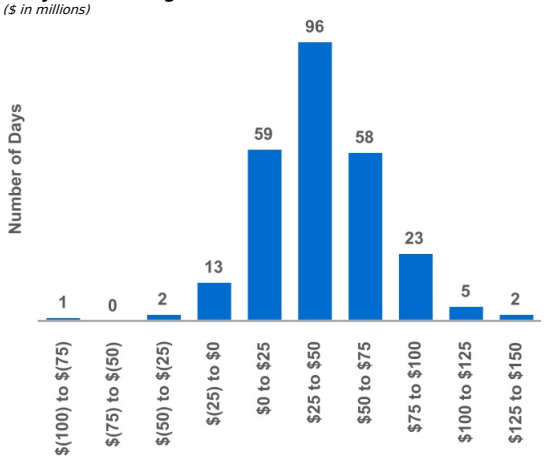
Distribution of VaR Statistics and Net Revenues

We evaluate the reasonableness of our VaR model by comparing the potential declines in portfolio values generated by the model with corresponding actual trading results for the Firm, as well as individual business units. For days where losses exceed the VaR statistic, we examine the drivers of trading losses to evaluate the VaR model's accuracy. There were 16 trading loss days in 2023, one of which exceeded 95% Total Management VaR, compared to 15 trading loss days in 2022, none of which exceeded 95% Total Management VaR.

Daily 95%/One-Day Total Management VaR for 2023
($ in millions)



Daily Net Trading Revenues for 2023
($ in millions)



Daily net trading revenues include profits and losses from Interest rate and credit spread, Equity price, Foreign exchange rate, Commodity price, and Credit Portfolio positions and intraday trading activities for our trading businesses. Certain items such as fees, commissions, net interest income and counterparty default risk are excluded from daily net trading revenues and the VaR model. Revenues required for Regulatory VaR backtesting further exclude intraday trading.

Non-Trading Risks

We believe that sensitivity analysis is an appropriate representation of our non-trading risks. The following sensitivity analyses cover substantially all of the non-trading risk in our portfolio.

Credit Spread Risk Sensitivity[1]

$ in millions	At December 31, 2023	At December 31, 2022
Derivatives	$ 6	$ 7
Borrowings carried at fair value	48	39

1. Amounts represent the potential gain for each 1 bps widening of our credit spread.

Credit spread risk sensitivity for borrowings carried at fair value at December 31, 2023 increased from December 31, 2022, primarily driven by debt issuances and credit spread tightening.

The Wealth Management business segment reflects a substantial portion of our non-trading interest rate risk. Net interest income in the Wealth Management business segment primarily consists of interest income earned on non-trading assets held, including loans and investment securities, as well as margin and other lending on non-bank entities and interest expense incurred on non-trading liabilities, primarily deposits.

Wealth Management Net Interest Income Sensitivity Analysis

$ in millions	At December 31, 2023	At December 31, 2022
Basis point change		
+100	$ 585	$ 643
-100	(609)	(745)

The previous table presents an analysis of selected instantaneous upward and downward parallel interest rate shocks (subject to a floor of zero percent in the downward scenario) on net interest income over the next 12 months for our Wealth Management business segment. These shocks are applied to our 12-month forecast for our Wealth Management business segment, which incorporates market expectations of interest rates and our forecasted business activity, including deposit forecasts as a key assumption.

We do not manage to any single rate scenario but rather manage net interest income in our Wealth Management business segment across a range of possible outcomes, including non-parallel rate change scenarios. The sensitivity analysis assumes that we take no action in response to these scenarios, assumes there are no changes in other macroeconomic variables normally correlated with changes in interest rates and includes subjective assumptions regarding customer and market re-pricing behavior and other factors.

Our Wealth Management business segment balance sheet is asset sensitive, given assets reprice faster than liabilities, resulting in higher net interest income in increasing interest rate scenarios. The level of interest rates may impact the amount of deposits held at the Firm, given competition for deposits from other institutions and alternative cash-equivalent products available to depositors. Further, rising interest rates could also impact client demand for loans. Net interest income sensitivity to interest rates at December 31, 2023 decreased from December 31, 2022, primarily driven by the effects of changes in the mix of our assets and liabilities.

Investments Sensitivity, Including Related Carried Interest

$ in millions	Loss from 10% Decline At December 31, 2023	At December 31, 2022
Investments related to Investment Management activities	**$ 481**	$ 431
Other investments:		
MUMSS	**134**	143
Other Firm investments	**399**	378

We have exposure to public and private companies through direct investments, as well as through funds that invest in these assets. These investments are predominantly equity positions with long investment horizons, a portion of which is for business facilitation purposes. The market risk related to these investments is measured by estimating the potential reduction in net revenues associated with a reasonably possible 10% decline in investment values and related impact on performance-based income, as applicable.

Asset Management Revenue Sensitivity

Certain asset management revenues in the Wealth Management and Investment Management business segments are derived from management fees, which are based on fee-based client assets in Wealth Management or AUM in Investment Management (together, "client holdings"). The assets underlying client holdings are primarily composed of equity, fixed income and alternative investments and are sensitive to changes in related markets. These revenues depend on multiple factors including, but not limited to, the level and duration of a market increase or decline, price volatility, the geographic and industry mix of client assets, and client behavior such as the rate and magnitude of client investments and redemptions. Therefore, overall revenues may not correlate completely with changes in the related markets.

Credit Risk

Credit risk refers to the risk of loss arising when a borrower, counterparty or issuer does not meet its financial obligations to us. We are primarily exposed to credit risk from institutions and individuals through our Institutional Securities and Wealth Management business segments.

We incur credit risk in our Institutional Securities business segment through a variety of activities, including, but not limited to, the following:

- extending credit to clients through loans and lending commitments;
- entering into swap or other derivative contracts under which counterparties may have obligations to make payments to us;
- acting as clearing broker for listed and over-the-counter derivatives whereby we guarantee client performance to clearinghouses;
- providing short- or long-term funding that is secured by physical or financial collateral, including, but not limited to, real estate and marketable securities, whose value may at times be insufficient to fully cover the repayment amount;
- posting margin and/or collateral to clearinghouses, clearing agencies, exchanges, banks, securities firms and other financial counterparties;
- placing funds on deposit at other financial institutions to support our clearing and settlement obligations; and
- investing or trading in securities and loan pools, whereby the value of these assets may fluctuate based on realized or expected defaults on the underlying obligations or loans.

We incur credit risk in our Wealth Management business segment, primarily through lending to individuals and entities, including, but not limited to, the following:

- margin loans collateralized by securities;
- securities-based lending and other forms of secured loans, including tailored lending to ultra-high net worth clients, that are in most cases secured by various types of collateral, including marketable securities, private investments, commercial real estate and other financial assets;
- single-family residential mortgage loans in conforming, non-conforming or HELOC form, primarily to existing Wealth Management clients; and
- employee loans granted primarily to recruit certain Wealth Management representatives.

Monitoring and Control

The Credit Risk Management Department ("CRM") establishes Firmwide practices to evaluate, monitor and control credit risk at the transaction, obligor and portfolio levels. The CRM approves extensions of credit, evaluates the creditworthiness of the counterparties and borrowers on a regular basis, and helps ensure that credit exposure is actively monitored and managed. The evaluation of counterparties and borrowers includes an assessment of the probability that an obligor will default on its financial obligations and any losses that may occur when an obligor defaults. In addition, credit risk exposure is actively managed by credit professionals and committees within the CRM and through various risk committees, whose membership includes individuals from the CRM. A comprehensive and global Credit Limits Framework is utilized to manage credit risk levels across the Firm. The Credit Limits Framework is calibrated within our risk tolerance and includes single-name limits and portfolio concentration limits by country, industry and product type.

The CRM helps ensure timely and transparent communication of material credit risks, compliance with established limits and escalation of risk concentrations to appropriate senior management. The CRM also works closely with the Market Risk Department and applicable business units to monitor risk exposures and to perform stress tests to identify, analyze and control credit risk concentrations arising from lending and trading activities. The stress tests shock market factors (e.g., interest rates, commodity prices, credit spreads), risk

parameters (e.g., probability of default and loss given default), recovery rates and expected losses in order to assess the impact of stresses on exposures, profit and loss, and our capital position. Stress tests are conducted in accordance with our established policies and procedures.

Credit Evaluation

The evaluation of corporate and institutional counterparties and borrowers includes assigning credit ratings, which reflect an assessment of an obligor's probability of default and loss given default. Credit evaluations typically involve the assessment of financial statements; leverage; liquidity; capital strength; asset composition and quality; market capitalization; access to capital markets; adequacy of collateral, if applicable; and, in the case of certain loans, cash flow projections and debt service requirements. The CRM also evaluates strategy, market position, industry dynamics, management and other factors such as country risks and legal and contingent risks that could affect the obligor's risk profile. Additionally, the CRM evaluates the relative position of our exposure in the borrower's capital structure and relative recovery prospects, as well as other structural elements of the particular transaction. The underwriting of commercial real estate loans includes, but is not limited to, review of the property type, LTV ratio, occupancy levels, debt service ratio, prevailing capitalization rates and market dynamics.

The evaluation of consumer borrowers is tailored to the specific type of lending. Securities-based loans are evaluated based on factors that include, but are not limited to, the amount of the loan and the amount, quality, diversification, price volatility and liquidity of the collateral. The underwriting of residential real estate loans includes, but is not limited to, review of the obligor's debt-to-income ratio, net worth, liquidity, collateral, LTV ratio and industry standard credit-scoring models (e.g., FICO scores). Subsequent credit monitoring for individual loans is performed at the portfolio level, and collateral values are monitored on an ongoing basis.

Credit risk metrics assigned to our borrowers during the evaluation process are incorporated into the CRM maintenance of the allowance for credit losses. Such allowance serves as a reserve for expected inherent losses, as well as expected losses related to loans identified as impaired. For more information on the allowance for credit losses, see Notes 2 and 9 to the financial statements.

Risk Mitigation

We may seek to mitigate credit risk from our lending and trading activities in multiple ways, including collateral provisions, guarantees and hedges. At the transaction level, we seek to mitigate risk through management of key risk elements such as size, tenor, financial covenants, seniority and collateral. We actively hedge our lending and derivatives exposures. Hedging activities consist of the purchase or sale of positions in related securities and financial instruments, including a variety of derivative products (e.g., futures, forwards, swaps and options). Additionally, we may sell, assign or syndicate loans and lending commitments to other financial institutions in the primary and secondary loan markets.

In connection with our derivatives trading activities, we generally enter into master netting agreements and collateral arrangements with counterparties. These agreements provide us with the ability to demand collateral, as well as to liquidate collateral and offset receivables and payables covered under the same master agreement in the event of a counterparty default. A collateral management group monitors collateral levels against requirements and oversees the administration of the collateral function. See Note 8 to the financial statements for additional information about our collateralized transactions.

Loans and Lending Commitments

	At December 31, 2023			
$ in millions	HFI	HFS	FVO[1]	Total
Institutional Securities:				
Corporate	**$ 6,758**	**$ 11,862**	**$ —**	**$ 18,620**
Secured lending facilities	**39,498**	**3,161**	**—**	**42,659**
Commercial and Residential real estate	**8,678**	**209**	**3,331**	**12,218**
Securities-based lending and Other	**2,818**	**—**	**4,402**	**7,220**
Total Institutional Securities	**57,752**	**15,232**	**7,733**	**80,717**
Wealth Management:				
Residential real estate	**60,375**	**22**	**—**	**60,397**
Securities-based lending and Other	**86,423**	**1**	**—**	**86,424**
Total Wealth Management	**146,798**	**23**	**—**	**146,821**
Total Investment Management[2]	**4**	**—**	**455**	**459**
Total loans	**204,554**	**15,255**	**8,188**	**227,997**
ACL	**(1,169)**			**(1,169)**
Total loans, net of ACL	**$ 203,385**	**$ 15,255**	**$ 8,188**	**$ 226,828**
Lending commitments[3]				**$ 149,973**
Total exposure				**$ 376,801**

	At December 31, 2022			
$ in millions	HFI	HFS	FVO[1]	Total
Institutional Securities:				
Corporate	$ 6,589	$ 10,634	$ —	$ 17,223
Secured lending facilities	35,606	3,176	6	38,788
Commercial and Residential real estate	8,515	926	2,548	11,989
Securities-based lending and Other	2,865	39	5,625	8,529
Total Institutional Securities	53,575	14,775	8,179	76,529
Wealth Management:				
Residential real estate	54,460	4	—	54,464
Securities-based lending and Other	91,797	9	—	91,806
Total Wealth Management	146,257	13	—	146,270
Total Investment Management[2]	4	—	218	222
Total loans	199,836	14,788	8,397	223,021
ACL	(839)			(839)
Total loans, net of ACL	$ 198,997	$ 14,788	$ 8,397	$ 222,182
Lending commitments[3]				$ 136,960
Total exposure				$ 359,142

Total exposure—consists of Total loans, net of ACL, and Lending commitments
1. FVO includes the fair value of certain unfunded lending commitments.
2. Investment Management business segment loans are related to certain of our activities as an investment adviser and manager. Loans held at fair value are the result of the consolidation of investment vehicles (including CLOs) managed by

Investment Management, composed primarily of senior secured loans to corporations.
3. Lending commitments represent the notional amount of legally binding obligations to provide funding to clients for lending transactions. Since commitments associated with these business activities may expire unused or may not be utilized to full capacity, they do not necessarily reflect the actual future cash funding requirements.

We provide loans and lending commitments to a variety of customers, including large corporate and institutional clients, as well as high to ultra-high net worth individuals. In addition, we purchase loans in the secondary market. Loans and lending commitments are either held for investment, held for sale or carried at fair value. For more information on these loan classifications, see Note 2 to the financial statements.

In 2023, total loans and lending commitments increased by approximately $18 billion, primarily due to an increase in Corporate lending and Secured lending facilities within the Institutional Securities business segment.

See Notes 4, 5, 9 and 14 to the financial statements for further information.

Allowance for Credit Losses—Loans and Lending Commitments

$ in millions	2023
ACL—Loans	
Beginning balance	$ 839
Gross charge-offs	**(167)**
Recoveries	**2**
Net (charge-offs) recoveries	**(165)**
Provision for credit losses	**488**
Other	**7**
Ending balance	**$ 1,169**
ACL—Lending commitments	
Beginning balance	$ 504
Provision for credit losses	**44**
Other	**3**
Ending balance	**$ 551**
Total ending balance	**$ 1,720**

Provision for Credit Losses by Business Segment

	Year Ended December 31, 2023		
$ in millions	IS	WM	Total
Loans	**$ 356**	**$ 132**	**$ 488**
Lending commitments	**45**	**(1)**	**44**
Total	**$ 401**	**$ 131**	**$ 532**

Credit exposure arising from our loans and lending commitments is measured in accordance with our internal risk management standards. Risk factors considered in determining the allowance for credit losses for loans and lending commitments include the borrower's financial strength, industry, facility structure, LTV ratio, debt service ratio, collateral and covenants. Qualitative and environmental factors such as economic and business conditions, nature and volume of the portfolio and lending terms, and volume and severity of past due loans may also be considered.

The allowance for credit losses for loans and lending commitments increased in 2023, primarily related to deteriorating conditions in the commercial real estate sector, including provisions for certain specific loans, mainly in the office portfolio, and modest growth in certain other loan portfolios. Charge-offs in 2023 were primarily related to Commercial real estate and Corporate loans.

The base scenario used in our ACL models as of December 31, 2023 was generated using a combination of consensus economic forecasts, forward rates, and internally developed and validated models, and assumes slow economic growth in 2024, followed by a gradual improvement in 2025. Given the nature of our lending portfolio, the most sensitive model input is U.S. gross domestic product ("GDP").

Forecasted U.S. Real GDP Growth Rates in Base Scenario

	4Q 2024	4Q 2025
Year-over-year growth rate	**0.9 %**	**2.0 %**

See Note 2 to the financial statements for a discussion of the Firm's ACL methodology under CECL.

Status of Loans Held for Investment

	At December 31, 2023		At December 31, 2022	
	IS	WM	IS	WM
Accrual	**98.9 %**	**99.8 %**	99.3 %	99.9 %
Nonaccrual[1]	**1.1 %**	**0.2 %**	0.7 %	0.1 %

1. Nonaccrual loans are loans where principal or interest is not expected when contractually due or are past due 90 days or more.

Net Charge-off Ratios for Loans Held for Investment

$ in millions	Corporate	Secured Lending Facilities	CRE	Residential Real Estate	SBL and Other	Total
2023						
Net charge-off ratio[1]	**0.47 %**	**— %**	**1.50 %**	**— %**	**— %**	**0.08 %**
Average loans	**$ 7,062**	**$ 37,702**	**$ 8,590**	**$ 57,177**	**$ 91,126**	**$ 201,657**
2022						
Net charge-off ratio[1]	(0.09)%	0.01 %	0.09 %	— %	0.02 %	0.01 %
Average loans	$ 6,544	$ 33,172	$ 8,234	$ 49,937	$ 93,427	$ 191,314
2021						
Net charge-off ratio[1]	0.44 %	0.24 %	0.38 %	— %	0.01 %	0.08 %
Average loans	$ 5,184	$ 27,833	$ 7,089	$ 39,111	$ 75,230	$ 154,447

CRE—Commercial real estate
SBL—Securities-based lending
1. Net charge-off ratio represents gross charge-offs net of recoveries divided by total average loans held for investment before ACL.

Institutional Securities Loans and Lending Commitments[1]

	At December 31, 2023				
	Contractual Years to Maturity				
$ in millions	< 1	1-5	5-15	>15	Total
Loans					
AA	**$ 3**	**$ 11**	**$ 216**	**$ —**	**$ 230**
A	**1,054**	**950**	**182**	**—**	**2,186**
BBB	**7,117**	**10,076**	**346**	**—**	**17,539**
BB	**11,723**	**16,367**	**1,775**	**277**	**30,142**
Other NIG	**9,586**	**12,961**	**2,924**	**156**	**25,627**
Unrated[2]	**111**	**1,036**	**62**	**2,910**	**4,119**
Total loans, net of ACL	**29,594**	**41,401**	**5,505**	**3,343**	**79,843**
Lending commitments					
AAA	**—**	**50**	**—**	**—**	**50**
AA	**2,610**	**3,064**	**154**	**—**	**5,828**
A	**7,704**	**21,256**	**593**	**—**	**29,553**
BBB	**9,161**	**46,304**	**106**	**—**	**55,571**
BB	**4,069**	**16,431**	**1,594**	**414**	**22,508**
Other NIG	**1,916**	**13,842**	**1,077**	**3**	**16,838**
Unrated[2]	**6**	**7**	**—**	**—**	**13**
Total lending commitments	**25,466**	**100,954**	**3,524**	**417**	**130,361**
Total exposure	**$ 55,060**	**$ 142,355**	**$ 9,029**	**$ 3,760**	**$ 210,204**

	At December 31, 2022				
	Contractual Years to Maturity				
$ in millions	< 1	1-5	5-15	>15	Total
Loans					
AA	$ 66	$ —	$ 139	$ —	$ 205
A	1,331	787	185	—	2,303
BBB	5,632	10,712	465	—	16,809
BB	11,045	19,219	796	162	31,222
Other NIG	7,274	10,249	3,945	139	21,607
Unrated[2]	95	924	624	2,066	3,709
Total loans, net of ACL	25,443	41,891	6,154	2,367	75,855
Lending commitments					
AAA	—	50	—	—	50
AA	2,515	2,935	11	—	5,461
A	5,030	19,717	202	330	25,279
BBB	10,263	39,615	566	—	50,444
BB	3,691	17,656	1,416	96	22,859
Other NIG	1,173	13,872	530	—	15,575
Unrated[2]	—	20	—	3	23
Total lending commitments	22,672	93,865	2,725	429	119,691
Total exposure	$ 48,115	$ 135,756	$ 8,879	$ 2,796	$ 195,546

NIG–Non-investment grade
1. Counterparty credit ratings are internally determined by the CRM.
2. Unrated loans and lending commitments are primarily trading positions that are measured at fair value and risk-managed as a component of market risk. For a further discussion of our market risk, see "Quantitative and Qualitative Disclosures about Risk—Market Risk" herein.

Institutional Securities Loans and Lending Commitments by Industry

$ in millions	**At December 31, 2023**	At December 31, 2022
Financials	**$ 57,804**	$ 54,222
Real estate	**35,342**	32,358
Industrials	**18,056**	14,557
Communications services	**15,301**	15,336
Healthcare	**14,274**	12,353
Information technology	**12,430**	13,790
Consumer discretionary	**12,190**	11,592
Utilities	**11,522**	10,542
Consumer staples	**9,305**	7,823
Energy	**9,156**	9,115
Materials	**6,503**	6,102
Insurance	**6,486**	5,925
Other	**1,835**	1,831
Total exposure	**$ 210,204**	$ 195,546

Institutional Securities Lending Activities

The Institutional Securities business segment lending activities include Corporate, Secured lending facilities, Commercial and Residential real estate, and Securities-based lending and Other. As of December 31, 2023 and December 31, 2022, over 90% of our total lending exposure, which consists of loans and lending commitments, is investment grade and/or secured by collateral.

Corporate comprises relationship and event-driven loans and lending commitments supporting general and event-driven financing needs for our institutional clients, which typically consist of revolving lines of credit, term loans and bridge loans; may have varying terms; may be senior or subordinated; may be secured or unsecured; are generally contingent upon representations, warranties and contractual conditions applicable to the borrower; and may be syndicated, traded or hedged. Relationship loans and lending commitments are extended to select institutional clients, primarily for general corporate purposes and generally with the intent to hold for the foreseeable future. Event-driven loans and lending commitments are extended in connection with specific client transactions and are explained in further detail in "Institutional Securities Event-Driven Loans and Lending Commitments" herein.

Secured lending facilities include loans provided to clients, which are collateralized by various assets, including residential and commercial real estate mortgage loans, investor commitments for capital calls, corporate loans and other assets. These facilities generally provide for overcollateralization. Credit risk with respect to these loans and lending commitments arises from the failure of a borrower to perform according to the terms of the loan agreement and/or a decline in the underlying collateral value. The Firm monitors collateral levels against the requirements of lending agreements. See Note 15 to the financial statements for information about our securitization activities.

Commercial real estate loans are primarily senior, secured by underlying real estate and are typically in term loan form. In addition, as part of certain of its trading and securitization activities, Institutional Securities may also hold residential real estate loans.

Securities-based lending and Other includes financing extended to sales and trading customers and corporate loans purchased in the secondary market.

Institutional Securities Event-Driven Loans and Lending Commitments

	At December 31, 2023			
	Contractual Years to Maturity			
$ in millions	<1	1-5	5-15	Total
Loans, net of ACL	**$ 1,974**	**$ 2,564**	**$ 2,580**	**$ 7,118**
Lending commitments	**3,564**	**685**	**549**	**4,798**
Total exposure	**$ 5,538**	**$ 3,249**	**$ 3,129**	**$ 11,916**

	At December 31, 2022			
	Contractual Years to Maturity			
$ in millions	<1	1-5	5-15	Total
Loans, net of ACL	$ 2,385	$ 1,441	$ 2,771	$ 6,597
Lending commitments	3,079	861	603	4,543
Total exposure	$ 5,464	$ 2,302	$ 3,374	$ 11,140

Event-driven loans and lending commitments are associated with certain underwritings and/or syndications to finance a specific transaction, such as merger, acquisition, recapitalization or project finance activities. Balances may fluctuate as such lending is related to transactions that vary in timing and size from period to period.

Institutional Securities Loans and Lending Commitments Held for Investment

	At December 31, 2023		
$ in millions	Loans	Lending Commitments	Total
Corporate	**$ 6,758**	**$ 91,752**	**$ 98,510**
Secured lending facilities	**39,498**	**15,589**	**55,087**
Commercial real estate	**8,678**	**266**	**8,944**
Other	**2,818**	**915**	**3,733**
Total, before ACL	**$ 57,752**	**$ 108,522**	**$ 166,274**
ACL	**$ (874)**	**$ (533)**	**$ (1,407)**

	At December 31, 2022		
$ in millions	Loans	Lending Commitments	Total
Corporate	$ 6,589	$ 79,882	$ 86,471
Secured lending facilities	35,606	12,803	48,409
Commercial real estate	8,515	374	8,889
Other	2,865	985	3,850
Total, before ACL	$ 53,575	$ 94,044	$ 147,619
ACL	$ (674)	$ (484)	$ (1,158)

Institutional Securities Commercial Real Estate Loans and Lending Commitments

By Region

	At December 31, 2023			At December 31, 2022		
$ in millions	Loans[1]	LC[1]	Total	Loans[1]	LC[1]	Total
Americas	**$ 5,410**	**$ 289**	**$ 5,699**	$ 6,320	$ 378	$ 6,698
EMEA	**3,127**	**56**	**3,183**	3,040	79	3,119
Asia	**485**	**—**	**485**	445	5	450
Total	**$ 9,022**	**$ 345**	**$ 9,367**	$ 9,805	$ 462	$ 10,267

By Property Type

	At December 31, 2023			At December 31, 2022		
$ in millions	Loans[1]	LC[1]	Total	Loans[1]	LC[1]	Total
Office	**$ 3,310**	**$ 186**	**$ 3,496**	$ 3,861	$ 301	$ 4,162
Industrial	**2,435**	**5**	**2,440**	2,561	25	2,586
Multifamily	**1,715**	**74**	**1,789**	1,889	85	1,974
Retail	**842**	**7**	**849**	659	6	665
Hotel	**718**	**73**	**791**	780	45	825
Other	**2**	**—**	**2**	55	—	55
Total	**$ 9,022**	**$ 345**	**$ 9,367**	$ 9,805	$ 462	$ 10,267

LC–Lending Commitments
1. Amounts include HFI, HFS and FVO loans and lending commitments. HFI loans are presented net of ACL.

The current economic environment and changes in business and consumer behavior have adversely impacted commercial real estate borrowers due to pressure from higher interest rates, tenant lease renewals, and elevated refinancing risks for loans with near-term maturities, among other issues. While we continue to actively monitor all our loan portfolios, the commercial real estate sector remains under heightened focus given the sector's sensitivity to economic and secular factors, credit conditions, and difficulties specific to certain property types, most notably office.

As of December 31, 2023 and December 31, 2022, our lending against commercial real estate ("CRE") properties totaled $9.4 billion and $10.3 billion within the Institutional Securities business segment, which represents 4.5% and 5.3% of total exposure reflected in the Institutional Securities Loans and Lending Commitments table above. Those CRE loans are originated for experienced sponsors and are generally secured by specific institutional CRE properties. In many cases, loans are subsequently syndicated or securitized on a full or partial basis, reducing our ongoing exposure.

In addition to the amounts included in the table above, we provide certain secured lending facilities which are typically collateralized by pooled CRE mortgage loans and are included in Secured lending facilities in the Institutional Securities Loans and Lending Commitments Held for Investment table above. These secured lending facilities benefit from structural protections including cross-collateralization and diversification across property types.

Institutional Securities Allowance for Credit Losses—Loans and Lending Commitments

	Year Ended December 31, 2023				
$ in millions	Corporate	Secured Lending Facilities	CRE	Other	Total
ACL—Loans					
Beginning balance	$ 235	$ 153	$ 275	$ 11	$ 674
Gross charge-offs	**(34)**	**—**	**(129)**	**(1)**	**(164)**
Recoveries	**1**	**—**	**—**	**—**	**1**
Net (charge-offs) recoveries	**(33)**	**—**	**(129)**	**(1)**	**(163)**
Provision (release)	**37**	**—**	**314**	**5**	**356**
Other	**2**	**—**	**3**	**2**	**7**
Ending balance	**$ 241**	**$ 153**	**$ 463**	**$ 17**	**$ 874**
ACL—Lending commitments					
Beginning balance	$ 411	$ 51	$ 15	$ 7	$ 484
Provision (release)	**16**	**18**	**11**	**—**	**45**
Other	**4**	**1**	**—**	**(1)**	**4**
Ending balance	**$ 431**	**$ 70**	**$ 26**	**$ 6**	**$ 533**
Total ending balance	**$ 672**	**$ 223**	**$ 489**	**$ 23**	**$ 1,407**

CRE—Commercial real estate

Institutional Securities HFI Loans—Ratios of Allowance for Credit Losses to Balance before Allowance

	At December 31, 2023	At December 31, 2022
Corporate	**3.6 %**	3.6 %
Secured lending facilities	**0.4 %**	0.4 %
Commercial real estate	**5.3 %**	3.2 %
Securities-based lending and Other	**0.6 %**	0.4 %
Total Institutional Securities loans	**1.5 %**	1.3 %

Wealth Management Loans and Lending Commitments

	At December 31, 2023				
	Contractual Years to Maturity				
$ in millions	<1	1-5	5-15	>15	Total
Securities-based lending and Other loans	**$ 76,923**	**$ 7,679**	**$ 1,494**	**$ 133**	**$ 86,229**
Residential real estate loans	**1**	**91**	**1,255**	**58,950**	**60,297**
Total loans, net of ACL	**$ 76,924**	**$ 7,770**	**$ 2,749**	**$ 59,083**	**$ 146,526**
Lending commitments	**16,312**	**2,937**	**19**	**344**	**19,612**
Total exposure	**$ 93,236**	**$ 10,707**	**$ 2,768**	**$ 59,427**	**$ 166,138**

	At December 31, 2022				
	Contractual Years to Maturity				
$ in millions	<1	1-5	5-15	>15	Total
Securities-based lending and Other loans	$ 80,526	$ 9,371	$ 1,692	$ 140	$ 91,729
Residential real estate loans	1	32	1,375	52,968	54,376
Total loans, net of ACL	$ 80,527	$ 9,403	$ 3,067	$ 53,108	$ 146,105
Lending commitments	12,408	4,501	37	323	17,269
Total exposure	$ 92,935	$ 13,904	$ 3,104	$ 53,431	$ 163,374

The principal Wealth Management business segment lending activities include Securities-based lending and Residential real estate loans.

Securities-based lending allows clients to borrow money against the value of qualifying securities, generally for any purpose other than purchasing, trading or carrying securities or refinancing margin debt. We establish approved credit lines against qualifying securities and monitor limits daily and, pursuant to such guidelines, require customers to deposit additional collateral, or reduce debt positions, when necessary. These credit lines are primarily uncommitted loan facilities, as we reserve the right not to make any advances or may terminate these credit lines at any time. Factors considered in the review of these loans include, but are not limited to, the loan amount, the client's credit profile, the degree of leverage, collateral diversification, price volatility and liquidity of the collateral. Other loans primarily include tailored lending, which typically consist of bespoke lending arrangements provided to ultra-high net worth clients. Securities-based lending and Other loans are generally secured by various types of eligible collateral, including marketable securities, private investments, commercial real estate and other financial assets.

Residential real estate loans consist of first- and second-lien mortgages, including HELOCs. Our underwriting policy is designed to ensure that all borrowers pass an assessment of capacity and willingness to pay, which includes an analysis utilizing industry standard credit scoring models (e.g., FICO scores), debt-to-income ratios and assets of the borrower. LTV ratios are determined based on independent third-party property appraisals and valuations, and security lien positions are established through title and ownership reports. The vast majority of mortgage loans, including HELOCs, are held for investment in the Wealth Management business segment's loan portfolio.

Wealth Management Commercial Real Estate Loans and Lending Commitments by Property Type

	At December 31, 2023			At December 31, 2022		
$ in millions	Loans[1]	LC[1]	Total	Loans[1]	LC[1]	Total
Retail	**$ 2,180**	**$ 3**	**$ 2,183**	$ 2,135	$ 6	$ 2,141
Multifamily	**1,891**	**159**	**2,050**	1,661	142	1,803
Office	**1,736**	**16**	**1,752**	1,675	1	1,676
Industrial	**454**	**—**	**454**	330	—	330
Hotel	**400**	**—**	**400**	419	—	419
Other	**253**	**—**	**253**	183	10	193
Total	**$ 6,914**	**$ 178**	**$ 7,092**	$ 6,403	$ 159	$ 6,562

LC–Lending Commitments
1. Amounts include HFI loans and lending commitments. HFI loans are presented net of ACL.

As of December 31, 2023 and December 31, 2022, our direct lending against CRE totaled $7.1 billion and $6.6 billion within the Wealth Management business segment, which represents 4.3% and 4.0% of total exposure reflected in the Wealth Management Loans and Lending Commitments table above, primarily included within Securities-based lending and Other loans. Such loans are originated through our private banking platform, are both secured and generally benefiting from full or partial guarantees from high or ultra-high net worth clients, which partially reduce associated credit risk. At both December 31, 2023 and December 31, 2022, greater than 95% of the CRE loans balance in the Wealth Management business segment received guarantees. All of our lending against CRE properties within Wealth Management are in the Americas region.

Wealth Management Allowance for Credit Losses—Loans and Lending Commitments

$ in millions	Year Ended December 31, 2023 Residential Real Estate	SBL and Other	Total
ACL—Loans			
Beginning balance	$ 87	$ 78	$ 165
Gross charge-offs	—	(3)	(3)
Recoveries	1	—	1
Net (charge-offs) recoveries	1	(3)	(2)
Provision (release)	13	119	132
Other	(1)	1	—
Ending balance	$ 100	$ 195	$ 295
ACL—Lending commitments			
Beginning balance	$ 4	$ 16	$ 20
Provision (release)	—	(1)	(1)
Other	—	(1)	(1)
Ending balance	$ 4	$ 14	$ 18
Total ending balance	$ 104	$ 209	$ 313

As of December 31, 2023 and December 31, 2022, more than 75% of Wealth Management residential real estate loans were to borrowers with "Exceptional" or "Very Good" FICO scores (i.e., exceeding 740). Additionally, Wealth Management's securities-based lending portfolio remains well-collateralized and subject to daily client margining, which includes requiring customers to deposit additional collateral or reduce debt positions, when necessary.

Customer and Other Receivables

Margin and Other Lending

$ in millions	At December 31, 2023	At December 31, 2022
Institutional Securities	$ 24,208	$ 16,591
Wealth Management	21,436	21,933
Total	$ 45,644	$ 38,524

The Institutional Securities and Wealth Management business segments provide margin lending arrangements that allow customers to borrow against the value of qualifying securities, primarily for the purpose of purchasing additional securities, as well as to collateralize short positions. Institutional Securities primarily includes margin loans in the Equity Financing business. Wealth Management includes margin loans as well as non-purpose securities-based lending on non-bank entities. Amounts may fluctuate from period to period as overall client balances change as a result of market levels, client positioning and leverage.

Credit exposures arising from margin lending activities are generally mitigated by their short-term nature, the value of collateral held and our right to call for additional margin when collateral values decline. However, we could incur losses in the event that the customer fails to meet margin calls and collateral values decline below the loan amount. This risk is elevated in loans backed by collateral pools with significant concentrations in individual issuers or securities with similar risk characteristics. For a further discussion, see "Risk Factors—Credit Risk" herein.

Employee Loans

For information on employee loans and related ACL, see Note 9 to the financial statements.

Derivatives

Fair Value of OTC Derivative Assets

$ in millions	Counterparty Credit Rating[1] AAA	AA	A	BBB	NIG	Total
At December 31, 2023						
Less than 1 year	$ 2,013	$ 16,885	$ 37,517	$ 25,529	$ 10,084	$ 92,028
1-3 years	1,013	7,274	18,451	12,757	7,360	46,855
3-5 years	504	8,897	8,814	5,989	3,825	28,029
Over 5 years	3,955	29,511	50,512	28,003	6,597	118,578
Total, gross	$ 7,485	$ 62,567	$ 115,294	$ 72,278	$ 27,866	$ 285,490
Counterparty netting	(3,691)	(48,821)	(86,826)	(53,178)	(15,888)	(208,404)
Cash and securities collateral	(2,709)	(10,704)	(25,921)	(13,025)	(5,554)	(57,913)
Total, net	$ 1,085	$ 3,042	$ 2,547	$ 6,075	$ 6,424	$ 19,173

$ in millions	Counterparty Credit Rating[1] AAA	AA	A	BBB	NIG	Total
At December 31, 2022						
Less than 1 year	$ 2,903	$ 18,166	$ 40,825	$ 32,373	$ 10,730	$ 104,997
1-3 years	1,818	8,648	17,113	19,365	6,974	53,918
3-5 years	655	6,834	8,632	9,105	4,049	29,275
Over 5 years	4,206	42,613	45,488	46,660	8,244	147,211
Total, gross	$ 9,582	$ 76,261	$ 112,058	$ 107,503	$ 29,997	$ 335,401
Counterparty netting	(4,037)	(60,451)	(79,334)	(85,786)	(17,415)	(247,023)
Cash and securities collateral	(3,632)	(13,402)	(28,776)	(14,457)	(5,198)	(65,465)
Total, net	$ 1,913	$ 2,408	$ 3,948	$ 7,260	$ 7,384	$ 22,913

$ in millions	At December 31, 2023	At December 31, 2022
Industry		
Financials	$ 7,215	$ 6,294
Utilities	4,267	5,656
Regional governments	1,319	2,052
Industrials	937	1,433
Communications services	841	1,051
Consumer discretionary	684	290
Information technology	677	480
Energy	533	2,851
Consumer staples	515	687
Healthcare	468	565
Materials	383	317
Sovereign governments	262	410
Real estate	167	95
Not-for-profit organizations	166	204
Insurance	156	185
Other	583	343
Total	$ 19,173	$ 22,913

1. Counterparty credit ratings are determined internally by the CRM.

We are exposed to credit risk as a dealer in OTC derivatives. Credit risk with respect to derivative instruments arises from the possibility that a counterparty may fail to perform according to the terms of the contract. For a description of our risk mitigation strategies, see "Credit Risk—Risk Mitigation" herein.

Credit Derivatives

A credit derivative is a contract between a seller and buyer of protection against the risk of a credit event occurring on one or more debt obligations issued by a specified reference entity. The buyer typically pays a periodic premium over the life of the contract and is protected for the period. If a credit event occurs, the seller is required to make payment to the beneficiary based on the terms of the credit derivative contract. Credit events, as defined in the contract, may be one or more of the following defined events: bankruptcy, dissolution or insolvency of the referenced entity, failure to pay, obligation acceleration, repudiation, payment moratorium and restructuring.

We trade in a variety of credit derivatives and may either purchase or write protection on a single name or portfolio of referenced entities. In transactions referencing a portfolio of entities or securities, protection may be limited to a tranche of exposure or a single name within the portfolio. We are an active market maker in the credit derivatives markets. As a market maker, we work to earn a bid-offer spread on client flow business and manage any residual credit or correlation risk on a portfolio basis. Further, we use credit derivatives to manage our exposure to residential and commercial mortgage loans and corporate lending exposures. The effectiveness of our CDS protection as a hedge of our exposures may vary depending upon a number of factors, including the contractual terms of the CDS.

We actively monitor our counterparty credit risk related to credit derivatives. A majority of our counterparties are composed of banks, broker-dealers, insurance and other financial institutions. Contracts with these counterparties may include provisions related to counterparty rating downgrades, which may result in the counterparty posting additional collateral to us. As with all derivative contracts, we consider counterparty credit risk in the valuation of our positions and recognize CVAs as appropriate within Trading revenues in the income statement.

For additional credit exposure information on our credit derivative portfolio, see Note 6 to the financial statements.

Country Risk

Country risk exposure is the risk that events in, or that affect, a foreign country (any country other than the U.S.) might adversely affect us. We actively manage country risk exposure through a comprehensive risk management framework that combines credit and other market fundamentals and allows us to effectively identify, monitor and limit country risk.

Our obligor credit evaluation process defines country of risk as the country that has the largest economic impact on the obligor and may be different from the obligor's country of jurisdiction. Examples where this applies may include corporations that are incorporated in one country but that derive the bulk of their revenue from another and mutual funds incorporated in one jurisdiction but with a concentration of investments in a different country.

In addition to the direct country risk reflected in the “Top 10 Non-U.S. Country Exposures” table below, we also have indirect country exposure, for example, from collateral received in secured financing transactions or from providing client clearing services. These indirect exposures are managed through the credit and market risk frameworks.

We conduct periodic stress testing that seeks to measure the impact on our credit and market exposures of shocks stemming from negative economic or political scenarios. When deemed appropriate by our risk managers, the stress test scenarios include possible contagion effects and second order risks. This analysis, and results of the stress tests, may result in the amendment of limits or exposure mitigation.

Our sovereign exposures consist of financial contracts and obligations entered into with sovereign and local governments. Our non-sovereign exposures consist of financial contracts and obligations entered into primarily with corporations and financial institutions.

Index credit derivatives are included in the following “Top 10 Non-U.S. Country Exposures” table. Each reference entity within an index is allocated to that reference entity’s country of risk. Index exposures are allocated to the underlying reference entities in proportion to the notional weighting of each reference entity in the index, adjusted for any fair value receivable or payable for that reference entity. Where credit risk crosses multiple jurisdictions, for example, a CDS purchased from an issuer in a specific country that references bonds issued by an entity in a different country, the fair value of the CDS is reflected in the Net counterparty exposure row based on the country of the CDS issuer. Further, the notional amount of the CDS adjusted for the fair value of the receivable or payable is reflected in the Net inventory row based on the country of the underlying reference entity.

Top 10 Non-U.S. Country Exposures

	At December 31, 2023				
$ in millions	United Kingdom	Korea	France	Brazil	China
Sovereign					
Net inventory[1]	$ (407)	$ 6,475	$ 419	$ 3,630	$ 754
Net counterparty exposure[2]	9	338	—	2	141
Exposure before hedges	(398)	6,813	419	3,632	895
Hedges[3]	(55)	—	(6)	(164)	—
Net exposure	$ (453)	$ 6,813	$ 413	$ 3,468	$ 895
Non-sovereign					
Net inventory[1]	$ 1,335	$ 65	$ 1,524	$ 127	$ 2,022
Net counterparty exposure[2]	6,566	643	2,670	428	136
Loans	8,035	14	858	424	455
Lending commitments	7,966	49	3,166	310	637
Exposure before hedges	23,902	771	8,218	1,289	3,250
Hedges[3]	(1,952)	—	(1,984)	(18)	(1)
Net exposure	$ 21,950	$ 771	$ 6,234	$ 1,271	$ 3,249
Total net exposure	$ 21,497	$ 7,584	$ 6,647	$ 4,739	$ 4,144

$ in millions	Australia	Canada	Spain	India	Germany
Sovereign					
Net inventory[1]	$ 286	$ 264	$ 197	$ 1,563	$ (3,745)
Net counterparty exposure[2]	79	62	—	—	77
Exposure before hedges	365	326	197	1,563	(3,668)
Hedges[3]	—	—	(8)	—	(262)
Net exposure	$ 365	$ 326	$ 189	$ 1,563	$ (3,930)
Non-sovereign					
Net inventory[1]	$ 201	$ 407	$ 330	$ 925	$ 872
Net counterparty exposure[2]	575	1,058	332	950	2,696
Loans	1,696	402	1,952	118	896
Lending commitments	1,093	1,592	1,135	—	4,618
Exposure before hedges	3,565	3,459	3,749	1,993	9,082
Hedges[3]	(14)	(91)	(340)	—	(1,937)
Net exposure	$ 3,551	$ 3,368	$ 3,409	$ 1,993	$ 7,145
Total net exposure	$ 3,916	$ 3,694	$ 3,598	$ 3,556	$ 3,215

1. Net inventory represents exposure to both long and short single-name and index positions (*i.e.*, bonds and equities at fair value and CDS based on a notional amount assuming zero recovery adjusted for the fair value of any receivable or payable).
2. Net counterparty exposure (e.g, repurchase transactions, securities lending and OTC derivatives) is net of the benefit of collateral received and also is net by counterparty when legally enforceable master netting agreements are in place. For more information, see "Additional Information—Top 10 Non-U.S. Country Exposures" herein.
3. Amounts represent net CDS hedges (purchased and sold) on net counterparty exposure and lending executed by trading desks responsible for hedging counterparty and lending credit risk exposures. Amounts are based on the CDS notional amount assuming zero recovery adjusted for the fair value of any receivable or payable. For further description of the contractual terms for purchased credit protection and whether they may limit the effectiveness of our hedges, see "Quantitative and Qualitative Disclosures about Risk—Credit Risk—Derivatives" herein.

Additional Information—Top 10 Non-U.S. Country Exposures

Collateral Held Against Net Counterparty Exposure[1]

$ in millions		At December 31, 2023
Country of Risk	**Collateral[2]**	
United Kingdom	U.K., U.S., and France	$ 7,828
Germany	France, Romania, and Switzerland	4,616
Other	U.S., Spain, and Italy	14,592

1. The benefit of collateral received is reflected in the Top 10 Non-U.S. Country Exposures at December 31, 2023.
2. Primarily consists of cash and government obligations of the countries listed.

Operational Risk

Operational risk refers to the risk of loss, or of damage to our reputation, resulting from inadequate or failed processes or systems, from human factors or from external events (e.g., cyberattacks or third-party vulnerabilities) that may manifest as, for example, loss of information, business disruption, theft and fraud, legal and compliance risks, or damage to physical assets. We may incur operational risk across the full scope of our business activities, including revenue-generating activities and support and control groups (e.g., IT and trade processing).

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

We have implemented operational risk data and assessment systems to monitor and analyze internal and external operational risk events, to assess business environment and internal control factors, and to perform scenario analysis. The collected data elements are incorporated in the operational risk capital model. The model encompasses both quantitative and qualitative elements. Internal loss data and scenario analysis results are direct inputs to the capital model, while external operational incidents, business environment and internal control factors are evaluated as part of the scenario analysis process.

In addition, we employ a variety of risk processes and mitigants to manage our operational risk exposures. These include a governance framework, a comprehensive risk management program and insurance. Operational risks and associated risk exposures are assessed relative to the risk appetite reviewed and confirmed by the Board and are prioritized accordingly.

The breadth and range of operational risk are such that the types of mitigating activities are wide-ranging. Examples of activities include: continuous enhancement of defenses against cyberattacks, use of legal agreements and contracts to transfer and/or limit operational risk exposures, due diligence,

implementation of enhanced policies and procedures, technology change management controls, exception management processing controls, and segregation of duties.

Primary responsibility for the management of operational risk is with the business segments, the control groups and the business managers therein. The business managers maintain processes and controls designed to identify, assess, manage, mitigate and report operational risk. Each of the business segments has a designated operational risk coordinator. The operational risk coordinator regularly reviews operational risk issues and reports to our senior management within each business. Each control group also has a designated operational risk coordinator and a forum for discussing operational risk matters with our senior management. Oversight of operational risk is provided by the Non-Financial Risk Committee, legal entity risk committees, regional risk committees and senior management. In the event of a merger, joint venture, divestiture, reorganization, or creation of a new legal entity, a new product, or a business activity, operational risks are considered, and any necessary changes in processes or controls are implemented.

The Operational Risk Department provides independent oversight of operational risk and assesses, measures and monitors operational risk against appetite. The Operational Risk Department works with the divisions and control groups to embed a transparent, consistent and comprehensive framework for managing operational risk within each area and across the Firm.

The Operational Risk Department scope includes oversight of technology risk, cybersecurity risk, information security risk, the fraud risk management and prevention program, and third-party risk management (supplier and affiliate risk oversight and assessment), among others.

Cybersecurity

For a discussion of our Cybersecurity Program, see “Cybersecurity.”

Firm Resilience

The Firm’s critical processes and businesses could be disrupted by events including cyberattacks, failure or loss of access to technology and/or associated data, military conflicts, acts of terror, natural disasters, severe weather events and infectious disease. The Firm maintains a resilience program designed to provide for operational resilience and enable it to respond to and recover critical processes and supporting assets in the event of a disruption impacting our people, technology, facilities and third parties. The key elements of the Firm’s resilience program include business continuity management, technology disaster recovery, third party resilience and key business service resilience. Resilience testing is performed both internally and with critical third parties to validate recovery capability in accordance with business requirements. The Firm’s resilience program is applied consistently Firmwide and is aligned with regulatory requirements.

Third-Party Risk Management

In connection with our ongoing operations, we utilize the services of third-party suppliers, which we anticipate will continue and may increase in the future. These services include, for example, outsourced processing and support functions and other professional services. Our risk-based approach to managing exposure to these services includes the performance of due diligence, implementation of service-level and other contractual agreements, consideration of operational risks and ongoing monitoring of third-party suppliers’ performance. We maintain and continue to enhance our third-party risk management program, which is designed to align with our risk tolerance and meet regulatory requirements. The program includes appropriate governance, policies, procedures and enabling technology. The third-party risk management program includes the adoption of appropriate risk management controls and practices throughout the third-party management life cycle to manage risk of service failure, risk of data loss and reputational risk, among others.

Model Risk

Model risk refers to the potential for adverse consequences from decisions based on incorrect or misused model outputs. Model risk can lead to financial loss, poor business and strategic decision-making or damage to our reputation. The risk inherent in a model is a function of the materiality, complexity and uncertainty around inputs and assumptions.

Model risk is generated from the use of models impacting financial statements, regulatory filings, capital adequacy assessments and the formulation of strategy.

Sound model risk management is an integral part of our Risk Management Framework. The Model Risk Management Department (“MRM”) is a distinct department in Risk Management responsible for the oversight of model risk.

The MRM establishes a model risk tolerance in line with our risk appetite. The tolerance is based on an assessment of the materiality of the risk of financial loss or reputational damage due to errors in design, implementation and/or inappropriate use of models. The tolerance is monitored through model-specific and aggregate business-level assessments, which are based upon qualitative and quantitative factors.

The effective challenge of models consists of critical analysis by objective, informed parties who can identify model limitations and assumptions and drive appropriate changes. The MRM provides effective challenge of models, independently validates and approves models for use, annually recertifies models, periodically revalidates, identifies and tracks remediation plans for model limitations and reports on model risk metrics. The department also oversees the

development of controls to support a complete and accurate Firmwide model inventory.

Liquidity Risk

Liquidity risk refers to the risk that we will be unable to finance our operations due to a loss of access to the capital markets or difficulty in liquidating our assets. Liquidity risk also encompasses our ability (or perceived ability) to meet our financial obligations without experiencing significant business disruption or reputational damage that may threaten our viability as a going concern. Liquidity risk also encompasses the associated funding risks triggered by the market or idiosyncratic stress events that may negatively affect our liquidity and may impact our ability to raise new funding. Generally, we incur liquidity and funding risk as a result of our trading, lending, investing and client facilitation activities.

Our Liquidity Risk Management Framework is critical to helping ensure that we maintain sufficient liquidity reserves and durable funding sources to meet our daily obligations and to withstand unanticipated stress events. The Liquidity Risk Department is a distinct area in Risk Management responsible for the oversight and monitoring of liquidity risk. The Liquidity Risk Department ensures transparency of material liquidity and funding risks, compliance with established risk limits and escalation of risk concentrations to appropriate senior management.

To execute these responsibilities, the Liquidity Risk Department establishes limits in line with our risk appetite, identifies and analyzes emerging liquidity and funding risks to ensure such risks are appropriately mitigated, monitors and reports risk exposures against metrics and limits, and reviews the methodologies and assumptions underpinning our Liquidity Stress Tests to ensure sufficient liquidity and funding under a range of adverse scenarios.

The Treasury Department and applicable business units have primary responsibility for evaluating, monitoring and controlling the liquidity and funding risks arising from our business activities and for maintaining processes and controls to manage the key risks inherent in their respective areas. The Liquidity Risk Department coordinates with the Treasury Department and these business units to help ensure a consistent and comprehensive framework for managing liquidity and funding risk across the Firm. See also “Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources” herein.

Legal, Regulatory and Compliance Risk

Legal, regulatory and compliance risk includes the risk of legal or regulatory sanctions, material financial loss, including fines, penalties, judgments, damages and/or settlements, limitations on our business, or loss to reputation that we may suffer as a result of failure to comply with laws, regulations, rules, related self-regulatory organization standards and codes of conduct applicable to our business activities. This risk also includes contractual and commercial risk, such as the risk that a counterparty’s performance obligations will be unenforceable. It also includes compliance with AML, terrorist financing, and anti-corruption rules and regulations. We are generally subject to extensive regulation in the different jurisdictions in which we conduct our business (see also “Business—Supervision and Regulation” and “Risk Factors”).

We have established procedures based on legal and regulatory requirements on a worldwide basis that are designed to facilitate compliance with applicable statutory and regulatory requirements and to require that our policies relating to business conduct, ethics and practices are followed globally. In addition, we have established procedures to mitigate the risk that a counterparty’s performance obligations will be unenforceable, including consideration of counterparty legal authority and capacity, adequacy of legal documentation, the permissibility of a transaction under applicable law and whether applicable bankruptcy or insolvency laws limit or alter contractual remedies. The heightened legal and regulatory focus on the financial services and banking industries globally presents a continuing business challenge for us.

Climate Risk

Climate change manifests as physical and transition risks. The physical risks of climate change include harm to people and property arising from acute climate-related events, such as floods, hurricanes, heatwaves, droughts and wildfires, and chronic, longer-term shifts in climate patterns, such as higher global average temperatures, rising sea levels and long-term droughts. The transition risk of climate change include policy, legal, technology and market changes. Examples of these transition risks include changes in consumer behavior and business sentiment, related technologies, shareholder preferences and any additional regulatory and legislative requirements, including increased disclosure or carbon taxes.

Climate risk, which is not expected to have a significant effect on our consolidated results of operations or financial condition in the near term, is an overarching risk that can impact other categories of risk. Physical risk may lead to increased credit risk by diminishing borrowers’ repayment capacity or impacting the value of collateral. In addition, physical risk could pose increased operational risk to our facilities and people. The impacts of transition risk may lead to and amplify credit, market or liquidity risk by reducing our customers’ operating income or the value of their assets as well as exposing us to reputational, compliance and/or litigation risk due to increased legal and regulatory scrutiny or negative public sentiment.

As climate risk is interconnected with other risk types, we have developed and continue to enhance processes to embed climate risk considerations into our risk management

practices and governance structures. The BRC oversees Firmwide risks, which include climate risk, and, as part of its oversight, receives updates on our risk management approach to climate risk, including our approaches toward scenario analysis and integration of climate risk into our existing risk management processes. Our climate risk management efforts are overseen by the Climate Risk Committee, which is co-chaired by our Chief Risk Officer and Chief Sustainability Officer and shapes our approach to managing climate-related risks in line with our overall risk framework.

Financial Statements and Supplementary Data

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Morgan Stanley:

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Morgan Stanley and subsidiaries (the "Firm") as of December 31, 2023 and 2022, the related consolidated income statements, comprehensive income statements, cash flow statements and statements of changes in total equity for each of the three years in the period ended December 31, 2023, and the related notes (collectively referred to as the "financial statements"). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Firm as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Firm's internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission and our report dated February 22, 2024, expressed an unqualified opinion on the Firm's internal control over financial reporting.

Basis for Opinion

These financial statements are the responsibility of the Firm's management. Our responsibility is to express an opinion on the Firm's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Firm 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 audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the 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 financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current-period audit of the financial statements that was communicated or required to be communicated to the audit committee and that (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Valuation of Level 3 Financial Assets and Liabilities Carried at Fair Value on a Recurring Basis and Level 3 Loans Held for Sale — Refer to Note 4 to the financial statements

Critical Audit Matter Description

The Firm's trading and financing activities result in the Firm carrying material financial instruments having limited price transparency. These financial instruments can span a broad array of product types and generally include derivatives, securities, loans, and borrowings. As described in Note 4, these Level 3 financial assets and liabilities carried at fair value on a recurring basis approximate $9.3 billion and $6.2 billion, respectively, and the Level 3 loans held for sale approximate $6.7 billion at December 31, 2023. Unlike financial instruments whose inputs are readily observable and, therefore, more easily independently corroborated, the valuation of these financial instruments is inherently subjective and often involves the use of unobservable inputs and proprietary valuation models whose underlying algorithms and valuation methodologies are complex.

We identified the valuation of Level 3 financial assets and liabilities carried at fair value on a recurring basis and Level 3 loans held for sale as a critical audit matter given the Firm uses complex valuation models and/or valuation inputs that are not observable in the marketplace to determine the respective carrying values. Performing our audit procedures to evaluate the appropriateness of these models and inputs involved a high degree of auditor judgment, professionals with specialized skills and knowledge, and an increased extent of testing.

How the Critical Audit Matter Was Addressed in the Audit

Our audit procedures related to the valuation of Level 3 financial assets and liabilities carried at fair value on a recurring basis and Level 3 loans held for sale included the following, among others:

- We tested the design and operating effectiveness of the Firm's model review and price verification controls. The Firm maintains these internal controls to assess the appropriateness

of its valuation methodologies and the relevant inputs and assumptions.

- We independently evaluated the appropriateness of management's valuation methodologies, for selected financial instruments, including the input assumptions, considering the expected assumptions of other market participants and external data when available.
- We developed independent estimates for selected financial instruments, using externally sourced inputs and independent valuation models, and used such estimates to further evaluate management's estimates. For certain of our selected financial instruments, this included a comparison to the Firm's estimates for similar transactions and an evaluation of the Firm's assumptions inclusive of the inputs, as applicable.
- We tested the revenues arising from the trade date fair value estimates for selected structured transactions for which we developed independent fair value estimates to test the valuation inputs and assumptions used by the Firm and evaluated whether these methods were consistent with the Firm's relevant valuation policies.
- We assessed the consistency by which management has applied significant and unobservable valuation assumptions used in developing the Firm's estimates.
- We performed a retrospective assessment of management's fair value estimates for certain of our selected financial instruments, for which there were events or transactions occurring after the valuation date. We did so by comparing management's estimates to the relevant evidence provided by such events or transactions, as applicable.

/s/ Deloitte & Touche LLP
New York, New York
February 22, 2024

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

Consolidated Income Statement

Morgan Stanley

in millions, except per share data	2023	2022	2021
Revenues			
Investment banking	**$ 4,948**	$ 5,599	$ 10,994
Trading	**15,263**	13,928	12,810
Investments	**573**	15	1,376
Commissions and fees	**4,537**	4,938	5,521
Asset management	**19,617**	19,578	19,967
Other	**975**	283	1,042
Total non-interest revenues	**45,913**	44,341	51,710
Interest income	**50,281**	21,595	9,411
Interest expense	**42,051**	12,268	1,366
Net interest	**8,230**	9,327	8,045
Net revenues	**54,143**	53,668	59,755
Provision for credit losses	**532**	280	4
Non-interest expenses			
Compensation and benefits	**24,558**	23,053	24,628
Brokerage, clearing and exchange fees	**3,476**	3,458	3,341
Information processing and communications	**3,775**	3,493	3,119
Professional services	**3,058**	3,070	2,933
Occupancy and equipment	**1,895**	1,729	1,725
Marketing and business development	**898**	905	643
Other	**4,138**	3,591	3,694
Total non-interest expenses	**41,798**	39,299	40,083
Income before provision for income taxes	**11,813**	14,089	19,668
Provision for income taxes	**2,583**	2,910	4,548
Net income	**$ 9,230**	$ 11,179	$ 15,120
Net income applicable to noncontrolling interests	**143**	150	86
Net income applicable to Morgan Stanley	**$ 9,087**	$ 11,029	$ 15,034
Preferred stock dividends	**557**	489	468
Earnings applicable to Morgan Stanley common shareholders	**$ 8,530**	$ 10,540	$ 14,566
Earnings per common share			
Basic	**$ 5.24**	$ 6.23	$ 8.16
Diluted	**5.18**	6.15	8.03
Average common shares outstanding			
Basic	**1,628**	1,691	1,785
Diluted	**1,646**	1,713	1,814

Consolidated Comprehensive Income Statement

$ in millions	2023	2022	2021
Net income	**$ 9,230**	$ 11,179	$ 15,120
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	**(20)**	(337)	(331)
Change in net unrealized gains (losses) on available-for-sale securities	**1,098**	(4,437)	(1,542)
Pension and other	**(87)**	43	(53)
Change in net debt valuation adjustment	**(1,290)**	1,502	696
Net change in cash flow hedges	**20**	(4)	—
Total other comprehensive income (loss)	**$ (279)**	$ (3,233)	$ (1,230)
Comprehensive income	**$ 8,951**	$ 7,946	$ 13,890
Net income applicable to noncontrolling interests	**143**	150	86
Other comprehensive income (loss) applicable to noncontrolling interests	**(111)**	(82)	(90)
Comprehensive income applicable to Morgan Stanley	**$ 8,919**	$ 7,878	$ 13,894

Consolidated Balance Sheet

Morgan Stanley

$ in millions, except share data	At December 31, 2023	At December 31, 2022
Assets		
Cash and cash equivalents	**$ 89,232**	$ 128,127
Trading assets at fair value (**$162,698** and $124,411 were pledged to various parties)	**367,074**	301,315
Investment securities:		
Available-for-sale at fair value (amortized cost of **$92,149** and $89,772)	**88,113**	84,297
Held-to-maturity (fair value of **$57,453** and $65,006)	**66,694**	75,634
Securities purchased under agreements to resell (includes **$7** and $8 at fair value)	**110,740**	113,907
Securities borrowed	**121,091**	133,374
Customer and other receivables	**80,105**	78,540
Loans:		
Held for investment (net of allowance for credit losses of **$1,169** and $839)	**203,385**	198,997
Held for sale	**15,255**	14,788
Goodwill	**16,707**	16,652
Intangible assets (net of accumulated amortization of **$4,847** and $4,253)	**7,055**	7,618
Other assets	**28,242**	26,982
Total assets	**$ 1,193,693**	$ 1,180,231
Liabilities		
Deposits (includes **$6,472** and $4,796 at fair value)	**$ 351,804**	$ 356,646
Trading liabilities at fair value	**151,513**	154,438
Securities sold under agreements to repurchase (includes **$1,020** and $864 at fair value)	**62,651**	62,534
Securities loaned	**15,057**	15,679
Other secured financings (includes **$9,899** and $4,550 at fair value)	**12,655**	8,158
Customer and other payables	**208,148**	216,134
Other liabilities and accrued expenses	**28,151**	27,353
Borrowings (includes **$93,900** and $78,720 at fair value)	**263,732**	238,058
Total liabilities	**1,093,711**	1,079,000
Commitments and contingent liabilities (see Note 14)		
Equity		
Morgan Stanley shareholders' equity:		
Preferred stock	**8,750**	8,750
Common stock, $0.01 par value:		
Shares authorized: **3,500,000,000**; Shares issued: **2,038,893,979**; Shares outstanding: **1,626,828,437** and 1,675,487,409	**20**	20
Additional paid-in capital	**29,832**	29,339
Retained earnings	**97,996**	94,862
Employee stock trusts	**5,314**	4,881
Accumulated other comprehensive income (loss)	**(6,421)**	(6,253)
Common stock held in treasury at cost, $0.01 par value (**412,065,542** and 363,406,570 shares)	**(31,139)**	(26,577)
Common stock issued to employee stock trusts	**(5,314)**	(4,881)
Total Morgan Stanley shareholders' equity	**99,038**	100,141
Noncontrolling interests	**944**	1,090
Total equity	**99,982**	101,231
Total liabilities and equity	**$ 1,193,693**	$ 1,180,231

Consolidated Statement of Changes in Total Equity

Morgan Stanley

$ in millions	**2023**	2022	2021
Preferred Stock			
Beginning balance	$ 8,750	$ 7,750	$ 9,250
Issuance of preferred stock	**—**	1,000	1,300
Redemption of preferred stock	**—**	—	(2,800)
Ending balance	**8,750**	8,750	7,750
Common Stock			
Beginning and ending balance	**20**	20	20
Additional Paid-in Capital			
Beginning balance	29,339	28,841	25,546
Share-based award activity	**493**	503	1,117
Issuance of preferred stock	**—**	(6)	(25)
Issuance of common stock for the acquisition of Eaton Vance	**—**	—	2,185
Other net increases (decreases)	**—**	1	18
Ending balance	**29,832**	29,339	28,841
Retained Earnings			
Beginning balance	94,862	89,432	78,694
Net income applicable to Morgan Stanley	**9,087**	11,029	15,034
Preferred stock dividends[1]	**(557)**	(489)	(468)
Common stock dividends[1]	**(5,393)**	(5,108)	(3,818)
Other net increases (decreases)	**(3)**	(2)	(10)
Ending balance	**97,996**	94,862	89,432
Employee Stock Trusts			
Beginning balance	4,881	3,955	3,043
Share-based award activity	**433**	926	912
Ending balance	**5,314**	4,881	3,955
Accumulated Other Comprehensive Income (Loss)			
Beginning balance	(6,253)	(3,102)	(1,962)
Net change in Accumulated other comprehensive income (loss)	**(168)**	(3,151)	(1,140)
Ending balance	**(6,421)**	(6,253)	(3,102)
Common Stock Held in Treasury at Cost			
Beginning balance	(26,577)	(17,500)	(9,767)
Share-based award activity	**1,654**	1,794	1,210
Repurchases of common stock and employee tax withholdings	**(6,216)**	(10,871)	(12,075)
Issuance of common stock for the acquisition of Eaton Vance	**—**	—	3,132
Ending balance	**(31,139)**	(26,577)	(17,500)
Common Stock Issued to Employee Stock Trusts			
Beginning balance	(4,881)	(3,955)	(3,043)
Share-based award activity	**(433)**	(926)	(912)
Ending balance	**(5,314)**	(4,881)	(3,955)
Noncontrolling Interests			
Beginning balance	1,090	1,157	1,368
Net income applicable to noncontrolling interests	**143**	150	86
Net change in Accumulated other comprehensive income (loss) applicable to noncontrolling interests	**(111)**	(82)	(90)
Other net increases (decreases)	**(178)**	(135)	(207)
Ending balance	**944**	1,090	1,157
Total Equity	**$ 99,982**	$ 101,231	$ 106,598

1. See Note 17 for information regarding dividends per share for each class of stock.

Consolidated Cash Flow Statement

$ in millions	**2023**	2022	2021
Cash flows from operating activities			
Net income	**$ 9,230**	$ 11,179	$ 15,120
Adjustments to reconcile net income to net cash provided by (used for) operating activities:			
Deferred income taxes	**(463)**	(849)	4
Stock-based compensation expense	**1,709**	1,875	2,085
Depreciation and amortization	**4,256**	3,998	4,216
Provision for credit losses	**532**	280	4
Other operating adjustments	**308**	618	(147)
Changes in assets and liabilities:			
Trading assets, net of Trading liabilities	**(61,026)**	(39,422)	9,075
Securities borrowed	**12,283**	(3,661)	(17,322)
Securities loaned	**(622)**	3,380	4,568
Customer and other receivables and other assets	**602**	14,664	774
Customer and other payables and other liabilities	**(3,629)**	(4,897)	7,758
Securities purchased under agreements to resell	**3,167**	6,092	(3,765)
Securities sold under agreements to repurchase	**117**	346	11,601
Net cash provided by (used for) operating activities	**(33,536)**	(6,397)	33,971
Cash flows from investing activities			
Proceeds from (payments for):			
Other assets—Premises, equipment and software	**(3,412)**	(3,078)	(2,308)
Changes in loans, net	**(4,059)**	(23,652)	(36,106)
AFS securities:			
Purchases	**(23,078)**	(24,602)	(42,469)
Proceeds from sales	**5,929**	22,014	20,652
Proceeds from paydowns and maturities	**14,316**	13,435	26,375
HTM securities:			
Purchases	**—**	(5,231)	(27,102)
Proceeds from paydowns and maturities	**8,143**	9,829	14,541
Cash paid as part of the Eaton Vance acquisition, net of cash acquired	**—**	—	(2,648)
Other investing activities	**(923)**	(347)	(832)
Net cash provided by (used for) investing activities	**(3,084)**	(11,632)	(49,897)
Cash flows from financing activities			
Net proceeds from (payments for):			
Other secured financings	**796**	(884)	(625)
Deposits	**(5,075)**	1,659	36,897
Issuance of preferred stock, net of issuance costs	**—**	994	1,275
Proceeds from issuance of Borrowings	**78,424**	72,460	90,273
Payments for:			
Borrowings	**(64,805)**	(34,898)	(70,124)
Repurchases of common stock and employee tax withholdings	**(6,178)**	(10,871)	(12,075)
Cash dividends	**(5,763)**	(5,401)	(4,171)
Other financing activities	**(125)**	(345)	97
Net cash provided by (used for) financing activities	**(2,726)**	22,714	41,547
Effect of exchange rate changes on cash and cash equivalents	**451**	(4,283)	(3,550)
Net increase (decrease) in cash and cash equivalents	**(38,895)**	402	22,071
Cash and cash equivalents, at beginning of period	**128,127**	127,725	105,654
Cash and cash equivalents, at end of period	**$ 89,232**	$ 128,127	$ 127,725
Supplemental Disclosure of Cash Flow Information			
Cash payments for:			
Interest	**$ 41,940**	$ 9,819	$ 1,303
Income taxes, net of refunds	**2,035**	4,147	4,231

1. Introduction and Basis of Presentation

The Firm

Morgan Stanley is a global financial services firm that maintains significant market positions in each of its business segments—Institutional Securities, Wealth Management and Investment Management. Morgan Stanley, through its subsidiaries and affiliates, provides a wide variety of products and services to a large and diversified group of clients and customers, including corporations, governments, financial institutions and individuals. Unless the context otherwise requires, the terms "Morgan Stanley" or the "Firm" mean Morgan Stanley (the "Parent Company") together with its consolidated subsidiaries. See the "Glossary of Common Terms and Acronyms" for the definition of certain terms and acronyms used throughout this Form 10-K.

A description of the clients and principal products and services of each of the Firm's business segments is as follows:

Institutional Securities provides a variety of products and services to corporations, governments, financial institutions and ultra-high net worth clients. Investment Banking services consist of capital raising and financial advisory services, including the underwriting of debt, equity securities and other products, as well as advice on mergers and acquisitions, restructurings and project finance. Our Equity and Fixed Income businesses include sales, financing, prime brokerage, market-making, Asia wealth management services and certain business-related investments. Lending activities include originating corporate loans and commercial real estate loans, providing secured lending facilities, and extending securities-based and other financing to customers. Other activities include research.

Wealth Management provides a comprehensive array of financial services and solutions to individual investors and small to medium-sized businesses and institutions covering: financial advisor-led brokerage, custody, administrative and investment advisory services; self-directed brokerage services; financial and wealth planning services; workplace services, including stock plan administration; securities-based lending, residential real estate loans and other lending products; banking; and retirement plan services.

Investment Management provides a broad range of investment strategies and products that span geographies, asset classes, and public and private markets to a diverse group of clients across institutional and intermediary channels. Strategies and products, which are offered through a variety of investment vehicles, include equity, fixed income, alternatives and solutions, and liquidity and overlay services. Institutional clients include defined benefit/defined contribution plans, foundations, endowments, government entities, sovereign wealth funds, insurance companies, third-party fund sponsors and corporations. Individual clients are generally served through intermediaries, including affiliated and non-affiliated distributors.

Basis of Financial Information

The financial statements are prepared in accordance with U.S. GAAP, which requires the Firm to make estimates and assumptions regarding the valuations of certain financial instruments, the valuations of goodwill and intangible assets, the outcome of legal and tax matters, deferred tax assets, ACL, and other matters that affect its financial statements and related disclosures. The Firm believes that the estimates utilized in the preparation of its financial statements are prudent and reasonable. Actual results could differ materially from these estimates.

The Notes are an integral part of the Firm's financial statements. The Firm has evaluated subsequent events for adjustment to or disclosure in these financial statements through the date of this report and has not identified any recordable or disclosable events not otherwise reported in these financial statements or the notes thereto.

Consolidation

The financial statements include the accounts of the Firm, its wholly owned subsidiaries and other entities in which the Firm has a controlling financial interest, including certain VIEs (see Note 15). Intercompany balances and transactions have been eliminated. For consolidated subsidiaries that are not wholly owned, the third-party holdings of equity interests are referred to as Noncontrolling interests. The net income attributable to Noncontrolling interests for such subsidiaries is presented as Net income applicable to noncontrolling interests in the income statement. The portion of shareholders' equity that is attributable to Noncontrolling interests for such subsidiaries is presented as Noncontrolling interests, a component of Total equity, in the balance sheet.

For entities where the total equity investment at risk is sufficient to enable the entity to finance its activities without additional subordinated financial support and the equity holders bear the residual economic risks and returns of the entity and have the power to direct the activities of the entity that most significantly affect its economic performance, the Firm consolidates those entities it controls either through a majority voting interest or otherwise. For VIEs (i.e., entities that do not meet the aforementioned criteria), the Firm consolidates those entities where it has the power to make the decisions that most significantly affect the economic performance of the VIE and has the obligation to absorb losses or the right to receive benefits that could potentially be significant to the VIE.

For investments in entities in which the Firm does not have a controlling financial interest but has significant influence over operating and financial decisions, it applies the equity method of accounting with net gains and losses recorded within Other

revenues (see Note 11) unless the Firm has elected to measure the investment at fair value, in which case net gains and losses are recorded within Investments revenues (see Note 5).

Equity and partnership interests held by entities qualifying for accounting purposes as investment companies are carried at fair value.

The Firm's significant regulated U.S. and international subsidiaries include:

- Morgan Stanley & Co. LLC ("MS&Co."),
- Morgan Stanley Smith Barney LLC ("MSSB"),
- Morgan Stanley Europe SE ("MSESE"),
- Morgan Stanley & Co. International plc ("MSIP"),
- Morgan Stanley Capital Services LLC ("MSCS"),
- Morgan Stanley Capital Group Inc. ("MSCG"),
- Morgan Stanley MUFG Securities Co., Ltd. ("MSMS"),
- Morgan Stanley Bank, N.A. ("MSBNA") and
- Morgan Stanley Private Bank, National Association ("MSPBNA").

For further information on the Firm's significant regulated U.S. and international subsidiaries, see Note 16.

2. Significant Accounting Policies

Revenue Recognition

Revenues are recognized when the promised goods or services are delivered to our customers in an amount that is based on the consideration the Firm expects to receive in exchange for those goods or services when such amounts are not probable of significant reversal.

Investment Banking

Revenues from investment banking activities consist of revenues earned from underwriting, primarily equity and fixed income securities and loan syndications, and advisory fees, primarily for mergers, acquisitions and restructurings.

Underwriting revenues are generally recognized on trade date if there is no uncertainty or contingency related to the amount to be paid. Underwriting costs are deferred and recognized in the relevant non-interest expenses line items when the related underwriting revenues are recorded.

Advisory fees are recognized as advice is provided to the client, based on the estimated progress of work and when revenues are not probable of a significant reversal. Advisory costs are recognized as incurred in the relevant non-interest expenses line items, including those reimbursed.

Commissions and Fees

Commission and fee revenues generally result from transaction-based arrangements in which the client is charged a fee for the execution of transactions. Such revenues primarily arise from transactions in equity securities; services related to sales and trading activities; and sales of mutual funds, alternative funds, futures, insurance products and options, as well as revenues from order flow payments for directing customer orders to broker-dealers, exchanges and market centers for execution. Commission and fee revenues are recognized on trade date when the performance obligation is satisfied.

Asset Management Revenues

Asset management, distribution and administration fees are generally based on related asset levels, such as the AUM of a customer's account or the net asset value of a fund. These fees are generally recognized when services are performed and the value of the assets is known. Management fees are reduced by estimated fee waivers and expense caps, if any, provided to the customer.

Performance-based fees not in the form of carried interest are recorded when the annual performance target is met and the revenues are not probable of a significant reversal.

Sales commissions paid by the Firm in connection with the sale of certain classes of shares of its open-end mutual fund products are accounted for as deferred commission assets and amortized to Other expenses over the expected life of the contract. The Firm periodically tests deferred commission assets for recoverability based on cash flows expected to be received in future periods. Other asset management and distribution costs are recognized as incurred in the relevant non-interest expenses line items.

Investments Revenues—Carried Interest

The Firm is entitled to receive performance-based fees in the form of carried interest when the return in certain funds exceeds specified performance targets. When the Firm earns carried interest from funds as specified performance thresholds are met, that carried interest and any related general or limited partner interest are accounted for under the equity method of accounting and measured based on the Firm's claim on the NAV of the fund at the reporting date, taking into account the distribution terms applicable to the interest held. Such items are reflected within Investments revenues.

See Note 22 for information regarding the net cumulative unrealized amount of performance-based fee revenues at risk of reversal. See Note 14 for information regarding general partner guarantees, which include potential obligations to return performance fee distributions previously received.

Other Items

Revenues from certain commodities-related contracts are recognized in Trading revenues when the Firm has transferred control over the promised goods or services to the customer.

Receivables from contracts with customers are recognized in Customer and other receivables in the balance sheet when the

underlying performance obligations have been satisfied and the Firm has the right per the contract to bill the customer. Contract assets are recognized in Other assets when the Firm has satisfied its performance obligations but customer payment is conditional on something other than the passage of time. Contract liabilities are recognized in Other liabilities and accrued expenses when the Firm has collected payment from a customer based on the terms of the contract but the underlying performance obligations are not yet satisfied.

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

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

Cash and Cash Equivalents

Cash and cash equivalents consist of Cash and due from banks and Interest-bearing deposits with banks. Cash equivalents are highly liquid investments with remaining maturities of three months or less from the acquisition date that are readily convertible to cash and are not held for trading purposes.

Cash and cash equivalents also include Restricted cash, such as cash segregated in compliance with federal or other regulations, including minimum reserve requirements set by the Federal Reserve Bank and other central banks, and the Firm's initial margin deposited with clearing organizations.

Fair Value of Financial Instruments

Instruments within Trading assets and Trading liabilities are measured at fair value, either as required or allowed by accounting guidance. These financial instruments primarily represent the Firm's trading and investment positions and include both cash and derivative products. In addition, securities classified as Available-for-Sale ("AFS") are measured at fair value.

Gains and losses on instruments carried at fair value are reflected in Trading revenues, Investments revenues or Investment banking revenues in the income statement, except for gains and losses related to AFS securities (see "AFS Investment Securities" section herein and Note 7) and derivatives accounted for as hedges, as well as economic derivative hedges associated with certain held-for-sale and held-for-investment corporate loans and lending commitments (see "Hedge Accounting" and "Other Hedges" herein and Note 6).

Interest income and interest expense are recorded within the income statement depending on the nature of the instrument and related market conventions. When interest is included as a component of the instruments' fair value, interest is recorded within Trading revenues or Investments revenues. Otherwise, it is recorded within Interest income or Interest expense. Dividend income is recorded in Trading revenues or Investments revenues depending on the business activity.

The fair value of OTC financial instruments, including derivative contracts related to financial instruments and commodities, is presented in the accompanying balance sheet on a net-by-counterparty basis, when appropriate. Additionally, the Firm nets the fair value of cash collateral paid or received against the fair value amounts recognized for net derivative positions executed with the same counterparty under the same master netting agreement.

Fair Value Option

The Firm has elected to measure certain eligible instruments at fair value, including Securities purchased under agreements to resell, Loans and lending commitments, equity method investments and certain other assets, Deposits, Securities sold under agreements to repurchase, Other secured financings and Borrowings.

Fair Value Measurement—Definition and Hierarchy

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

Fair value is a market-based measure considered from the perspective of a market participant rather than an entity-specific measure. Therefore, even when market assumptions are not readily available, assumptions are set to reflect those that the Firm believes market participants would use in pricing the asset or liability at the measurement date. Where the Firm manages a group of financial assets, financial liabilities, and nonfinancial items accounted for as derivatives on the basis of its net exposure to either market risks or credit risk, the Firm measures the fair value of that group of financial instruments consistently with how market participants would price the net risk exposure at the measurement date.

In determining fair value, the Firm uses various valuation approaches and establishes a hierarchy for inputs used in measuring fair value that requires the most observable inputs be used when available.

Observable inputs are inputs that market participants would use in pricing the asset or liability that were developed based on market data obtained from sources independent of the Firm. Unobservable inputs are inputs that reflect assumptions the Firm believes other market participants would use in pricing the asset or liability that are developed based on the best information available in the circumstances. The fair value hierarchy is broken down into three levels based on the observability of inputs as follows, with Level 1 being the highest and Level 3 being the lowest level:

Level 1. Valuations based on quoted prices in active markets that the Firm has the ability to access for identical assets or liabilities. Valuation adjustments, block discounts and discounts for entity-specific and contractual restrictions that would not transfer to market participants are not applied to Level 1 instruments. Since valuations are based on quoted prices that are readily and regularly available in an active market, valuation of these products does not entail a significant degree of judgment.

Level 2. Valuations based on quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in inactive markets, significant market inputs other than quoted prices that are observable for the asset or liability, or market-corroborated inputs.

Level 3. Valuations based on inputs that are unobservable and significant to the overall fair value measurement.

The availability of observable inputs can vary from product to product and is affected by a wide variety of factors, including the type of product, whether the product is new and not yet established in the marketplace, the liquidity of markets and other characteristics particular to the product. To the extent that valuation is based on models or inputs that are less observable or unobservable in the market, the determination of fair value requires more judgment. Accordingly, the degree of judgment exercised by the Firm in determining fair value is greatest for instruments categorized in Level 3 of the fair value hierarchy.

The Firm considers prices and inputs that are current as of the measurement date, including during periods of market dislocation. In periods of market dislocation, the observability of prices and inputs may be reduced for many instruments. This condition could cause an instrument to be reclassified from Level 1 to Level 2 or from Level 2 to Level 3 of the fair value hierarchy.

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

Valuation Techniques

Many cash instruments and OTC derivative contracts have bid and ask prices that can be observed in the marketplace. Bid prices reflect the highest price that a party is willing to pay for an asset. Ask prices represent the lowest price that a party is willing to accept for an asset. The Firm carries positions at the point within the bid-ask range that meets its best estimate of fair value. For offsetting positions in the same financial instrument, the same price within the bid-ask spread is used to measure both the long and short positions.

Fair value for many cash instruments and OTC derivative contracts is derived using pricing models. Pricing models take into account the contract terms, as well as multiple inputs, including, where applicable, commodity prices, equity prices, interest rate yield curves, credit curves, correlation, creditworthiness of the counterparty, creditworthiness of the Firm, option volatility and currency rates.

Where appropriate, valuation adjustments are made to account for various factors such as liquidity risk (bid-ask adjustments), credit quality, model uncertainty, and concentration risk and funding in order to arrive at fair value. Adjustments for liquidity risk adjust model-derived mid-market amounts of Level 2 and Level 3 financial instruments for the bid-mid or mid-ask spread required to properly reflect the exit price of a risk position. Bid-mid and mid-ask spreads are marked to levels observed in trade activity, broker quotes or other external third-party data. Where these spreads are unobservable for the particular position in question, spreads are derived from observable levels of similar positions.

The Firm applies credit-related valuation adjustments to its Borrowings for which the fair value option was elected and to OTC derivatives. The Firm considers the impact of changes in its own credit spreads based upon observations of the secondary bond market spreads when measuring the fair value for Borrowings.

For OTC derivatives, which are recognized in Trading assets at fair value in the balance sheet, the impact of changes in both the Firm's and the counterparty's credit rating is considered when measuring fair value. In determining the expected exposure, the Firm simulates the distribution of the future exposure to a counterparty, then applies market-based default probabilities to the future exposure, leveraging external third-party CDS spread data. Where CDS spread data are unavailable for a specific counterparty, bond market spreads, CDS spread data based on the counterparty's credit rating or CDS spread data that reference a comparable counterparty may be utilized. The Firm also considers collateral held and legally enforceable master netting agreements that mitigate its exposure to each counterparty.

Adjustments for model uncertainty are taken for positions whose underlying models are reliant on significant inputs that are neither directly nor indirectly observable, hence requiring reliance on established theoretical concepts in their derivation. These adjustments are derived by making assessments of the possible degree of variability using statistical approaches and market-based information where possible.

The Firm may apply concentration adjustments to certain of its OTC derivative portfolios to reflect the additional cost of closing out a particularly large risk exposure. Where possible, these adjustments are based on observable market information, but in many instances, significant judgment is required to estimate the costs of closing out concentrated risk exposures due to the lack of liquidity in the marketplace.

The Firm applies an FVA in the fair value measurements of OTC uncollateralized or partially collateralized derivatives

and in collateralized derivatives where the terms of the agreement do not permit the reuse of the collateral received. In general, FVA reflects a market funding risk premium inherent in the noted derivative instruments. The methodology for measuring FVA leverages the Firm's existing credit-related valuation adjustment calculation methodologies, which apply to both assets and liabilities.

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

Assets and Liabilities Measured at Fair Value on a Non-recurring Basis

Certain of the Firm's assets and liabilities are measured at fair value on a non-recurring basis. The Firm incurs losses or gains for any adjustments of these assets or liabilities to fair value.

For assets and liabilities measured at fair value on a non-recurring basis, fair value is determined by using various valuation approaches. The same hierarchy for inputs as described above, which requires that observable inputs be used when available, is used in measuring fair value for these items.

For further information on financial assets and liabilities that are measured at fair value on a recurring and non-recurring basis, see Note 4.

Offsetting of Derivative Instruments

In connection with its derivative activities, the Firm generally enters into master netting agreements and collateral agreements with its counterparties. These agreements provide the Firm with the right, in the event of a default by the counterparty, to net a counterparty's rights and obligations under the agreement and to liquidate and set off cash collateral against any net amount owed by the counterparty. Derivatives with enforceable master netting agreements are reported net of cash collateral received and posted.

However, in certain circumstances, the Firm may not have such an agreement in place; the relevant insolvency regime may not support the enforceability of the master netting agreement or collateral agreement; or the Firm may not have sought legal advice to support the enforceability of the agreement. In cases where the Firm has not determined an agreement to be enforceable, the related amounts are not offset (see Note 6).

The Firm's policy is generally to receive cash and/or securities posted as collateral (with rights of rehypothecation) in connection with derivative transactions, irrespective of the enforceability determination regarding the master netting and collateral agreement. In certain cases, the Firm may agree for such collateral to be posted by the counterparty to a third-party custodian under a control agreement that enables it to take control of such collateral in the event of a counterparty default. The enforceability of the master netting agreement is taken into account in the Firm's risk management practices and application of counterparty credit limits.

For information related to offsetting of derivatives, see Note 6.

Hedge Accounting

The Firm applies hedge accounting using various derivative financial instruments for the following types of hedges: hedges of changes in the fair value of assets and liabilities due to the risk being hedged (fair value hedges); hedges of variability in forecasted cash flows from floating-rate assets due to contractually specified interest rates (cash flow hedges) and hedges of net investments in foreign operations whose functional currency is different from the reporting currency of the Parent Company (net investment hedges). These financial instruments are included within Trading assets—Derivative and other contracts or Trading liabilities—Derivative and other contracts in the balance sheet. For hedges where hedge accounting is being applied, the Firm performs effectiveness testing and other procedures. The change in the fair value of the designated portion of the hedging instrument should be highly correlated, between 80 and 125 percent of the change in the fair value, cash flows, or carrying value (due to translation gains or losses) of the hedged item attributable to the risk being hedged. The Firm considers the impact of valuation adjustments related to counterparty credit spreads and its own credit spreads to determine whether they would cause the hedging relationship to be ineffective.

Fair Value Hedges—Interest Rate Risk

The Firm's designated fair value hedges consist of interest rate swaps designated as hedges of changes in the benchmark interest rate of certain fixed rate AFS securities and senior borrowings. The Firm also designates interest rate swaps as fair value hedges of changes in the benchmark interest rate of certain fixed rate deposits. The Firm is permitted to hedge the full, or part of the contractual term of the hedged instrument. The Firm uses regression analysis to perform an ongoing prospective and retrospective assessment of the effectiveness of these hedging relationships. For qualifying fair value hedges of benchmark interest rates, the change in the fair value of the derivative, offset by the change in the fair value attributable to the change in the benchmark interest rate risk of the hedged asset (liability), is recognized in earnings each period as a component of Interest income (expense). For AFS securities, the change in fair value of the hedged item due to changes other than the risk being hedged will continue to be reported in OCI. When a derivative is de-designated as a hedge, any basis adjustment remaining on the hedged asset (liability) is amortized to Interest income (expense) over the remaining life of the asset (liability) using the effective interest method.

Net Investment Hedges

The Firm uses forward foreign exchange contracts to manage a portion of the currency exposure relating to its net investments in foreign operations. To the extent that the notional amounts of the hedging instruments equal the portion of the investments being hedged and the underlying exchange rate of the derivative hedging instrument is the same as the exchange rate between the functional currency of the investee and the intermediate parent entity's functional currency, it is considered to be perfectly effective. The gain or loss from revaluing hedges of net investments in foreign operations at the spot rate is reported within AOCI. The forward points on the hedging instruments are excluded from hedge effectiveness testing and changes in the fair value of this excluded component are recorded currently in Interest income.

Cash Flow Hedges—Interest Rate Risk

The Firm's designated cash flow hedges consist of interest rate derivatives designated as hedges of variability in forecasted cash flows from floating-rate assets due to changes in the contractually specified interest rates. The Firm uses regression analysis to perform an ongoing prospective and retrospective assessment of the effectiveness of these hedging relationships.

The objective of this strategy is to hedge the risk of changes in the hedged item's cash flows attributable to changes in the contractually specified interest rate. For qualifying cash flow hedges of contractually specified interest rates, changes in the fair value of the derivative are recorded in OCI and subsequently reclassified to earnings in the same periods when the hedged item affects earnings. If cash flow hedge accounting is discontinued, AOCI is released into earnings immediately if the cash flow of the hedged item is probable of not occurring. Otherwise the amount in AOCI is released into earnings as the forecasted transaction affects earnings.

Other Hedges

In addition to hedges that are designated and qualify for hedge accounting, the Firm uses derivatives to economically hedge credit risk associated with certain held-for-sale and held-for-investment corporate loans and lending commitments, and the related gains and losses are reported within Other revenues in the income statement.

For further information on derivative instruments and hedging activities, see Note 6.

AFS Investment Securities

AFS securities are reported at fair value in the balance sheet. Interest income, including amortization of premiums and accretion of discounts, is included in Interest income in the income statement. Unrealized gains are recorded in OCI, and unrealized losses are recorded either in OCI or in Other revenues as described below.

AFS securities in an unrealized loss position are first evaluated to determine whether there is an intent to sell or it is more likely than not the Firm will be required to sell before recovery of the amortized cost basis. If so, the amortized cost basis is written down to the fair value of the security such that the entire unrealized loss is recognized in Other revenues, and any previously established ACL is written off.

For all other AFS securities in an unrealized loss position, any portion of unrealized losses representing a credit loss is recognized in Other revenues and as an increase to the ACL for AFS securities, with the remainder of unrealized losses recognized in OCI. A credit loss exists if the Firm does not expect to recover the amortized cost basis of the security. When considering whether a credit loss exists, the Firm considers relevant information, including:

- guarantees (implicit or explicit) by the U.S. government;
- the extent to which the fair value has been less than the amortized cost basis;
- adverse conditions specifically related to the security, its industry or geographic area;
- changes in the financial condition of the issuer of the security or, in the case of an asset-backed debt security, changes in the financial condition of the underlying loan obligors;
- the payment structure of the debt security and the likelihood of the issuer being able to make payments that increase in the future;
- failure of the issuer of the security to make scheduled interest or principal payments;
- the current rating and any changes to the rating of the security by a rating agency.

If a credit loss exists, the Firm measures the credit loss as the difference between the present value of cash flows expected to be collected (discounted at the implicit interest rate at acquisition of the security or discounted at the effective yield for securities that incorporate changes in prepayment assumptions) and the amortized cost basis of the security. Changes in prepayment assumptions alone are not considered to result in a credit loss. When estimating the present value of expected cash flows, information utilized includes the remaining payment terms of the security, prepayment speeds, financial condition of the issuer, expected defaults and the value of any underlying collateral.

Presentation of ACL and Provision for Credit Losses

	ACL	Provision for Credit Losses
AFS securities	Contra investment securities	Other revenue

Nonaccrual & ACL Charge-offs on AFS Securities

AFS securities follow the same nonaccrual and charge-off guidance as discussed in "Allowance for Credit Losses" herein.

HTM Securities

HTM securities are reported at amortized cost, net of any ACL, in the balance sheet. Refer to "Allowance for Credit Losses" herein for guidance on the ACL determination. Interest income, including amortization of premiums and accretion of discounts on HTM securities, is included in Interest income in the income statement.

Loans

The Firm accounts for loans based on the following categories: loans held for investment; loans held for sale; and loans at fair value.

Nonaccrual and ACL Charge-offs on Loans

All loan categories described below follow the same nonaccrual and charge-off guidance as discussed in "Allowance for Credit Losses" herein.

Loans Held for Investment

Loans held for investment are reported at amortized cost, which consists of the outstanding principle balance adjusted for any charge-offs, the allowance for credit losses, any unamortized deferred fees or costs for originated loans, and any unamortized premiums or discounts for purchased loans.

Interest Income. Interest income on performing loans held for investment is accrued and recognized as interest income at the contractual rate of interest. Purchase price discounts or premiums, as well as net deferred loan fees or costs, are amortized into interest income over the life of the loan to produce a level rate of return.

Lending Commitments. The Firm records the liability and related expense for the credit exposure related to commitments to fund loans. The liability is recorded in Other Liabilities in the balance sheet and the expense is recorded in the Provision for credit losses in the income statement. For more information regarding loan commitments, standby letters of credit and financial guarantees, see Note 14.

For more information regarding allowance for credit losses, refer to "Allowance for Credit Losses" herein.

Loans Held for Sale

Loans held for sale are measured at the lower of amortized cost or fair value, with valuation changes recorded in Other revenues. The Firm determines the valuation allowance on an individual loan basis, except for residential mortgage loans for which the valuation allowance is determined at the loan product level. Any decreases in fair value below the initial carrying amount and any recoveries in fair value up to the initial carrying amount are recorded in Other revenues. Increases in fair value above initial carrying value are not recognized.

Interest Income. Interest income on loans held for sale is accrued and recognized based on the contractual rate of interest. Loan origination fees or costs and purchase price discounts or premiums are deferred as an adjustment to the loan's cost basis until the related loan is sold and, as such, are included in the periodic determination of the lower of cost or fair value adjustments and the gain or loss recognized at the time of sale.

Lending Commitments. Commitments to fund mortgage loans held for sale are derivatives and are reported in Trading assets or Trading liabilities in the balance sheet and in Trading revenues in the income statement.

For commitments to fund non-mortgage loans, the Firm records the liability and related expense for the fair value exposure below cost of such commitments in Other liabilities and accrued expenses in the balance sheet with an offset to Other revenues in the income statement.

Because loans and lending commitments held for sale are recognized at the lower of cost or fair value, the allowance for credit losses and charge-off policies do not apply to these loans.

Loans at Fair Value

Loans for which the fair value option is elected are carried at fair value and included in Trading assets in the balance sheet, with changes in fair value recognized in earnings. For further information on loans carried at fair value and classified as Trading assets, see Note 4.

Lending Commitments. The Firm records the liability and related expense for the fair value exposure related to commitments to fund loans that will be measured at fair value. The liability is recorded in Trading liabilities in the balance sheet, and the expense is recorded in Trading revenues in the income statement.

Because such loans and lending commitments are reported at fair value, the allowance for credit losses and charge-off policies do not apply to these loans.

For further information on loans, see Note 9. For more information regarding loan commitments, standby letters of credit and financial guarantees, see Note 14.

Allowance for Credit Losses

The ACL for financial instruments measured at amortized cost and certain off-balance sheet exposures (e.g., HFI loans and lending commitments, HTM securities, customer and other receivables and certain guarantees) represents an

estimate of expected credit losses over the entire life of the financial instrument.

Factors considered by management when determining the ACL include payment status, fair value of collateral and expected payments of principal and interest, as well as internal or external information relating to past events, current conditions, and reasonable and supportable forecasts. The Firm uses three forecasts that include assumptions about certain macroeconomic variables, including, but not limited to, U.S. gross domestic product ("GDP"), equity market indices and unemployment rates, as well as commercial real estate and home price indices. At the conclusion of the Firm's reasonable and supportable forecast period of 13 quarters, there is a gradual reversion back to historical averages.

The ACL is measured on a collective basis when similar risk characteristics exist for multiple instruments, considering all available information relevant to assessing the collectability of cash flows. Generally, the Firm applies a probability of default/loss given default model for instruments that are collectively assessed, under which the ACL is calculated as the product of probability of default, loss given default and exposure at default. These parameters are forecast for each collective group of assets using a scenario-based statistical model.

If the instrument does not share similar risk characteristics with other instruments, including when it is probable that the Firm will be unable to collect the full payment of principal and interest on the instrument when due, the ACL is measured on an individual basis. The Firm generally applies a discounted cash flow method for instruments that are individually assessed.

The Firm may also elect to use an approach that considers the fair value of the collateral when measuring the ACL if the loan is collateral dependent (i.e., repayment of the loan is expected to be provided substantially by the sale or operation of the underlying collateral and the borrower is experiencing financial difficulty).

Additionally, the Firm can elect to use an approach to measure the ACL that considers the fair value of collateral where the borrower is required to, and reasonably expected to, continually adjust and replenish the amount of collateral securing the instrument to reflect changes in the fair value of such collateral. The Firm has elected to use this approach for certain securities-based loans, margin loans, securities purchased under agreements to resell and securities borrowed.

Credit quality indicators considered in developing the ACL include:

- Corporate loans, secured lending facilities, commercial real estate loans and securities, and other loans: Internal risk ratings developed by the CRM that are refreshed at least annually, and more frequently as necessary. These ratings generally correspond to external ratings published by S&P. The Firm also considers transaction structure, including type of collateral, collateral terms and position of the obligation within the capital structure. In addition, for commercial real estate, the Firm considers property type and location, net operating income and LTV ratios, among other factors, as well as commercial real estate price and credit spread indices and capitalization rates.
- Residential real estate loans: Loan origination Fair Isaac Corporation ("FICO") credit scores as determined by independent credit agencies in the U.S. and LTV ratios.
- Employee loans: Employment status, which includes those currently employed by the Firm and for which the Firm can deduct any unpaid amounts due to it through certain compensation arrangements; and those no longer employed by the Firm where such arrangements are no longer applicable.

Qualitative and environmental factors such as economic and business conditions, the nature and volume of the portfolio, and lending terms and the volume and severity of past due loans are also considered in the ACL calculations.

Presentation of ACL and Provision for Credit Losses

	ACL	Provision for Credit Losses
Held for investment loans	Contra asset	Provision for credit losses
Other instruments measured at amortized cost (e.g., HTM securities and customer and other receivables)	Contra asset	Other revenues
Employee loans	Contra asset	Compensation and benefits expenses
Held for investment lending commitments	Other liabilities and accrued expenses	Provision for credit losses
Other off-balance sheet instruments (e.g., certain guarantees)	Other liabilities and accrued expenses	Other expenses

Nonaccrual

The Firm places financial instruments on nonaccrual status if principal or interest is not expected when contractually due or is past due for a period of 90 days or more unless the obligation is well-secured and is in the process of collection.

For any instrument placed on nonaccrual status, the Firm reverses any unpaid interest accrued with an offsetting reduction to Interest income. Principal and interest payments received on nonaccrual instruments are applied to principal if there is doubt regarding the ultimate collectability of principal. If collection of the principal is not in doubt, interest income is realized on a cash basis. If the instrument is brought current and neither principal nor interest collection is in doubt, instruments can generally return to accrual status, and interest income can be recognized.

ACL Charge-offs

The principal balance of a financial instrument is charged off in the period it is deemed uncollectible, resulting in a reduction in the ACL and in the balance of the financial instrument in the balance sheet. Accrued interest receivable

balances that are separately recorded from the related financial instruments are charged off against Interest income when the related financial instrument is placed on nonaccrual status. Accordingly, the Firm elected not to measure an ACL for accrued interest receivables.

Transfers of Financial Assets

Transfers of financial assets are accounted for as sales when the Firm has relinquished control over the transferred assets. Any related gain or loss on sale is recorded in Net revenues. Transfers that are not accounted for as sales are treated as collateralized financings. Securities borrowed or purchased under agreements to resell and securities loaned or sold under agreements to repurchase are treated as collateralized financings (see Note 8).

Securities purchased under agreements to resell ("reverse repurchase agreements") and Securities sold under agreements to repurchase ("repurchase agreements"), including repurchase and reverse repurchase agreements-to-maturity, are carried in the balance sheet at the amount of cash paid or received plus accrued interest except for certain reverse repurchase and repurchase agreements for which the Firm has elected the fair value option (see Note 5). Where appropriate, repurchase agreements and reverse repurchase agreements with the same counterparty are reported on a net basis. Securities borrowed and securities loaned are recorded at the amount of cash collateral advanced or received.

In instances where the Firm is the lender in securities-for-securities transactions and is permitted to sell or repledge these securities, the fair value of the collateral received is reported in Trading assets, and the related obligation to return the collateral is reported in Trading liabilities in the balance sheet. Securities-for-securities transactions where the Firm is the borrower are not included in the balance sheet.

In order to manage credit exposure arising from these transactions, in appropriate circumstances, the Firm enters into master netting agreements and collateral agreements with its counterparties. These agreements provide the Firm with the right, in the event of a default by the counterparty, to net a counterparty's rights and obligations under the agreement and to liquidate and set off collateral held by the Firm against the net amount owed by the counterparty.

The Firm's policy is generally to take possession of securities purchased or borrowed in connection with reverse repurchase agreements and securities borrowed transactions, respectively, and to receive cash and/or securities delivered under repurchase agreements or securities loaned transactions (with rights of rehypothecation).

For information related to offsetting of certain collateralized transactions, see Note 8.

Premises, Equipment and Capitalized Software Costs

Premises, equipment and capitalized software costs consist of buildings, leasehold improvements, furniture, fixtures, computer and communications equipment, power generation assets and capitalized software (externally purchased and developed for internal use). Premises, equipment and capitalized software costs are stated at cost less accumulated depreciation and amortization and are included in Other assets in the balance sheet. Depreciation and amortization are provided by the straight-line method over the estimated useful life of the asset.

Estimated Useful Life of Assets

in years	Estimated Useful Life
Buildings	39
Leasehold improvements—Building	term of lease to 25
Leasehold improvements—Other	term of lease to 15
Furniture and fixtures	7
Computer and communications equipment	3 to 9
Power generation assets	15 to 29
Capitalized software costs	2 to 10

Premises, equipment and capitalized software costs are tested for impairment whenever events or changes in circumstances suggest that an asset's carrying value may not be fully recoverable.

Goodwill and Intangible Assets

The Firm tests goodwill and indefinite-lived intangible assets for impairment on an annual basis and on an interim basis when certain events or circumstances exist. The Firm tests goodwill for impairment at the reporting unit level, which is generally at the level of or one level below the asset's business segment. The Firm tests indefinite-lived intangible assets for impairment at the aggregate level of management contracts. For both the annual and interim tests, the Firm has the option to either (i) perform a quantitative impairment test or (ii) first perform a qualitative assessment to determine whether it is more likely than not that the fair value is less than its carrying amount, in which case, the quantitative test would be performed.

When performing a quantitative impairment test, the Firm compares the fair value with the carrying amount. If the fair value is less than the carrying amount, the impairment loss is equal to the excess of the carrying value over the fair value, limited to the carrying amount.

The estimated fair values are derived based on valuation techniques the Firm believes market participants would use. The estimated fair values are generally determined by utilizing a discounted cash flow methodology or methodologies that incorporate price-to-book and price-to-earnings multiples of certain comparable companies for goodwill impairment testing.

Intangible assets with a finite life are amortized over their estimated useful life and are reviewed for impairment on an interim basis when impairment indicators are present. Impairment losses are recorded within Other expenses in the income statement.

Earnings per Common Share

Basic EPS is computed by dividing earnings available to Morgan Stanley common shareholders by the weighted average number of common shares outstanding for the period. Earnings available to Morgan Stanley common shareholders represents net income applicable to Morgan Stanley reduced by preferred stock dividends. Common shares outstanding include common stock and vested RSUs where recipients have satisfied the relevant vesting terms. Diluted EPS reflects the assumed conversion of all dilutive securities.

Share-based awards that pay dividend equivalents subject to vesting are included in diluted shares outstanding (if dilutive) under the treasury stock method.

The Firm has granted PSUs that vest and convert to shares of common stock only if predetermined performance and market goals are satisfied. Since the issuance of the shares is contingent upon the satisfaction of certain conditions, the PSUs are included in diluted EPS based on the number of shares (if any) that would be issuable if the reporting date was the end of the performance period.

For further information on diluted earnings (loss) per common share, see Note 17 to the financial statements.

Deferred Compensation

Stock-Based Compensation

The Firm measures compensation expense for stock-based awards at fair value. The Firm determines the fair value of RSUs (including PSUs with non-market performance conditions) based on the grant-date fair value of its common stock, measured as the volume-weighted average price on the date of grant ("VWAP"). The fair value of RSUs not entitled to dividends until conversion is measured at VWAP reduced by the present value of dividends expected to be paid on the underlying shares prior to scheduled conversion date. PSUs that contain market-based conditions are valued using a Monte Carlo valuation model.

Compensation expense is recognized over the vesting period relevant to each separately vesting portion of the award. Compensation expense for awards with performance conditions is recognized based on the probable outcome of the performance condition at each reporting date. Compensation expense for awards with market-based conditions is recognized irrespective of the probability of the market condition being achieved and is not reversed if the market condition is not met. The Firm accounts for forfeitures as they occur.

Stock-based awards generally contain clawback and cancellation provisions. Certain awards provide the Firm discretion to claw back or cancel all or a portion of the award under specified circumstances. Where award terms are considered to be subjective, a grant date cannot be established and the awards are subject to variable accounting which requires that compensation expense for those awards is adjusted for changes in the fair value of the Firm's common stock or the relevant model valuation, as appropriate, until conversion, exercise or expiration. Following amendments to clarify specific subjective award terms in the second quarter of 2023, a grant date for the awards was established such that compensation expense for those awards is no longer adjusted for changes in the fair value of the Firm's common stock. The Firm also operates an Employee Stock Purchase Plan ("ESPP") which allows eligible employees of the Firm to purchase shares of Morgan Stanley at a discount.

Employee Stock Trusts

In connection with certain stock-based compensation plans, the Firm has established employee stock trusts to provide, at its discretion, common stock voting rights to certain RSU holders. Following the grant of an RSU award, when a stock trust is utilized, the Firm contributes shares to be held in the stock trust until the RSUs convert to common shares. The assets of the employee stock trusts are consolidated with those of the Firm and are generally accounted for in a manner similar to treasury stock, where the shares of common stock outstanding reported in Common stock issued to employee stock trusts are offset by an equal amount reported in Employee stock trusts in the balance sheet.

The Firm uses the grant-date fair value of stock-based compensation as the basis for recording the movement of the assets to or from the employee stock trusts. Changes in the fair value are not recognized as the Firm's stock-based compensation must be settled by delivery of a fixed number of shares of the Firm's common stock.

Deferred Cash-Based Compensation

Compensation expense for DCP awards is calculated based on the notional value of the award granted, adjusted for changes in the fair value of the referenced investments that employees select. Compensation expense is recognized over the vesting period relevant to each separately vesting portion of deferred awards.

The Firm invests directly, as a principal, in financial instruments and other investments to economically hedge certain of its obligations under its DCP. Changes in the value of such investments are recorded in Trading revenues and Investments revenues. Although changes in compensation expense resulting from changes in the fair value of the referenced investments will generally be offset by changes in the fair value of investments made by the Firm, there is typically a timing difference between the immediate recognition of gains and losses on the Firm's investments and

the deferred recognition of the related compensation expense over the vesting period.

Retirement-Eligible Employee Compensation

For year-end stock-based awards and DCP awards anticipated to be granted to retirement-eligible employees under award terms that do not contain a future service requirement, the Firm accrues the estimated cost of the awards over the course of the calendar year preceding the grant date, which reflects the period over which the compensation is earned.

Carried Interest Compensation

The Firm generally recognizes compensation expense for any portion of carried interest (both realized and unrealized) that is allocated to employees. For information on performance-based fees in the form of carried interest, which are directly related to carried interest compensation, see "Revenue Recognition—Carried Interest" herein.

Income Taxes

Deferred tax assets and liabilities are recorded based upon the temporary differences between the financial statement and income tax bases of assets and liabilities using currently enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income tax expense (benefit) in the period that includes the enactment date. Such effects are recorded in Provision for income taxes regardless of where deferred taxes were originally recorded.

The Firm recognizes net deferred tax assets to the extent that it believes these assets are more likely than not to be realized. In making such a determination, the Firm considers all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax planning strategies and results of recent operations. When performing the assessment, the Firm considers all types of deferred tax assets in combination with each other, regardless of the origin of the underlying temporary difference. If a deferred tax asset is determined to be unrealizable, a valuation allowance is established. If the Firm subsequently determines that it would be able to realize deferred tax assets in excess of their net recorded amount, it would make an adjustment to the deferred tax asset valuation allowance, which would reduce the provision for income taxes.

The Firm recognizes tax expense associated with Global Intangible Low-Taxed Income as it is incurred as part of the current income taxes to be paid or refunded for the current period.

Uncertain tax positions are recorded on the basis of a two-step process, whereby (i) the Firm determines whether it is more likely than not that the tax positions will be sustained on the basis of the technical merits of the position and (ii) for those tax positions that meet this threshold, the Firm recognizes the largest amount of tax benefit that is more likely than not to be realized upon ultimate settlement with the related tax authority. Interest and penalties related to unrecognized tax benefits are recognized as a component of the provision for income taxes.

Foreign Currencies

Assets and liabilities of operations with non-U.S. dollar functional currencies are translated at year-end rates of exchange. Gains or losses resulting from translating foreign currency financial statements, net of hedge gains or losses and related tax effects, are reflected in AOCI in the balance sheet. Gains or losses resulting from remeasurement of foreign currency transactions are included in net income, and amounts recognized in the income statement are translated at the rate of exchange on the respective date of recognition for each amount.

Accounting Updates Adopted in 2023

Fair Value Measurement - Equity Securities Subject to Contractual Sale Restrictions

The Firm early adopted the *Fair Value Measurement of Equity Securities Subject to Contractual Sale Restrictions* accounting update on July 1, 2023, with no material impact on the Firm's financial condition or results of operations upon adoption. The update clarifies that a contractual sale restriction is not considered part of the unit of account of an equity security and, therefore, is not considered in measuring fair value.

Financial Instruments - Credit Losses

The Firm adopted the *Financial Instruments-Credit Losses* accounting update on January 1, 2023, with no impact on the Firm's financial condition or results of operations upon adoption.

This accounting update eliminates the accounting guidance for troubled debt restructurings ("TDRs") and requires new disclosures regarding certain modifications of financing receivables (i.e., principal forgiveness, interest rate reductions, other-than-insignificant payment delays and term extensions) to borrowers experiencing financial difficulty. The update also requires disclosure of current period gross charge-offs by year of origination for financing receivables measured at amortized cost. Refer to Note 9, Loans, Lending Commitments and Related Allowance for Credit Losses, for the new disclosures.

Accounting Update Adopted in 2022

Reference Rate Reform

The Firm has adopted the Reference Rate Reform accounting update, which extends the period of time entities can utilize the reference rate reform relief guidance from December 31, 2022 to December 31, 2024. The relief provides optional

expedients and exceptions for applying generally accepted accounting principles to contracts, hedging relationships and other transactions that reference LIBOR or other interest rate benchmarks for which the referenced rate is expected to be discontinued or replaced. The Firm is applying the accounting relief as relevant contract and hedge accounting relationship modifications are made during the course of the reference rate reform transition period. There was no impact to the Firm's financial statements upon issuance of this accounting standard update.

3. Cash and Cash Equivalents

$ in millions	**At December 31, 2023**	At December 31, 2022
Cash and due from banks	**$ 7,323**	$ 5,409
Interest bearing deposits with banks	**81,909**	122,718
Total Cash and cash equivalents	**$ 89,232**	$ 128,127
Restricted cash	**$ 30,571**	$ 35,380

For additional information on cash and cash equivalents, including restricted cash, see Note 2.

4. Fair Values

Recurring Fair Value Measurements

Assets and Liabilities Measured at Fair Value on a Recurring Basis

	At December 31, 2023				
$ in millions	Level 1	Level 2	Level 3	Netting[1]	Total
Assets at fair value					
Trading assets:					
U.S. Treasury and agency securities	**$ 56,459**	**$ 53,741**	**$ —**	**$ —**	**$ 110,200**
Other sovereign government obligations	**22,580**	**9,946**	**94**	**—**	**32,620**
State and municipal securities	**—**	**2,148**	**34**	**—**	**2,182**
MABS	**—**	**1,540**	**489**	**—**	**2,029**
Loans and lending commitments[2]	**—**	**6,122**	**2,066**	**—**	**8,188**
Corporate and other debt	**—**	**35,833**	**1,983**	**—**	**37,816**
Corporate equities[3,5]	**126,772**	**929**	**199**	**—**	**127,900**
Derivative and other contracts:					
Interest rate	**7,284**	**140,139**	**784**	**—**	**148,207**
Credit	**—**	**10,244**	**393**	**—**	**10,637**
Foreign exchange	**12**	**93,218**	**20**	**—**	**93,250**
Equity	**2,169**	**55,319**	**587**	**—**	**58,075**
Commodity and other	**1,608**	**11,862**	**2,811**	**—**	**16,281**
Netting[1]	**(7,643)**	**(237,497)**	**(1,082)**	**(42,915)**	**(289,137)**
Total derivative and other contracts	**3,430**	**73,285**	**3,513**	**(42,915)**	**37,313**
Investments[4,5]	**781**	**836**	**949**	**—**	**2,566**
Physical commodities	**—**	**736**	**—**	**—**	**736**
Total trading assets[4]	**210,022**	**185,116**	**9,327**	**(42,915)**	**361,550**
Investment securities —AFS	**57,405**	**30,708**	**—**	**—**	**88,113**
Securities purchased under agreements to resell	**—**	**7**	**—**	**—**	**7**
Total assets at fair value	**$ 267,427**	**$ 215,831**	**$ 9,327**	**$ (42,915)**	**$ 449,670**

	At December 31, 2023				
$ in millions	Level 1	Level 2	Level 3	Netting[1]	Total
Liabilities at fair value					
Deposits	**$ —**	**$ 6,439**	**$ 33**	**$ —**	**$ 6,472**
Trading liabilities:					
U.S. Treasury and agency securities	**27,708**	**16**	**—**	**—**	**27,724**
Other sovereign government obligations	**26,829**	**3,955**	**6**	**—**	**30,790**
Corporate and other debt	**—**	**10,560**	**9**	**—**	**10,569**
Corporate equities[3]	**46,809**	**300**	**45**	**—**	**47,154**
Derivative and other contracts:					
Interest rate	**8,000**	**129,983**	**857**	**—**	**138,840**
Credit	**—**	**10,795**	**297**	**—**	**11,092**
Foreign exchange	**96**	**89,880**	**385**	**—**	**90,361**
Equity	**2,411**	**64,794**	**1,689**	**—**	**68,894**
Commodity and other	**1,642**	**11,904**	**1,521**	**—**	**15,067**
Netting[1]	**(7,643)**	**(237,497)**	**(1,082)**	**(42,757)**	**(288,979)**
Total derivative and other contracts	**4,506**	**69,859**	**3,667**	**(42,757)**	**35,275**
Total trading liabilities	**105,852**	**84,690**	**3,727**	**(42,757)**	**151,512**
Securities sold under agreements to repurchase	**—**	**571**	**449**	**—**	**1,020**
Other secured financings	**—**	**9,807**	**92**	**—**	**9,899**
Borrowings	**—**	**92,022**	**1,878**	**—**	**93,900**
Total liabilities at fair value	**$ 105,852**	**$ 193,529**	**$ 6,179**	**$ (42,757)**	**$ 262,803**

	At December 31, 2022				
$ in millions	Level 1	Level 2	Level 3	Netting[1]	Total
Assets at fair value					
Trading assets:					
U.S. Treasury and agency securities	$ 38,462	$ 42,263	$ 17	$ —	$ 80,742
Other sovereign government obligations	24,644	4,769	169	—	29,582
State and municipal securities	—	1,503	145	—	1,648
MABS	—	1,774	416	—	2,190
Loans and lending commitments[2]	—	6,380	2,017	—	8,397
Corporate and other debt	—	23,351	2,096	—	25,447
Corporate equities[3]	97,869	1,019	116	—	99,004
Derivative and other contracts:					
Interest rate	4,481	166,392	517	—	171,390
Credit	—	7,876	425	—	8,301
Foreign exchange	49	115,766	183	—	115,998
Equity	2,778	40,171	406	—	43,355
Commodity and other	5,609	21,152	3,701	—	30,462
Netting[1]	(9,618)	(258,821)	(1,078)	(55,777)	(325,294)
Total derivative and other contracts	3,299	92,536	4,154	(55,777)	44,212
Investments[4]	652	685	923	—	2,260
Physical commodities	—	2,379	—	—	2,379
Total trading assets[4]	164,926	176,659	10,053	(55,777)	295,861
Investment securities —AFS	53,866	30,396	35	—	84,297
Securities purchased under agreements to resell	—	8	—	—	8
Total assets at fair value	$ 218,792	$ 207,063	$ 10,088	$ (55,777)	$ 380,166

$ in millions	At December 31, 2022 Level 1	Level 2	Level 3	Netting[1]	Total
Liabilities at fair value					
Deposits	$ —	$ 4,776	$ 20	$ —	$ 4,796
Trading liabilities:					
U.S. Treasury and agency securities	20,776	228	—	—	21,004
Other sovereign government obligations	23,235	2,688	3	—	25,926
Corporate and other debt	—	8,786	29	—	8,815
Corporate equities[3]	59,998	518	42	—	60,558
Derivative and other contracts:					
Interest rate	3,446	161,044	668	—	165,158
Credit	—	7,987	315	—	8,302
Foreign exchange	89	113,383	117	—	113,589
Equity	3,266	46,923	1,142	—	51,331
Commodity and other	6,187	17,574	2,618	—	26,379
Netting[1]	(9,618)	(258,821)	(1,078)	(57,107)	(326,624)
Total derivative and other contracts	3,370	88,090	3,782	(57,107)	38,135
Total trading liabilities	107,379	100,310	3,856	(57,107)	154,438
Securities sold under agreements to repurchase	—	352	512	—	864
Other secured financings	—	4,459	91	—	4,550
Borrowings	—	77,133	1,587	—	78,720
Total liabilities at fair value	$ 107,379	$ 187,030	$ 6,066	$ (57,107)	$ 243,368

MABS—Mortgage- and asset-backed securities
1. For positions with the same counterparty that cross over the levels of the fair value hierarchy, both counterparty netting and cash collateral netting are included in the column titled "Netting." Positions classified within the same level that are with the same counterparty are netted within that level. For further information on derivative instruments and hedging activities, see Note 6.
2. For a further breakdown by type, see the following Detail of Loans and Lending Commitments at Fair Value table.
3. For trading purposes, the Firm holds or sells short equity securities issued by entities in diverse industries and of varying sizes.
4. Amounts exclude certain investments that are measured based on NAV per share, which are not classified in the fair value hierarchy. For additional disclosure about such investments, see "Net Asset Value Measurements" herein.
5. At December 31, 2023, the Firm's Trading assets included an insignificant amount of equity securities subject to contractual sale restrictions that generally prohibit the Firm from selling the security for a period of time as of the measurement date.

Detail of Loans and Lending Commitments at Fair Value

$ in millions	**At December 31, 2023**	At December 31, 2022
Secured lending facilities	**$ —**	$ 6
Commercial real estate	**422**	528
Residential real estate	**2,909**	2,020
Securities-based lending and Other loans	**4,857**	5,843
Total	**$ 8,188**	$ 8,397

Unsettled Fair Value of Futures Contracts[1]

$ in millions	**At December 31, 2023**	At December 31, 2022
Customer and other receivables, net	**$ 1,062**	$ 1,219

1. These contracts are primarily Level 1, actively traded, valued based on quoted prices from the exchange and are excluded from the previous recurring fair value tables.

Valuation Techniques for Assets and Liabilities Measured at Fair Value on a Recurring Basis

U.S. Treasury and Agency Securities

U.S. Treasury Securities

Valuation Technique:
- Fair value is determined using quoted market prices.

Valuation Hierarchy Classification:
- Level 1—as inputs are observable and in an active market

U.S. Agency Securities

Valuation Techniques:
- Non-callable agency-issued debt securities are generally valued using quoted market prices, and callable agency-issued debt securities are valued by benchmarking model-derived prices to quoted market prices and trade data for comparable instruments.
- The fair value of agency mortgage pass-through pool securities is model-driven based on spreads of comparable to-be-announced securities.
- CMOs are generally valued using quoted market prices and trade data adjusted by subsequent changes in related indices for comparable instruments.

Valuation Hierarchy Classification:
- Level 1—on-the-run agency issued debt securities if actively traded and inputs are observable
- Level 2—all other agency issued debt securities, agency mortgage pass-through pool securities and CMOs if actively traded and inputs are observable
- Level 3—in instances where the trading activity is limited or inputs are unobservable

Other Sovereign Government Obligations

Valuation Techniques:
- Fair value is determined using quoted prices in active markets when available. When not available, quoted prices in less active markets are used. In the absence of position-specific quoted prices, fair value may be determined through benchmarking from comparable instruments.

Valuation Hierarchy Classification:
- Level 1—if actively traded and inputs are observable
- Level 2—if the market is less active or prices are dispersed
- Level 3—in instances where the prices are unobservable

State and Municipal Securities

Valuation Techniques:
- Fair value is determined using recently executed transactions, market price quotations or pricing models that factor in, where applicable, interest rates, bond or CDS spreads, adjusted for any basis difference between cash and derivative instruments.

Valuation Hierarchy Classification:
- Level 2—if value based on observable market data supported by market liquidity for comparable instruments
- Level 3—in instances where market data are not observable or supported by market liquidity

Mortgage- and Asset-Backed Securities

Valuation Techniques:

- Mortgage- and asset-backed securities may be valued based on price or spread data obtained from observed transactions or independent external parties such as vendors or brokers.
- When position-specific external price data are not observable, the fair value determination may require benchmarking to comparable instruments, and/or analyzing expected credit losses, default and recovery rates, and/or applying discounted cash flow techniques. When evaluating the comparable instruments for use in the valuation of each security, security collateral-specific attributes, including payment priority, credit enhancement levels, type of collateral, delinquency rates and loss severity, are considered. In addition, for RMBS borrowers, FICO scores and the level of documentation for the loan are considered.
- Market standard cash flow models may be utilized to model the specific collateral composition and cash flow structure of each transaction. Key inputs to these models are market spreads, forecasted credit losses, and default and prepayment rates for each asset category.
- Valuation levels of RMBS and CMBS indices are used as an additional data point for benchmarking purposes or to price outright index positions.

Valuation Hierarchy Classification:

- Level 2—if value based on observable market data supported by market liquidity for comparable instruments
- Level 3—if external prices or significant spread inputs are unobservable or not supported by market liquidity or if the comparability assessment involves significant subjectivity related to property type differences, cash flows, performance or other inputs

Loans and Lending Commitments

Valuation Techniques:

- Fair value of corporate loans is determined using recently executed transactions, market price quotations (where observable), implied yields from comparable debt, market observable CDS spread levels obtained from independent external parties adjusted for any basis difference between cash and derivative instruments, along with proprietary valuation models and default recovery analysis where such transactions and quotations are unobservable.
- Fair value of contingent corporate lending commitments is determined by using executed transactions on comparable loans and the anticipated market price based on pricing indications from syndicate banks and customers. The valuation of loans and lending commitments also takes into account fee income that is considered an attribute of the contract.
- Fair value of mortgage loans is determined using observable prices based on transactional data or third-party pricing for comparable instruments, when available.
- Where position-specific external prices are not observable, fair value is estimated based on benchmarking to prices and rates observed in the primary market for similar loan or borrower types or based on the present value of expected future cash flows using the Firm's best available estimates of the key assumptions, including forecasted credit losses, prepayment rates, forward yield curves and discount rates commensurate with the risks involved or a methodology that utilizes the capital structure and credit spreads of recent comparable securitization transactions.
- Fair value of equity margin loans is determined by discounting future interest cash flows, net of potential losses resulting from large downward price movements of the underlying margin loan collateral. The potential losses are modeled using the margin loan rate, which is calibrated from market observable CDS spreads, implied debt yields or volatility metrics of the loan collateral.

Valuation Hierarchy Classification:

- Level 2—if value based on observable market data supported by market liquidity for comparable instruments
- Level 3—in instances where prices or significant spread inputs are unobservable or not supported by market liquidity or if the comparability assessment involves significant subjectivity

Corporate and Other Debt

Corporate Bonds

Valuation Techniques:

- Fair value is determined using recently executed transactions, market price quotations, bond spreads and CDS spreads obtained from independent external parties, such as vendors and brokers, adjusted for any basis difference between cash and derivative instruments.
- The spread data used are for the same maturity as the bond. If the spread data do not reference the issuer, then data that reference comparable issuers are used. When position-specific external price data are not observable, fair value is determined based on either benchmarking to comparable instruments or cash flow models with yield curves, bond or single-name CDS spreads and recovery rates or loss given default as significant inputs.

Valuation Hierarchy Classification:

- Level 2—if value based on observable market data for comparable instruments
- Level 3—in instances where prices or significant spread inputs are unobservable or if the comparability assessment involves significant subjectivity

CDOs

Valuation Techniques:

- The Firm holds cash CDOs that typically reference a tranche of an underlying synthetic portfolio of single-name CDS spreads collateralized by corporate bonds ("CLN") or cash portfolio of ABS/loans ("asset-backed CDOs").
- Credit correlation, a primary input used to determine the fair value of CLNs, is usually unobservable and derived using a benchmarking technique. Other model inputs, such as credit spreads, including collateral spreads and interest rates, are typically observable.
- Asset-backed CDOs are valued based on an evaluation of the market and model input parameters sourced from comparable instruments as indicated by market activity.

Each asset-backed CDO position is evaluated independently taking into consideration available comparable market levels, underlying collateral performance and pricing, deal structures and liquidity.

Valuation Hierarchy Classification:

- Level 2—when either comparable market transactions are observable or credit correlation input is insignificant
- Level 3—when either comparable market transactions are unobservable or the credit correlation input is significant

Equity Contracts with Financing Features

Valuation Techniques:

- Fair value of certain equity contracts, which are not classified as OTC derivatives because they do not meet the net investment criteria, is determined by discounting future interest cash flows, inclusive of the estimated value of the embedded optionality. The valuation uses the same derivative pricing models and valuation techniques as described under "OTC Derivative Contracts" herein.

Valuation Hierarchy Classification:

- Level 2—when the contract is valued using observable inputs or where the unobservable input is not deemed significant
- Level 3—when the contract is valued using an unobservable input that is deemed significant

Corporate Equities

Valuation Techniques:

- Exchange-traded equity securities are generally valued based on quoted prices from the exchange.
- Unlisted equity securities are generally valued based on an assessment of each security, considering rounds of financing and third-party transactions, discounted cash flow analyses and market-based information, including comparable transactions, trading multiples and changes in market outlook, among other factors.
- Listed fund units are generally marked to the exchange-traded price if actively traded, or to NAV if not. Unlisted fund units are generally marked to NAV.

Valuation Hierarchy Classification:

- Level 1—actively traded exchange-traded securities and fund units
- Level 2—if not actively traded, inputs are observable or if undergoing a recent M&A event or corporate action
- Level 3—if not actively traded, inputs are unobservable or if undergoing an aged M&A event or corporate action

Derivative and Other Contracts

Exchange-Traded Derivative Contracts

Valuation Techniques:

- Exchange-traded derivatives that are actively traded are valued based on quoted prices from the exchange.
- Exchange-traded derivatives that are not actively traded are valued using the same techniques as those applied to OTC derivatives as noted below.

Valuation Hierarchy Classification:

- Level 1—when actively traded
- Level 2—when not actively traded

OTC Derivative Contracts

Valuation Techniques:

- OTC derivative contracts include forward, swap and option contracts related to interest rates, foreign currencies, credit standing of reference entities, equity prices or commodity prices.
- Depending on the product and the terms of the transaction, the fair value of OTC derivative products can be modeled using a series of techniques, including closed-form analytic formulas, such as the Black-Scholes option-pricing model, simulation models or a combination thereof. Many pricing models do not entail material subjectivity as the methodologies employed do not necessitate significant judgment since model inputs may be observed from actively quoted markets, as is the case for generic interest rate swaps, many equity, commodity and foreign currency option contracts, and certain CDS. In the case of more established derivative products, the pricing models used by the Firm are widely accepted by the financial services industry.
- More complex OTC derivative products are typically less liquid and require more judgment in the implementation of the valuation technique since direct trading activity or quotes are unobservable. This includes certain types of interest rate derivatives with both volatility and correlation exposure, equity, commodity or foreign currency derivatives that are either longer-dated or include exposure to multiple underlyings, and credit derivatives, including CDS on certain mortgage- or asset-backed securities and basket CDS. Where required inputs are unobservable, relationships to observable data points, based on historical and/or implied observations, may be employed as a technique to estimate the model input values. For further information on the valuation techniques for OTC derivative products, see Note 2.

Valuation Hierarchy Classification:

- Level 2—when valued using observable inputs supported by market liquidity or where the unobservable input is not deemed significant
- Level 3—when valued using observable inputs with limited market liquidity or if an unobservable input is deemed significant

Investments

Valuation Techniques:

- Investments include direct investments in equity securities, as well as various investment management funds, which include DCP investments.
- Exchange-traded direct equity investments are generally valued based on quoted prices from the exchange.
- For direct investments, initially, the transaction price is generally considered by the Firm as the exit price and is its best estimate of fair value.
- After initial recognition, in determining the fair value of non-exchange-traded internally and externally managed funds, the Firm generally considers the NAV of the fund provided by the fund manager to be the best estimate of fair value. These investments are included in the Fund

Interests table in the "Net Asset Value Measurements" section herein.
- For non-exchange-traded investments either held directly or held within internally managed funds, fair value after initial recognition is based on an assessment of each underlying investment, considering rounds of financing and third-party transactions, discounted cash flow analyses and market-based information, including comparable Firm transactions, trading multiples and changes in market outlook, among other factors.

Valuation Hierarchy Classification:
- Level 1—if actively traded
- Level 2—when not actively traded and valued based on rounds of financing or third-party transactions
- Level 3—when not actively traded and rounds of financing or third-party transactions are not available

Physical Commodities

Valuation Techniques:.
- Fair value is determined using observable inputs, including broker quotations and published indices.

Valuation Hierarchy Classification:
- Level 2—valued using observable inputs

Investment Securities—AFS Securities

Valuation Techniques:
- AFS securities are composed of U.S. government and agency securities (e.g., U.S. Treasury securities, agency-issued debt, agency mortgage pass-through securities and CMOs), CMBS, ABS, state and municipal securities. For further information on the determination of fair value, refer to the corresponding asset/liability Valuation Technique described herein for the same instruments.

Valuation Hierarchy Classification:
- For further information on the determination of valuation hierarchy classification, see the corresponding Valuation Hierarchy Classification described herein.

Deposits

Valuation Techniques:
- The Firm issues FDIC-insured certificates of deposit that pay either fixed coupons or that have repayment terms linked to the performance of debt or equity securities, indices or currencies. The fair value of these certificates of deposit is determined using valuation models that incorporate observable inputs referencing identical or comparable securities, including prices to which the deposits are linked, interest rate yield curves, option volatility and currency rates, equity prices, and the impact of the Firm's own credit spreads, adjusted for the impact of the FDIC insurance, which is based on vanilla deposit issuance rates.

Valuation Hierarchy Classification:
- Level 2—when valuation inputs are observable
- Level 3—in instances where an unobservable input is deemed significant

Securities Purchased under Agreements to Resell and Securities Sold under Agreements to Repurchase

Valuation Techniques:
- Fair value is computed using a standard cash flow discounting methodology.
- The inputs to the valuation include contractual cash flows and collateral funding spreads, which are the incremental spread over the OIS rate for a specific collateral rate (which refers to the rate applicable to a specific type of security pledged as collateral).

Valuation Hierarchy Classification:
- Level 2—when the valuation inputs are observable and supported by market liquidity
- Level 3—in instances where the valuation input is observable but not supported by market liquidity or if an unobservable input is deemed significant

Other Secured Financings

Valuation Techniques:
- Other secured financings are composed of short-dated notes secured by Corporate equities, agreements to repurchase Physical commodities, the liabilities related to sales of Loans and lending commitments accounted for as financings, and secured contracts that are not classified as OTC derivatives because they fail net investment criteria. For further information on the determination of fair value, refer to the Valuation Techniques described herein for the corresponding instruments, which are the collateral referenced by the other secured financing liability.

Valuation Hierarchy Classification:
- For further information on the determination of valuation hierarchy classification, see the Valuation Hierarchy Classification described herein for the corresponding instruments, which are the collateral referenced by the other secured financing liability.

Borrowings

Valuation Techniques:
- The Firm carries certain borrowings at fair value that are primarily composed of: instruments whose payments and redemption values are linked to the performance of a specific index, a basket of stocks, a specific equity security, a commodity, a credit exposure or basket of credit exposures; and instruments with various interest rate-related features, including step-ups, step-downs and zero coupons. Also included are unsecured contracts that are not classified as OTC derivatives because they fail initial net investment criteria.
- Fair value is determined using valuation models for the derivative and debt portions of the instruments. These models incorporate observable inputs referencing identical or comparable securities, including prices to which the instruments are linked, interest rate yield curves, option volatility and currency rates, and commodity or equity prices.
- Independent, external and traded prices are considered, as well as the impact of the Firm's own credit spreads, which are based on observed secondary bond market spreads.

Valuation Hierarchy Classification:
- Level 2—when valued using observable inputs or where the unobservable input is not deemed significant
- Level 3—in instances where an unobservable input is deemed significant

Rollforward of Level 3 Assets and Liabilities Measured at Fair Value on a Recurring Basis

$ in millions	**2023**	2022	2021
U.S. Treasury and agency securities			
Beginning balance	$ 17	$ 2	$ 9
Realized and unrealized gains (losses)	**—**	(3)	—
Purchases	**—**	14	2
Sales	**(10)**	(1)	(9)
Net transfers	**(7)**	5	—
Ending balance	**$ —**	$ 17	$ 2
Unrealized gains (losses)	**$ —**	$ (1)	$ —
Other sovereign government obligations			
Beginning balance	$ 169	$ 211	$ 268
Realized and unrealized gains (losses)	**5**	(5)	(1)
Purchases	**38**	116	146
Sales	**(86)**	(107)	(192)
Net transfers	**(32)**	(46)	(10)
Ending balance	**$ 94**	$ 169	$ 211
Unrealized gains (losses)	**$ 2**	$ (14)	$ —
State and municipal securities			
Beginning balance	$ 145	$ 13	$ —
Realized and unrealized gains (losses)	**—**	(4)	—
Purchases	**9**	91	4
Sales	**(6)**	(82)	(4)
Net transfers	**(114)**	127	13
Ending balance	**$ 34**	$ 145	$ 13
Unrealized gains (losses)	**$ —**	$ —	$ —
MABS			
Beginning balance	$ 416	$ 344	$ 322
Realized and unrealized gains (losses)	**(2)**	(342)	51
Purchases	**232**	511	254
Sales	**(165)**	(130)	(215)
Net transfers	**8**	33	(68)
Ending balance	**$ 489**	$ 416	$ 344
Unrealized gains (losses)	**$ (14)**	$ 2	$ (10)
Loans and lending commitments			
Beginning balance	$ 2,017	$ 3,806	$ 5,759
Realized and unrealized gains (losses)	**(189)**	(80)	51
Purchases and originations	**1,502**	793	2,446
Sales	**(477)**	(740)	(2,609)
Settlements	**(843)**	(1,526)	(1,268)
Net transfers[1]	**56**	(236)	(573)
Ending balance	**$ 2,066**	$ 2,017	$ 3,806
Unrealized gains (losses)	**$ (76)**	$ 29	$ (7)
Corporate and other debt			
Beginning balance	$ 2,096	$ 1,973	$ 3,435
Realized and unrealized gains (losses)	**145**	456	(140)
Purchases and originations	**623**	1,165	1,355
Sales	**(664)**	(1,889)	(785)
Settlements	**(33)**	(27)	—
Net transfers[2]	**(184)**	418	(1,892)
Ending balance	**$ 1,983**	$ 2,096	$ 1,973
Unrealized gains (losses)	**$ (10)**	$ 160	$ 25

$ in millions	**2023**	2022	2021
Corporate equities			
Beginning balance	$ 116	$ 115	$ 86
Realized and unrealized gains (losses)	**12**	(97)	(8)
Purchases	**85**	73	121
Sales	**(41)**	(22)	(50)
Net transfers	**27**	47	(34)
Ending balance	**$ 199**	$ 116	$ 115
Unrealized gains (losses)	**$ 19**	$ 11	$ (3)
Investments			
Beginning balance	$ 923	$ 1,125	$ 828
Realized and unrealized gains (losses)	**35**	(409)	382
Purchases	**158**	63	226
Sales	**(183)**	(107)	(115)
Net transfers	**16**	251	(196)
Ending balance	**$ 949**	$ 923	$ 1,125
Unrealized gains (losses)	**$ 27**	$ (397)	$ 359
Investment securities—AFS			
Beginning balance	$ 35	$ —	$ 2,804
Realized and unrealized gains (losses)	**—**	(3)	(4)
Sales	**(32)**	—	(203)
Net transfers[3]	**(3)**	38	(2,597)
Ending balance	**$ —**	**$ 35**	**$ —**
Unrealized gains (losses)	**$ —**	$ (3)	$ —
Securities purchased under agreements to resell			
Beginning balance	$ —	$ —	$ 3
Net transfers	**—**	—	(3)
Ending balance	**$ —**	**$ —**	**$ —**
Unrealized gains (losses)	**$ —**	$ —	$ —
Net derivatives: Interest rate			
Beginning balance	$ (151)	$ 708	$ 682
Realized and unrealized gains (losses)	**(336)**	(643)	284
Purchases	**140**	1	67
Issuances	**(43)**	—	(52)
Settlements	**241**	(92)	14
Net transfers	**76**	(125)	(287)
Ending balance	**$ (73)**	$ (151)	$ 708
Unrealized gains (losses)	**$ (210)**	$ (327)	$ 292
Net derivatives: Credit			
Beginning balance	$ 110	$ 98	$ 49
Realized and unrealized gains (losses)	**5**	84	95
Purchases	**—**	5	18
Issuances	**—**	(10)	(46)
Settlements	**(21)**	(61)	58
Net transfers	**2**	(6)	(76)
Ending balance	**$ 96**	$ 110	$ 98
Unrealized gains (losses)	**$ 2**	$ 70	$ 122
Net derivatives: Foreign exchange			
Beginning balance	$ 66	$ 52	$ 61
Realized and unrealized gains (losses)	**(290)**	(8)	(89)
Purchases	**—**	1	2
Issuances	**(1)**	—	(15)
Settlements	**(15)**	(46)	16
Net transfers	**(125)**	67	77
Ending balance	**$ (365)**	$ 66	$ 52
Unrealized gains (losses)	**$ (277)**	$ 43	$ (62)

$ in millions	2023	2022	2021
Net derivatives: Equity			
Beginning balance	$ (736)	$ (945)	$ (2,231)
Realized and unrealized gains (losses)	**(91)**	201	344
Purchases	**221**	77	70
Issuances	**(572)**	(339)	(443)
Settlements	**87**	348	160
Net transfers[2]	**(11)**	(78)	1,155
Ending balance	**$ (1,102)**	$ (736)	$ (945)
Unrealized gains (losses)	**$ (201)**	$ 328	$ (103)
Net derivatives: Commodity and other			
Beginning balance	$ 1,083	$ 1,529	$ 1,709
Realized and unrealized gains (losses)	**910**	315	529
Purchases	**78**	185	44
Issuances	**(136)**	(210)	(86)
Settlements	**(701)**	(510)	(599)
Net transfers	**56**	(226)	(68)
Ending balance	**$ 1,290**	$ 1,083	$ 1,529
Unrealized gains (losses)	**$ 243**	$ (935)	$ 141
Deposits			
Beginning balance	$ 20	$ 67	$ 126
Realized and unrealized losses (gains)	**1**	—	—
Issuances	**25**	11	—
Settlements	**—**	(3)	(10)
Net transfers	**(13)**	(55)	(49)
Ending balance	**$ 33**	$ 20	$ 67
Unrealized losses (gains)	**$ 1**	$ —	$ —
Nonderivative trading liabilities			
Beginning balance	$ 74	$ 61	$ 79
Realized and unrealized losses (gains)	**8**	(86)	(21)
Purchases	**(38)**	(35)	(30)
Sales	**22**	93	43
Net transfers	**(6)**	41	(10)
Ending balance	**$ 60**	$ 74	$ 61
Unrealized losses (gains)	**$ 8**	$ 17	$ (21)
Securities sold under agreements to repurchase			
Beginning balance	$ 512	$ 651	$ 444
Realized and unrealized losses (gains)	**2**	(8)	1
Issuances	**1**	17	—
Settlements	**(9)**	(22)	—
Net transfers	**(57)**	(126)	206
Ending balance	**$ 449**	$ 512	$ 651
Unrealized losses (gains)	**$ 2**	$ —	$ 1
Other secured financings			
Beginning balance	$ 91	$ 403	$ 516
Realized and unrealized losses (gains)	**5**	(6)	(17)
Issuances	**83**	39	449
Settlements	**(99)**	(342)	(518)
Net transfers	**12**	(3)	(27)
Ending balance	**$ 92**	$ 91	$ 403
Unrealized losses (gains)	**$ 5**	$ (6)	$ (16)

$ in millions	2023	2022	2021
Borrowings			
Beginning balance	$ 1,587	$ 2,157	$ 4,374
Realized and unrealized losses (gains)	**219**	(133)	(99)
Issuances	**708**	513	717
Settlements	**(391)**	(285)	(448)
Net transfers[2]	**(245)**	(665)	(2,387)
Ending balance	**$ 1,878**	$ 1,587	$ 2,157
Unrealized losses (gains)	**$ 182**	$ (138)	$ (114)
Portion of unrealized losses (gains) recorded in OCI —Change in net DVA	**29**	(35)	(17)

1. Net transfers in 2021 reflect the transfer in the third quarter of $ 895 million of equity margin loans from Level 3 to Level 2 as a result of the reduced significance of the margin loan rate input.
2. Net transfers in 2021 reflect the transfer in the second quarter of $ 2.0 billion of Corporate and other debt, $1.0 billion of net Equity derivatives and $ 2.2 billion of Borrowings from Level 3 to Level 2 as the unobservable inputs were not significant to the overall fair value measurements.
3. Net transfers in 2021 reflect the transfer in the first quarter of $ 2.5 billion of AFS securities from Level 3 to Level 2 due to increased trading activity and observability of pricing inputs.

Level 3 instruments may be hedged with instruments classified in Level 1 and Level 2. The realized and unrealized gains or losses for assets and liabilities within the Level 3 category presented in the previous tables do not reflect the related realized and unrealized gains or losses on hedging instruments that have been classified by the Firm within the Level 1 and/or Level 2 categories.

The unrealized gains (losses) during the period for assets and liabilities within the Level 3 category may include changes in fair value during the period that were attributable to both observable and unobservable inputs. Total realized and unrealized gains (losses) are primarily included in Trading revenues in the income statement.

Additionally, in the previous tables, consolidations of VIEs are included in Purchases, and deconsolidations of VIEs are included in Settlements.

Significant Unobservable Inputs Used in Recurring and Nonrecurring Level 3 Fair Value Measurements

Valuation Techniques and Unobservable Inputs

	Balance / Range (Average[1])	
$ in millions, except inputs	**At December 31, 2023**	At December 31, 2022
Assets at Fair Value on a Recurring Basis		
Other sovereign government obligations	**$ 94**	$ 169
Comparable pricing:		
Bond price	**61 to 110 points (87 points)**	57 to 124 points (89 points)
State and municipal securities	**$ 34**	$ 145
Comparable pricing:		
Bond price	**N/M**	86 to 100 points (97 points)
MABS	**$ 489**	$ 416
Comparable pricing:		
Bond price	**0 to 88 points (61 points)**	0 to 95 points (68 points)

$ in millions, except inputs	Balance / Range (Average[1]) **At December 31, 2023**	At December 31, 2022
Loans and lending commitments	**$ 2,066**	$ 2,017
Margin loan model:		
Margin loan rate	**2% to 4% (3%)**	2% to 4% (3%)
Comparable pricing:		
Loan price	**85 to 102 points (98 points)**	87 to 105 points (99 points)
Corporate and other debt	**$ 1,983**	$ 2,096
Comparable pricing:		
Bond price	**28 to 135 points (82 points)**	51 to 132 points (90 points)
Discounted cash flow:		
Loss given default	**54% to 84% (62% / 54%)**	54% to 84% (62% / 54%)
Corporate equities	**$ 199**	$ 116
Comparable pricing:		
Equity price	**100%**	100%
Investments	**$ 949**	$ 923
Discounted cash flow:		
WACC	**16% to 18% (17%)**	15% to 17% (16%)
Exit multiple	**9 to 17 times (15 times)**	7 to 17 times (14 times)
Market approach:		
EBITDA multiple	**22 times**	7 to 21 times (11 times)
Comparable pricing:		
Equity price	**24% to 100% (86%)**	24% to 100% (89%)
Net derivative and other contracts:		
Interest rate	**$ (73)**	$ (151)
Option model:		
IR volatility skew	**70% to 100% (81% / 93%)**	105% to 130% (113% / 109%)
IR curve correlation	**49% to 99% (77% / 79%)**	47% to 100% (80% / 84%)
Bond volatility	**79% to 85% (82% / 85%)**	N/M
Inflation volatility	**27% to 70% (43% / 39%)**	22% to 65% (43% / 38%)
IR curve	**N/M**	4% to 5% (5% / 5%)
Credit	**$ 96**	$ 110
Credit default swap model:		
Cash-synthetic basis	**7 points**	7 points
Bond price	**0 to 92 points (46 points)**	0 to 83 points (43 points)
Credit spread	**10 to 404 bps (94 bps)**	10 to 528 bps (115 bps)
Funding spread	**18 to 590 bps (67 bps)**	18 to 590 bps (93 bps)
Foreign exchange[2]	**$ (365)**	$ 66
Option model:		
IR curve	**-4% to 26% (7% / 5%)**	-2% to 38% (8% / 4%)
Foreign exchange volatility skew	**-3% to 12% (2% / 0%)**	10% to 10% (10% / 10%)
Contingency probability	**95%**	95%
Equity[2]	**$ (1,102)**	$ (736)
Option model:		
Equity volatility	**6% to 97% (23%)**	5% to 96% (25%)
Equity volatility skew	**-1% to 0% (0%)**	-4% to 0% (-1%)
Equity correlation	**25% to 97% (49%)**	10% to 93% (71%)
FX correlation	**-79% to 40% (-28%)**	-79% to 65% (-26%)
IR correlation	**10% to 30% (15%)**	10% to 30% (14%)

$ in millions, except inputs	Balance / Range (Average[1]) **At December 31, 2023**	At December 31, 2022
Commodity and other	**$ 1,290**	$ 1,083
Option model:		
Forward power price	**$0 to $220 ($49) per MWh**	$1 to $292 ($43) per MWh
Commodity volatility	**8% to 123% (31%)**	12% to 169% (34%)
Cross-commodity correlation	**54% to 100% (94%)**	70% to 100% (94%)
Liabilities at Fair Value on a Recurring Basis		
Securities sold under agreements to repurchase	**$ 449**	$ 512
Discounted cash flow:		
Funding spread	**28 to 135 bps (79 bps)**	96 to 165 bps (131 bps)
Other secured financings	**$ 92**	$ 91
Comparable pricing:		
Loan price	**22 to 101 points (76 points)**	23 to 101 points (75 points)
Borrowings	**$ 1,878**	$ 1,587
Option model:		
Equity volatility	**6% to 69% (13%)**	7% to 86% (23%)
Equity volatility skew	**-2% to 0% (0%)**	-2% to 0% (0%)
Equity correlation	**41% to 97% (79%)**	39% to 98% (86%)
Equity - FX correlation	**-65% to 40% (-30%)**	-50% to 0% (-21%)
IR curve correlation	**50% to 89% (71% / 70%)**	N/M
IR - Volatility skew	**N/M**	47% to 136% (74% / 59%)
Discounted cash flow:		
Loss given default	**54% to 84% (62% / 54%)**	54% to 84% (62% / 54%)
Nonrecurring Fair Value Measurement		
Loans	**$ 4,532**	$ 6,610
Corporate loan model:		
Credit spread	**99 to 1467 bps (1015 bps)**	91 to 1276 bps (776 bps)
Comparable pricing:		
Loan price	**25 to 93 points (70 points)**	36 to 80 points (65 points)
Warehouse model:		
Credit spread	**115 to 268 bps (185 bps)**	110 to 319 bps (245 bps)

Points—Percentage of par
IR—Interest rate
FX—Foreign exchange
1. A single amount is disclosed for range and average when there is no significant difference between the minimum, maximum and average. Amounts represent weighted averages except where simple averages and the median of the inputs are more relevant.
2. Includes derivative contracts with multiple risks (*i.e.*, hybrid products).

The previous table provides information on the valuation techniques, significant unobservable inputs, and the ranges and averages for each major category of assets and liabilities measured at fair value on a recurring and nonrecurring basis with a significant Level 3 balance. The level of aggregation and breadth of products cause the range of inputs to be wide and not evenly distributed across the inventory of financial instruments. Further, the range of unobservable inputs may differ across firms in the financial services industry because of diversity in the types of products included in each firm's inventory. Generally, there are no predictable relationships between multiple significant unobservable inputs attributable to a given valuation technique.

During 2023, there were no significant revisions made to the descriptions of the Firm's significant unobservable inputs.

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

- *Comparable Bond or Loan Price.* A pricing input used when prices for the identical instrument are not available. Significant subjectivity may be involved when fair value is determined using pricing data available for comparable instruments. Valuation using comparable instruments can be done by calculating an implied yield (or spread over a liquid benchmark) from the price of a comparable bond or loan, then adjusting that yield (or spread) to derive a value for the bond or loan. The adjustment to yield (or spread) should account for relevant differences in the bonds or loans, such as maturity or credit quality. Alternatively, a price-to-price basis can be assumed between the comparable instrument and the bond or loan being valued in order to establish the value of the bond or loan.
- *Comparable Equity Price.* A price derived from equity raises, share buybacks and external bid levels, etc. A discount or premium may be included in the fair value estimate.
- *Contingency Probability.* Probability associated with the realization of an underlying event upon which the value of an asset is contingent.
- *EBITDA Multiple/Exit Multiple.* The ratio of enterprise value to EBITDA, where enterprise value is the aggregate value of equity and debt minus cash and cash equivalents. The EBITDA multiple reflects the value of a company in terms of its full-year EBITDA, whereas the exit multiple reflects the value of a company in terms of its full-year expected EBITDA at exit. Either multiple allows comparison between companies from an operational perspective as the effect of capital structure, taxation and depreciation/amortization is excluded.

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

- *Cash-Synthetic Basis.* The measure of the price differential between cash financial instruments and their synthetic derivative-based equivalents. The range disclosed in the previous table signifies the number of points by which the synthetic bond equivalent price is higher than the quoted price of the underlying cash bonds.
- *Funding Spread.* The cost of borrowing defined as the incremental spread over the OIS rate for a specific collateral rate (which refers to the rate applicable to a specific type of security pledged as collateral).
- *Loss Given Default.* Amount expressed as a percentage of par that is the expected loss when a credit event occurs.
- *Margin Loan Rate.* The annualized rate that reflects the possibility of losses as a result of movements in the price of the underlying margin loan collateral. The rate is calibrated from the discount rate, credit spreads and/or volatility measures.
- *WACC.* WACC represents the theoretical rate of return required to debt and equity investors. The WACC is used in a discounted cash flow model that calculates the value of the equity. The model assumes that the cash flow assumptions, including projections, are fully reflected in the current equity value, while the debt to equity ratio is held constant.

An increase (decrease) to the following significant unobservable inputs would generally result in an impact to the fair value, but the magnitude and direction of the impact would depend on whether the Firm is long or short the exposure.

- *Correlation.* A pricing input where the payoff is driven by more than one underlying risk. Correlation is a measure of the relationship between the movement of two variables (i.e., how the change in one variable influences a change in the other variable).
- *Credit Spread.* The credit spread reflects the additional net yield an investor can earn from a security with more credit risk relative to one with less credit risk. The credit spread of a particular security is often quoted in relation to the yield on a credit risk-free benchmark security or reference rate.
- *Interest Rate Curve.* The term structure of interest rates (relationship between interest rates and the time to maturity) and a market's measure of future interest rates at the time of observation. An interest rate curve is used to set interest rate and foreign exchange derivative cash flows and is a pricing input used in the discounting of any OTC derivative cash flow.
- *Volatility.* The measure of variability in possible returns for an instrument given how much that instrument changes in value over time. Volatility is a pricing input for options, and, generally, the lower the volatility, the less risky the option. The level of volatility used in the valuation of a particular option depends on a number of factors, including the nature of the risk underlying that option, the tenor and the strike price of the option.
- *Volatility Skew.* The measure of the difference in implied volatility for options with identical underliers and expiry dates but with different strikes.

Net Asset Value Measurements

Fund Interests

	At December 31, 2023		At December 31, 2022	
$ in millions	Carrying Value	Commitment	Carrying Value	Commitment
Private equity	**$ 2,685**	**$ 720**	$ 2,622	$ 638
Real estate	**2,765**	**240**	2,642	239
Hedge	**74**	**3**	190	3
Total	**$ 5,524**	**$ 963**	$ 5,454	$ 880

Amounts in the previous table represent the Firm's carrying value of general and limited partnership interests in fund investments, as well as any related performance-based income in the form of carried interest. The carrying amounts are measured based on the NAV of the fund taking into account the distribution terms applicable to the interest held. This same measurement applies whether the fund investments are accounted for under the equity method or fair value.

Private Equity. Funds that pursue multiple strategies, including leveraged buyouts, venture capital, infrastructure growth capital, distressed investments and mezzanine capital. In addition, the funds may be structured with a focus on specific geographic regions.

Real Estate. Funds that invest in real estate assets such as commercial office buildings, retail properties, multifamily residential properties, developments or hotels. In addition, the funds may be structured with a focus on specific geographic regions.

Investments in private equity and real estate funds generally are not redeemable due to the closed-end nature of these funds. Instead, distributions from each fund will be received as the underlying investments of the funds are disposed and monetized.

Hedge. Funds that pursue various investment strategies, including long-short equity, fixed income/credit, event-driven and multi-strategy. Investments in hedge funds may be subject to initial period lock-up or gate provisions, which restrict an investor from withdrawing from the fund during a certain initial period or restrict the redemption amount on any redemption date, respectively.

See Note 14 for information regarding general partner guarantees, which include potential obligations to return performance fee distributions previously received. See Note 22 for information regarding unrealized carried interest at risk of reversal.

Nonredeemable Funds by Contractual Maturity

	Carrying Value at December 31, 2023	
$ in millions	Private Equity	Real Estate
Less than 5 years	**$ 1,413**	**$ 947**
5-10 years	**1,186**	**1,778**
Over 10 years	**86**	**40**
Total	**$ 2,685**	**$ 2,765**

Nonrecurring Fair Value Measurements

Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis

	At December 31, 2023		
$ in millions	Level 2	Level 3[1]	Total
Assets			
Loans	**$ 4,215**	**$ 4,532**	**$ 8,747**
Other assets—Other investments	**—**	**4**	**4**
Other assets—ROU assets	**23**	**—**	**23**
Total	**$ 4,238**	**$ 4,536**	**$ 8,774**
Liabilities			
Other liabilities and accrued expenses—Lending commitments	**$ 110**	**$ 60**	**$ 170**
Total	**$ 110**	**$ 60**	**$ 170**

	At December 31, 2022		
$ in millions	Level 2	Level 3[1]	Total
Assets			
Loans	$ 4,193	$ 6,610	$ 10,803
Other assets—Other investments	—	7	7
Other assets—ROU assets	4	—	4
Total	$ 4,197	$ 6,617	$ 10,814
Liabilities			
Other liabilities and accrued expenses—Lending commitments	$ 275	$ 153	$ 428
Total	$ 275	$ 153	$ 428

1. For significant Level 3 balances, refer to "Significant Unobservable Inputs Used in Recurring and Nonrecurring Level 3 Fair Value Measurements" section herein for details of the significant unobservable inputs used for nonrecurring fair value measurement.

Gains (Losses) from Nonrecurring Fair Value Remeasurements[1]

$ in millions	**2023**	2022	2021
Assets			
Loans[2]	**$ (426)**	$ (563)	$ (89)
Goodwill	**—**	—	(8)
Intangibles	**—**	—	(3)
Other assets—Other investments[3]	**(15)**	(14)	(57)
Other assets—Premises, equipment and software[4]	**(8)**	(6)	(14)
Other assets—ROU assets[5]	**(35)**	(11)	(25)
Total	**$ (484)**	$ (594)	$ (196)
Liabilities			
Other liabilities and accrued expenses—Lending commitments[2]	**$ 75**	$ (137)	$ 37
Total	**$ 75**	$ (137)	$ 37

1. Gains and losses for Loans and Other assets—Other investments are classified in Other revenues. For other items, gains and losses are recorded in Other revenues if the item is held for sale; otherwise, they are recorded in Other expenses.
2. Nonrecurring changes in the fair value of loans and lending commitments, which exclude the impact of related economic hedges, are calculated as follows: for the held-for-investment category, based on the value of the underlying collateral; and for the held-for-sale category, based on recently executed transactions, market price quotations, valuation models that incorporate market observable inputs where possible, such as comparable loan or debt prices and CDS spread levels adjusted for any basis difference between cash and derivative instruments, or default recovery analysis where such transactions and quotations are unobservable.
3. Losses related to Other assets—Other investments were determined using techniques that included discounted cash flow models, methodologies that incorporate multiples of certain comparable companies and recently executed transactions.
4. Losses related to Other assets—Premises, equipment and software generally include impairments as well as write-offs related to the disposal of certain assets.
5. Losses related to Other Assets—ROU assets include impairments related to the discontinued leased properties.

Financial Instruments Not Measured at Fair Value

$ in millions	At December 31, 2023 Carrying Value	Fair Value Level 1	Level 2	Level 3	Total
Financial assets					
Cash and cash equivalents	**$ 89,232**	**$ 89,232**	**$ —**	**$ —**	**$ 89,232**
Investment securities—HTM	**66,694**	**21,937**	**34,411**	**1,105**	**57,453**
Securities purchased under agreements to resell	**110,733**	**—**	**108,099**	**2,674**	**110,773**
Securities borrowed	**121,091**	**—**	**121,091**	**—**	**121,091**
Customer and other receivables	**74,337**	**—**	**70,110**	**4,031**	**74,141**
Loans[1,2]:					
Held for investment	**203,385**	**—**	**20,125**	**176,291**	**196,416**
Held for sale	**15,255**	**—**	**8,652**	**6,672**	**15,324**
Other assets	**704**	**—**	**704**	**—**	**704**
Financial liabilities					
Deposits	**$ 345,332**	**$ —**	**$ 345,391**	**$ —**	**$ 345,391**
Securities sold under agreements to repurchase	**61,631**	**—**	**61,621**	**—**	**61,621**
Securities loaned	**15,057**	**—**	**15,055**	**—**	**15,055**
Other secured financings	**2,756**	**—**	**2,756**	**—**	**2,756**
Customer and other payables	**208,015**	**—**	**208,015**	**—**	**208,015**
Borrowings	**169,832**	**—**	**171,009**	**4**	**171,013**
	Commitment Amount				
Lending commitments[3]	**$ 149,464**	**$ —**	**$ 1,338**	**$ 749**	**$ 2,087**

$ in millions	At December 31, 2022 Carrying Value	Fair Value Level 1	Level 2	Level 3	Total
Financial assets					
Cash and cash equivalents	$ 128,127	$ 128,127	$ —	$ —	$ 128,127
Investment securities—HTM	75,634	26,754	37,218	1,034	65,006
Securities purchased under agreements to resell	113,899	—	111,188	2,681	113,869
Securities borrowed	133,374	—	133,370	—	133,370
Customer and other receivables	73,248	—	69,268	3,664	72,932
Loans[1, 2]:					
Held for investment	198,997	—	17,278	173,778	191,056
Held for sale	14,788	—	6,875	7,783	14,658
Other assets	704	—	704	—	704
Financial liabilities					
Deposits	$ 351,850	$ —	$ 351,721	$ —	$ 351,721
Securities sold under agreements to repurchase	61,670	—	61,620	—	61,620
Securities loaned	15,679	—	15,673	—	15,673
Other secured financings	3,608	—	3,608	—	3,608
Customer and other payables	216,018	—	216,018	—	216,018
Borrowings	159,338	—	157,780	4	157,784
	Commitment Amount				
Lending commitments[3]	$ 136,241	$ —	$ 1,789	$ 1,077	$ 2,866

1. Amounts include loans measured at fair value on a nonrecurring basis.
2. Loans amounts have been disaggregated into HFI and HFS for the first time in the fourth quarter of 2023. Prior period amounts have been revised to match the current period presentation.
3. Represents Lending commitments accounted for as Held for Investment and Held for Sale. For a further discussion on lending commitments, see Note 14.

The previous tables exclude all non-financial assets and liabilities, such as Goodwill and Intangible assets, and certain financial instruments, such as equity method investments and certain receivables.

5. Fair Value Option

The Firm has elected the fair value option for certain eligible instruments that are risk managed on a fair value basis to mitigate income statement volatility caused by measurement basis differences between the elected instruments and their associated risk management transactions or to eliminate complexities of applying certain accounting models.

Borrowings Measured at Fair Value on a Recurring Basis

$ in millions	At December 31, 2023	At December 31, 2022
Business Unit Responsible for Risk Management		
Equity	**$ 46,073**	$ 38,945
Interest rates	**31,055**	26,077
Commodities	**12,798**	10,717
Credit	**2,400**	1,564
Foreign exchange	**1,574**	1,417
Total	**$ 93,900**	$ 78,720

Net Revenues from Borrowings under the Fair Value Option

$ in millions	2023	2022	2021
Trading revenues	**$ (7,991)**	$ 12,370	$ 899
Interest expense	**503**	293	305
Net revenues[1]	**$ (8,494)**	$ 12,077	$ 594

1. Amounts do not reflect any gains or losses from related economic hedges.

Gains (losses) from changes in fair value are recorded in Trading revenues and are mainly attributable to movements in the reference price or index, interest rates or foreign exchange rates.

Gains (Losses) Due to Changes in Instrument-Specific Credit Risk

$ in millions	Trading Revenues	OCI
2023		
Loans and other receivables[1]	**$ (123)**	**$ —**
Lending commitments	**14**	**—**
Deposits	**—**	**17**
Borrowings	**(19)**	**(1,726)**
2022		
Loans and other receivables[1]	$ (108)	$ —
Lending commitments	(12)	—
Deposits	—	(24)
Borrowings	—	2,006
2021		
Loans and other receivables[1]	$ 278	$ —
Lending commitments	2	—
Deposits	—	17
Borrowings	(36)	901

$ in millions	At December 31, 2023	At December 31, 2022
Cumulative pre-tax DVA gain (loss) recognized in AOCI	**$ (2,166)**	$ (457)

1. Loans and other receivables-specific credit gains (losses) were determined by excluding the non-credit components of gains and losses.

Difference between Contractual Principal and Fair Value[1]

$ in millions	At December 31, 2023	At December 31, 2022
Loans and other receivables[2]	**$ 11,086**	$ 11,916
Nonaccrual loans[2]	**8,566**	9,128
Borrowings[3]	**3,030**	5,203

1. Amounts indicate contractual principal greater than or (less than) fair value.
2. The majority of the difference between principal and fair value amounts for loans and other receivables relates to distressed debt positions purchased at amounts well below par.
3. Excludes borrowings where the repayment of the initial principal amount fluctuates based on changes in a reference price or index.

The previous tables exclude non-recourse debt from consolidated VIEs, liabilities related to transfers of financial assets treated as collateralized financings, pledged commodities and other liabilities that have specified assets attributable to them.

Fair Value Loans on Nonaccrual Status

$ in millions	At December 31, 2023	At December 31, 2022
Nonaccrual loans	**$ 440**	$ 585
Nonaccrual loans 90 or more days past due	**$ 75**	$ 116

6 . Derivative Instruments and Hedging Activities

The Firm trades and makes markets globally in listed futures, OTC swaps, forwards, options and other derivatives referencing, among other things, interest rates, equities, currencies, investment grade and non-investment grade corporate credits, loans, bonds, U.S. and other sovereign securities, emerging market bonds and loans, credit indices, ABS indices, property indices, mortgage-related and other ABS, and real estate loan products. The Firm uses these instruments for market-making, managing foreign currency and credit exposure, and asset/liability management.

The Firm manages its market-making positions by employing a variety of risk mitigation strategies. These strategies include diversification of risk exposures and hedging. Hedging activities consist of the purchase or sale of positions in related securities and financial instruments, including a variety of derivative products (e.g., futures, forwards, swaps and options). The Firm manages the market risk associated with its market-making activities on a Firmwide basis, on a worldwide trading division level and on an individual product basis.

Fair Values of Derivative Contracts

	Assets at December 31, 2023			
$ in millions	Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate	**$ 25**	**$ —**	**$ —**	**$ 25**
Foreign exchange	**5**	**5**	**—**	**10**
Total	**30**	**5**	**—**	**35**
Not designated as accounting hedges				
Economic hedges of loans				
Credit	**2**	**27**	**—**	**29**
Other derivatives				
Interest rate	**127,414**	**19,914**	**854**	**148,182**
Credit	**5,712**	**4,896**	**—**	**10,608**
Foreign exchange	**90,654**	**2,570**	**16**	**93,240**
Equity	**20,338**	**—**	**37,737**	**58,075**
Commodity and other	**13,928**	**—**	**2,353**	**16,281**
Total	**258,048**	**27,407**	**40,960**	**326,415**
Total gross derivatives	**$ 258,078**	**$ 27,412**	**$ 40,960**	**$ 326,450**
Amounts offset				
Counterparty netting	**(184,553)**	**(23,851)**	**(38,510)**	**(246,914)**
Cash collateral netting	**(39,493)**	**(2,730)**	**—**	**(42,223)**
Total in Trading assets	**$ 34,032**	**$ 831**	**$ 2,450**	**$ 37,313**
Amounts not offset[1]				
Financial instruments collateral	**(15,690)**	**—**	**—**	**(15,690)**
Net amounts	**$ 18,342**	**$ 831**	**$ 2,450**	**$ 21,623**
Net amounts for which master netting or collateral agreements are not in place or may not be legally enforceable				**$ 2,641**

	Liabilities at December 31, 2023			
$ in millions	Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate	**$ 467**	**$ —**	**$ —**	**$ 467**
Foreign exchange	**414**	**43**	**—**	**457**
Total	**881**	**43**	**—**	**924**
Not designated as accounting hedges				
Economic hedges of loans				
Credit	**43**	**702**	**—**	**745**
Other derivatives				
Interest rate	**120,604**	**17,179**	**590**	**138,373**
Credit	**5,920**	**4,427**	**—**	**10,347**
Foreign exchange	**87,104**	**2,694**	**106**	**89,904**
Equity	**31,545**	**—**	**37,349**	**68,894**
Commodity and other	**12,237**	**—**	**2,830**	**15,067**
Total	**257,453**	**25,002**	**40,875**	**323,330**
Total gross derivatives	**$ 258,334**	**$ 25,045**	**$ 40,875**	**$ 324,254**
Amounts offset				
Counterparty netting	**(184,553)**	**(23,851)**	**(38,510)**	**(246,914)**
Cash collateral netting	**(41,082)**	**(983)**	**—**	**(42,065)**
Total in Trading liabilities	**$ 32,699**	**$ 211**	**$ 2,365**	**$ 35,275**
Amounts not offset[1]				
Financial instruments collateral	**(6,864)**	**(8)**	**(37)**	**(6,909)**
Net amounts	**$ 25,835**	**$ 203**	**$ 2,328**	**$ 28,366**
Net amounts for which master netting or collateral agreements are not in place or may not be legally enforceable				**$ 5,911**

$ in millions	Assets at December 31, 2022 Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate	$ 62	$ 1	$ —	$ 63
Foreign exchange	15	44	—	59
Total	77	45	—	122
Not designated as accounting hedges				
Economic hedges of loans				
Credit	2	59	—	61
Other derivatives				
Interest rate	141,291	29,007	1,029	171,327
Credit	5,888	2,352	—	8,240
Foreign exchange	113,540	2,337	62	115,939
Equity	16,505	—	26,850	43,355
Commodity and other	24,298	—	6,164	30,462
Total	301,524	33,755	34,105	369,384
Total gross derivatives	$ 301,601	$ 33,800	$ 34,105	$ 369,506
Amounts offset				
Counterparty netting	(214,773)	(32,250)	(32,212)	(279,235)
Cash collateral netting	(44,711)	(1,348)	—	(46,059)
Total in Trading assets	$ 42,117	$ 202	$ 1,893	$ 44,212
Amounts not offset[1]				
Financial instruments collateral	(19,406)	—	—	(19,406)
Net amounts	$ 22,711	$ 202	$ 1,893	$ 24,806
Net amounts for which master netting or collateral agreements are not in place or may not be legally enforceable				$ 4,318

$ in millions	Liabilities at December 31, 2022 Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate	$ 457	$ 4	$ —	$ 461
Foreign exchange	550	101	—	651
Total	1,007	105	—	1,112
Not designated as accounting hedges				
Economic hedges of loans				
Credit	9	368	—	377
Other derivatives				
Interest rate	135,661	28,581	455	164,697
Credit	5,535	2,390	—	7,925
Foreign exchange	110,322	2,512	104	112,938
Equity	23,138	—	28,193	51,331
Commodity and other	19,631	—	6,748	26,379
Total	294,296	33,851	35,500	363,647
Total gross derivatives	$ 295,303	$ 33,956	$ 35,500	$ 364,759
Amounts offset				
Counterparty netting	(214,773)	(32,250)	(32,212)	(279,235)
Cash collateral netting	(45,884)	(1,505)	—	(47,389)
Total in Trading liabilities	$ 34,646	$ 201	$ 3,288	$ 38,135
Amounts not offset[1]				
Financial instruments collateral	(2,545)	—	(1,139)	(3,684)
Net amounts	$ 32,101	$ 201	$ 2,149	$ 34,451
Net amounts for which master netting or collateral agreements are not in place or may not be legally enforceable				$ 6,430

1. Amounts relate to master netting agreements and collateral agreements that have been determined by the Firm to be legally enforceable in the event of default but where certain other criteria are not met in accordance with applicable offsetting accounting guidance.

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

Notionals of Derivative Contracts

$ in billions	**Assets at December 31, 2023** Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate	**$ —**	**$ 92**	**$ —**	**$ 92**
Foreign exchange	**1**	**1**	**—**	**2**
Total	**1**	**93**	**—**	**94**
Not designated as accounting hedges				
Economic hedges of loans				
Credit	**—**	**1**	**—**	**1**
Other derivatives				
Interest rate	**4,153**	**8,357**	**560**	**13,070**
Credit	**214**	**176**	**—**	**390**
Foreign exchange	**3,378**	**165**	**7**	**3,550**
Equity	**528**	**—**	**440**	**968**
Commodity and other	**142**	**—**	**65**	**207**
Total	**8,415**	**8,699**	**1,072**	**18,186**
Total gross derivatives	**$ 8,416**	**$ 8,792**	**$ 1,072**	**$ 18,280**

$ in billions	**Liabilities at December 31, 2023** Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate	**$ 3**	**$ 183**	**$ —**	**$ 186**
Foreign exchange	**14**	**3**	**—**	**17**
Total	**17**	**186**	**—**	**203**
Not designated as accounting hedges				
Economic hedges of loans				
Credit	**2**	**22**	**—**	**24**
Other derivatives				
Interest rate	**4,631**	**8,197**	**455**	**13,283**
Credit	**229**	**155**	**—**	**384**
Foreign exchange	**3,496**	**167**	**33**	**3,696**
Equity	**587**	**—**	**712**	**1,299**
Commodity and other	**101**	**—**	**79**	**180**
Total	**9,046**	**8,541**	**1,279**	**18,866**
Total gross derivatives	**$ 9,063**	**$ 8,727**	**$ 1,279**	**$ 19,069**

$ in billions	Assets at December 31, 2022 Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate	$ 2	$ 62	$ —	$ 64
Foreign exchange	2	2	—	4
Total	4	64	—	68
Not designated as accounting hedges				
Economic hedges of loans				
Credit	—	3	—	3
Other derivatives				
Interest rate	3,404	7,609	614	11,627
Credit	190	130	—	320
Foreign exchange	3,477	126	15	3,618
Equity	488	—	358	846
Commodity and other	141	—	59	200
Total	7,700	7,868	1,046	16,614
Total gross derivatives	$ 7,704	$ 7,932	$ 1,046	$ 16,682

$ in billions	Liabilities at December 31, 2022 Bilateral OTC	Cleared OTC	Exchange-Traded	Total
Designated as accounting hedges				
Interest rate	$ 3	$ 187	$ —	$ 190
Foreign exchange	12	2	—	14
Total	15	189	—	204
Not designated as accounting hedges				
Economic hedges of loans				
Credit	—	15	—	15
Other derivatives				
Interest rate	3,436	7,761	497	11,694
Credit	199	125	—	324
Foreign exchange	3,516	123	35	3,674
Equity	488	—	552	1,040
Commodity and other	101	—	79	180
Total	7,740	8,024	1,163	16,927
Total gross derivatives	$ 7,755	$ 8,213	$ 1,163	$ 17,131

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

Gains (Losses) on Accounting Hedges

$ in millions	2023	2022	2021
Fair value hedges—Recognized in Interest income			
Interest rate contracts	**$ (576)**	$ 1,928	$ 742
Investment Securities—AFS	**638**	(1,838)	(629)
Fair value hedges—Recognized in Interest expense			
Interest rate contracts	**$ 3,664**	$ (15,159)	$ (4,306)
Deposits	**(88)**	124	88
Borrowings	**(3,564)**	15,042	4,214
Net investment hedges—Foreign exchange contracts			
Recognized in OCI	**$ (168)**	$ 657	$ 664
Forward points excluded from hedge effectiveness testing—Recognized in Interest income	**211**	(33)	(53)
Cash flow hedges—Interest rate contracts[1]			
Recognized in OCI	**$ 9**	$ (4)	$ —
Less: Realized gains (losses) (pre-tax) reclassified from AOCI to interest income	**(16)**	—	—
Net change in cash flow hedges included within AOCI	**25**	(4)	—

1. For the year ended 2023, there were no forecasted transactions that failed to occur. The net gains (losses) associated with cash flow hedges expected to be reclassified from AOCI within 12 months as of December 31, 2023 is approximately $(56) million. The maximum length of time over which forecasted cash flows are hedged is 18 months.

Fair Value Hedges—Hedged Items

$ in millions	At December 31, 2023	At December 31, 2022
Investment securities—AFS		
Amortized cost basis currently or previously hedged	**$ 47,179**	$ 34,073
Basis adjustments included in amortized cost[1]	**$ (732)**	$ (1,628)
Deposits		
Carrying amount currently or previously hedged	**$ 10,569**	$ 3,735
Basis adjustments included in carrying amount[1]	**$ (31)**	$ (119)
Borrowings		
Carrying amount currently or previously hedged	**$ 158,659**	$ 146,025
Basis adjustments included in carrying amount—Outstanding hedges	**$ (9,219)**	$ (12,748)
Basis adjustments included in carrying amount—Terminated hedges	**$ (671)**	$ (715)

1. Hedge accounting basis adjustments are primarily related to outstanding hedges.

Gains (Losses) on Economic Hedges of Loans

$ in millions	2023	2022	2021
Recognized in Other revenues			
Credit contracts[1]	**(522)**	(62)	(285)

1. Amounts related to hedges of certain held-for-investment and held-for-sale loans.

Derivatives with Credit Risk-Related Contingencies

Net Derivative Liabilities and Collateral Posted

$ in millions	At December 31, 2023	At December 31, 2022
Net derivative liabilities with credit risk-related contingent features	**$ 21,957**	$ 20,287
Collateral posted	**16,389**	12,268

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

Incremental Collateral and Termination Payments upon Potential Future Ratings Downgrade

$ in millions	At December 31, 2023
One-notch downgrade	**$ 450**
Two-notch downgrade	**394**
Bilateral downgrade agreements included in the amounts above[1]	**$ 692**

1. Amount represents arrangements between the Firm and other parties where upon the downgrade of one party, the downgraded party must deliver collateral to the other party. These bilateral downgrade arrangements are used by the Firm to manage the risk of counterparty downgrades.

The additional collateral or termination payments that may be called in the event of a future credit rating downgrade vary by contract and can be based on ratings by Moody's Investors Service, Inc., S&P Global Ratings and/or other rating agencies. The previous table shows the future potential collateral amounts and termination payments that could be called or required by counterparties or exchange and clearing organizations in the event of one-notch or two-notch

downgrade scenarios based on the relevant contractual downgrade triggers.

Maximum Potential Payout/Notional of Credit Protection Sold[1]

	Years to Maturity at December 31, 2023				
$ in billions	< 1	1-3	3-5	Over 5	Total
Single-name CDS					
Investment grade	**$ 19**	**$ 29**	**$ 39**	**$ 10**	**$ 97**
Non-investment grade	**7**	**14**	**17**	**1**	**39**
Total	**$ 26**	**$ 43**	**$ 56**	**$ 11**	**$ 136**
Index and basket CDS					
Investment grade	**$ 8**	**$ 19**	**$ 85**	**$ 4**	**$ 116**
Non-investment grade	**8**	**14**	**95**	**17**	**134**
Total	**$ 16**	**$ 33**	**$ 180**	**$ 21**	**$ 250**
Total CDS sold	**$ 42**	**$ 76**	**$ 236**	**$ 32**	**$ 386**
Other credit contracts	**—**	**—**	**—**	**3**	**3**
Total credit protection sold	**$ 42**	**$ 76**	**$ 236**	**$ 35**	**$ 389**
CDS protection sold with identical protection purchased					**$ 330**

	Years to Maturity at December 31, 2022				
$ in billions	< 1	1-3	3-5	Over 5	Total
Single-name CDS					
Investment grade	$ 12	$ 29	$ 29	$ 9	$ 79
Non-investment grade	5	13	16	2	36
Total	$ 17	$ 42	$ 45	$ 11	$ 115
Index and basket CDS					
Investment grade	$ 3	$ 13	$ 37	$ 3	$ 56
Non-investment grade	8	17	108	19	152
Total	$ 11	$ 30	$ 145	$ 22	$ 208
Total CDS sold	$ 28	$ 72	$ 190	$ 33	$ 323
Other credit contracts	—	—	—	—	—
Total credit protection sold	$ 28	$ 72	$ 190	$ 33	$ 323
CDS protection sold with identical protection purchased					$ 262

Fair Value Asset (Liability) of Credit Protection Sold[1]

$ in millions	**At December 31, 2023**	At December 31, 2022
Single-name CDS		
Investment grade	**$ 1,904**	$ 762
Non-investment grade	**399**	(808)
Total	**$ 2,303**	$ (46)
Index and basket CDS		
Investment grade	**$ 1,929**	$ 859
Non-investment grade	**45**	(1,812)
Total	**$ 1,974**	$ (953)
Total CDS sold	**$ 4,277**	$ (999)
Other credit contracts	**314**	(1)
Total credit protection sold	**$ 4,591**	$ (1,000)

1. Investment grade/non-investment grade determination is based on the internal credit rating of the reference obligation. Internal credit ratings serve as the CRM's assessment of credit risk and the basis for a comprehensive credit limits framework used to control credit risk. The Firm uses quantitative models and judgment to estimate the various risk parameters related to each obligor.

Protection Purchased with CDS

	Notional	
$ in billions	**At December 31, 2023**	At December 31, 2022
Single name	**$ 166**	$ 140
Index and basket	**213**	173
Tranched index and basket	**30**	26
Total	**$ 409**	$ 339

	Fair Value Asset (Liability)	
$ in millions	**At December 31, 2023**	At December 31, 2022
Single name	**$ (2,799)**	$ (33)
Index and basket	**(1,208)**	1,248
Tranched index and basket	**(1,012)**	(217)
Total	**$ (5,019)**	$ 998

The Firm enters into credit derivatives, principally CDS, under which it receives or provides protection against the risk of default on a set of debt obligations issued by a specified reference entity or entities. A majority of the Firm's counterparties for these derivatives are banks, broker-dealers, and insurance and other financial institutions.

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

The purchase of credit protection does not represent the sole manner in which the Firm risk manages its exposure to credit derivatives. The Firm manages its exposure to these derivative contracts through a variety of risk mitigation strategies, which include managing the credit and correlation risk across single-name, non-tranched indices and baskets, tranched indices and baskets, and cash positions. Aggregate market risk limits have been established for credit derivatives, and market risk measures are routinely monitored against these limits. The Firm may also recover amounts on the underlying reference obligation delivered to the Firm under CDS where credit protection was sold.

Single-Name CDS. A CDS protects the buyer against the loss of principal on a bond or loan in case of a default by the issuer. The protection buyer pays a periodic premium (generally quarterly) over the life of the contract and is protected for the period. The Firm, in turn, performs under a CDS if a credit event as defined under the contract occurs. Typical credit events include bankruptcy, dissolution or insolvency of the referenced entity, failure to pay and restructuring of the obligations of the referenced entity.

Index and Basket CDS. Index and basket CDS are products where credit protection is provided on a portfolio of single-name CDS. Generally, in the event of a default on one of the underlying names, the Firm pays a pro rata portion of the total notional amount of the CDS.

The Firm also enters into tranched index and basket CDS where credit protection is provided on a particular portion of the portfolio loss distribution. The most junior tranches cover initial defaults, and once losses exceed the notional of the

tranche, they are passed on to the next most senior tranche in the capital structure.

Other Credit Contracts. The Firm has invested in CLNs and CDOs, which are hybrid instruments containing embedded derivatives, in which credit protection has been sold to the issuer of the note. If there is a credit event of a reference entity underlying the instrument, the principal balance of the note may not be repaid in full to the Firm.

7. Investment Securities

AFS and HTM Securities

	At December 31, 2023			
$ in millions	Amortized Cost[1]	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
AFS securities				
U.S. Treasury securities	**$ 58,484**	**$ 24**	**$ 1,103**	**57,405**
U.S. agency securities[2]	**25,852**	**4**	**2,528**	**23,328**
Agency CMBS	**5,871**	**—**	**456**	**5,415**
State and municipal securities	**1,132**	**46**	**5**	**1,173**
FFELP student loan ABS[3]	**810**	**—**	**18**	**792**
Total AFS securities	**92,149**	**74**	**4,110**	**88,113**
HTM securities				
U.S. Treasury securities	**23,222**	**—**	**1,285**	**21,937**
U.S. agency securities[2]	**40,894**	**—**	**7,699**	**33,195**
Agency CMBS	**1,337**	**—**	**121**	**1,216**
Non-agency CMBS	**1,241**	**2**	**138**	**1,105**
Total HTM securities	**66,694**	**2**	**9,243**	**57,453**
Total investment securities	**$ 158,843**	**$ 76**	**$ 13,353**	**$ 145,566**

	At December 31, 2022			
$ in millions	Amortized Cost[1]	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
AFS securities				
U.S. Treasury securities	$ 56,103	$ 17	$ 2,254	$ 53,866
U.S. agency securities[2]	23,926	1	2,753	21,174
Agency CMBS	5,998	—	470	5,528
State and municipal securities	2,598	71	42	2,627
FFELP student loan ABS[3]	1,147	—	45	1,102
Total AFS securities	89,772	89	5,564	84,297
HTM securities				
U.S. Treasury securities	28,599	—	1,845	26,754
U.S. agency securities[2]	44,038	—	8,487	35,551
Agency CMBS	1,819	—	152	1,667
Non-agency CMBS	1,178	—	144	1,034
Total HTM securities	75,634	—	10,628	65,006
Total investment securities	$ 165,406	$ 89	$ 16,192	$ 149,303

1. Amounts are net of any ACL.
2. U.S. agency securities consist mainly of agency mortgage pass-through pool securities, CMOs and agency-issued debt.
3. Underlying loans are backed by a guarantee, ultimately from the U.S. Department of Education, of at least 95% of the principal balance and interest outstanding.

Investment Securities in an Unrealized Loss Position

	At December 31, 2023		At December 31, 2022	
$ in millions	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
U.S. Treasury securities				
Less than12 months	**$ 14,295**	**$ 22**	$ 42,144	$ 1,711
12 months or longer	**33,458**	**1,081**	11,454	543
Total	**47,753**	**1,103**	53,598	2,254
U.S. agency securities				
Less than12 months	**4,297**	**43**	13,662	1,271
12 months or longer	**18,459**	**2,485**	7,060	1,482
Total	**22,756**	**2,528**	20,722	2,753
Agency CMBS				
Less than12 months	**—**	**—**	5,343	448
12 months or longer	**5,415**	**456**	185	22
Total	**5,415**	**456**	5,528	470
State and municipal securities				
Less than12 months	**524**	**3**	2,106	40
12 months or longer	**35**	**2**	65	2
Total	**559**	**5**	2,171	42
FFELP student loan ABS				
Less than12 months	**56**	**1**	627	23
12 months or longer	**616**	**17**	476	22
Total	**672**	**18**	1,103	45
Total AFS securities in an unrealized loss position				
Less than12 months	**19,172**	**69**	63,882	3,493
12 months or longer	**57,983**	**4,041**	19,240	2,071
Total	**$ 77,155**	**$ 4,110**	$ 83,122	$ 5,564

For AFS securities, the Firm believes there are no securities in an unrealized loss position that have credit losses after performing the analysis described in Note 2. Additionally, the Firm does not intend to sell these securities and is not likely to be required to sell these securities prior to recovery of the amortized cost basis. As of December 31, 2023 and December 31, 2022, the securities in an unrealized loss position are predominantly investment grade.

The HTM securities net carrying amounts at December 31, 2023 and December 31, 2022 reflect an ACL of $44 million and $34 million, respectively, predominantly related to Non-agency CMBS. See Note 2 for a description of the ACL methodology used for HTM Securities. As of December 31, 2023 and December 31, 2022, Non-Agency CMBS HTM securities were predominantly on accrual status and investment grade.

See Note 15 for additional information on securities issued by VIEs, including U.S. agency mortgage-backed securities, non-agency CMBS, and FFELP student loan ABS.

Investment Securities by Contractual Maturity

$ in millions	At December 31, 2023 Amortized Cost[1]	Fair Value	Annualized Average Yield[2,3]
AFS securities			
U.S. Treasury securities:			
Due within 1 year	**$ 16,311**	**$ 16,030**	**1.2 %**
After 1 year through 5 years	**40,412**	**39,620**	**2.6 %**
After 5 years through 10 years	**1,761**	**1,755**	**4.0 %**
Total	**58,484**	**57,405**	
U.S. agency securities:			
Due within 1 year	**23**	**23**	**(0.6) %**
After 1 year through 5 years	**397**	**375**	**1.6 %**
After 5 years through 10 years	**547**	**504**	**1.8 %**
After 10 years	**24,885**	**22,426**	**3.6 %**
Total	**25,852**	**23,328**	
Agency CMBS:			
Due within 1 year	**1**	**1**	**(2.2) %**
After 1 year through 5 years	**2,491**	**2,392**	**1.8 %**
After 5 years through 10 years	**2,176**	**2,043**	**2.0 %**
After 10 years	**1,203**	**979**	**1.4 %**
Total	**5,871**	**5,415**	
State and municipal securities:			
Due within 1 year	**27**	**28**	**5.2 %**
After 1 year through 5 years	**185**	**184**	**4.7 %**
After 5 years through 10 years	**6**	**9**	**4.1 %**
After 10 years	**914**	**952**	**4.2 %**
Total	**1,132**	**1,173**	
FFELP student loan ABS:			
After 1 year through 5 years	**96**	**91**	**6.1 %**
After 5 years through 10 years	**99**	**95**	**6.0 %**
After 10 years	**615**	**606**	**6.2 %**
Total	**810**	**792**	
Total AFS securities	**92,149**	**88,113**	**2.6 %**

$ in millions	At December 31, 2023 Amortized Cost[1]	Fair Value	Annualized Average Yield[2]
HTM securities			
U.S. Treasury securities:			
Due within 1 year	**$ 6,403**	**$ 6,317**	**2.1 %**
After 1 year through 5 years	**12,059**	**11,497**	**1.8 %**
After 5 years through 10 years	**3,202**	**2,965**	**2.4 %**
After 10 years	**1,558**	**1,158**	**2.3 %**
Total	**23,222**	**21,937**	
U.S. agency securities:			
After 1 year through 5 years	**6**	**6**	**1.8 %**
After 5 years through 10 years	**294**	**276**	**2.1 %**
After 10 years	**40,594**	**32,913**	**1.8 %**
Total	**40,894**	**33,195**	
Agency CMBS:			
Due within 1 year	**30**	**30**	**2.5 %**
After 1 year through 5 years	**1,063**	**985**	**1.4 %**
After 5 years through 10 years	**117**	**99**	**1.4 %**
After 10 years	**127**	**102**	**1.6 %**
Total	**1,337**	**1,216**	
Non-agency CMBS:			
Due within 1 year	**208**	**185**	**4.0 %**
After 1 year through 5 years	**343**	**321**	**4.6 %**
After 5 years through 10 years	**641**	**551**	**3.7 %**
After 10 years	**49**	**48**	**5.7 %**
Total	**1,241**	**1,105**	
Total HTM securities	**66,694**	**57,453**	**1.9 %**
Total investment securities	**$ 158,843**	**$ 145,566**	**2.3 %**

1. Amounts are net of any ACL.
2. Annualized average yield is computed using the effective yield, weighted based on the amortized cost of each security. The effective yield is shown pre-tax and excludes the effect of related hedging derivatives.
3. At December 31, 2023, the annualized average yield, including the interest rate swap accrual of related hedges, was 1.6% for AFS securities contractually maturing within 1 year and 3.6% for all AFS securities.

Gross Realized Gains (Losses) on Sales of AFS Securities

$ in millions	2023	2022	2021
Gross realized gains	**$ 70**	$ 164	$ 237
Gross realized (losses)	**(21)**	(94)	(27)
Total[1]	**$ 49**	$ 70	$ 210

1. Realized gains and losses are recognized in Other revenues in the income statement.

8. Collateralized Transactions

The Firm enters into securities purchased under agreements to resell, securities sold under agreements to repurchase, securities borrowed and securities loaned transactions to, among other things, acquire securities to cover short positions and settle other securities obligations, to accommodate customers' needs and to finance its inventory positions.

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

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

The Firm actively manages its secured financings in a manner that reduces the potential refinancing risk of secured financings of less liquid assets and also considers the quality of collateral when negotiating collateral eligibility with counterparties. The Firm utilizes shorter term secured financing for highly liquid assets and has established longer tenor limits for less liquid assets, for which funding may be at risk in the event of a market disruption.

Offsetting of Certain Collateralized Transactions

	At December 31, 2023				
$ in millions	Gross Amounts	Amounts Offset	Balance Sheet Net Amounts	Amounts Not Offset[1]	Net Amounts
Assets					
Securities purchased under agreements to resell	**$ 300,242**	**$ (189,502)**	**$ 110,740**	**$ (108,893)**	**$ 1,847**
Securities borrowed	**142,453**	**(21,362)**	**121,091**	**(115,969)**	**5,122**
Liabilities					
Securities sold under agreements to repurchase	**$ 252,153**	**$ (189,502)**	**$ 62,651**	**$ (58,357)**	**$ 4,294**
Securities loaned	**36,419**	**(21,362)**	**15,057**	**(15,046)**	**11**
Net amounts for which master netting agreements are not in place or may not be legally enforceable					
Securities purchased under agreements to resell					**$ 1,741**
Securities borrowed					**607**
Securities sold under agreements to repurchase					**3,014**
Securities loaned					**2**

	At December 31, 2022				
$ in millions	Gross Amounts	Amounts Offset	Balance Sheet Net Amounts	Amounts Not Offset[1]	Net Amounts
Assets					
Securities purchased under agreements to resell	$ 240,355	$ (126,448)	$ 113,907	$ (109,902)	$ 4,005
Securities borrowed	145,340	(11,966)	133,374	(128,073)	5,301
Liabilities					
Securities sold under agreements to repurchase	$ 188,982	$ (126,448)	$ 62,534	$ (57,395)	$ 5,139
Securities loaned	27,645	(11,966)	15,679	(15,199)	480
Net amounts for which master netting agreements are not in place or may not be legally enforceable					
Securities purchased under agreements to resell					$ 1,696
Securities borrowed					624
Securities sold under agreements to repurchase					3,861
Securities loaned					250

1. Amounts relate to master netting agreements that have been determined by the Firm to be legally enforceable in the event of default but where certain other criteria are not met in accordance with applicable offsetting accounting guidance.

For information related to offsetting of derivatives, see Note 6.

Gross Secured Financing Balances by Remaining Contractual Maturity

	At December 31, 2023				
$ in millions	Overnight and Open	Less than 30 Days	30-90 Days	Over 90 Days	Total
Securities sold under agreements to repurchase	**$ 80,376**	**$ 114,826**	**$ 25,510**	**$ 31,441**	**$ 252,153**
Securities loaned	**21,508**	**1,345**	**709**	**12,857**	**36,419**
Total included in the offsetting disclosure	**$ 101,884**	**$ 116,171**	**$ 26,219**	**$ 44,298**	**$ 288,572**
Trading liabilities—Obligation to return securities received as collateral	**13,528**	**—**	**—**	**—**	**13,528**
Total	**$ 115,412**	**$ 116,171**	**$ 26,219**	**$ 44,298**	**$ 302,100**

	At December 31, 2022				
$ in millions	Overnight and Open	Less than 30 Days	30-90 Days	Over 90 Days	Total
Securities sold under agreements to repurchase	$ 54,551	$ 77,359	$ 20,586	$ 36,486	$ 188,982
Securities loaned	15,150	882	1,984	9,629	27,645
Total included in the offsetting disclosure	$ 69,701	$ 78,241	$ 22,570	$ 46,115	$ 216,627
Trading liabilities—Obligation to return securities received as collateral	22,880	—	—	—	22,880
Total	$ 92,581	$ 78,241	$ 22,570	$ 46,115	$ 239,507

Gross Secured Financing Balances by Class of Collateral Pledged

$ in millions	**At December 31, 2023**	At December 31, 2022
Securities sold under agreements to repurchase		
U.S. Treasury and agency securities	**$ 98,377**	$ 57,761
Other sovereign government obligations	**122,342**	98,839
Corporate equities	**18,144**	19,340
Other	**13,290**	13,042
Total	**$ 252,153**	$ 188,982
Securities loaned		
Other sovereign government obligations	**$ 1,379**	$ 862
Corporate equities	**34,434**	26,289
Other	**606**	494
Total	**$ 36,419**	$ 27,645
Total included in the offsetting disclosure	**$ 288,572**	$ 216,627
Trading liabilities—Obligation to return securities received as collateral		
Corporate equities	**$ 13,502**	$ 22,833
Other	**26**	47
Total	**$ 13,528**	$ 22,880
Total	**$ 302,100**	$ 239,507

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

$ in millions	**At December 31, 2023**	At December 31, 2022
Trading assets	**$ 37,522**	$ 34,524

The Firm pledges certain of its trading assets to collateralize securities sold under agreements to repurchase, securities

loaned, other secured financings and derivatives and to cover customer short sales. Counterparties may or may not have the right to sell or repledge the collateral.

Pledged financial instruments that can be sold or repledged by the secured party are identified as Trading assets (pledged to various parties) in the balance sheet.

Fair Value of Collateral Received with Right to Sell or Repledge

$ in millions	**At December 31, 2023**	At December 31, 2022
Collateral received with right to sell or repledge	**$ 735,830**	$ 637,941
Collateral that was sold or repledged[1]	**553,386**	486,820

1. Does not include securities used to meet federal regulations for the Firm's U.S. broker-dealers.

The Firm receives collateral in the form of securities in connection with securities purchased under agreements to resell, securities borrowed, securities-for-securities transactions, derivative transactions, customer margin loans and securities-based lending. In many cases, the Firm is permitted to sell or repledge this collateral to secure securities sold under agreements to repurchase, to enter into securities lending and derivative transactions or to deliver to counterparties to cover short positions.

Securities Segregated for Regulatory Purposes

$ in millions	**At December 31, 2023**	At December 31, 2022
Segregated securities[1]	**$ 20,670**	$ 32,254

1. Securities segregated under federal regulations for the Firm's U.S. broker-dealers are sourced from Securities purchased under agreements to resell and Trading assets in the balance sheet.

Concentration Based on the Firm's Total Assets

	At December 31, 2023		At December 31, 2022	
U.S. government and agency securities and other sovereign government obligations				
Trading assets[1]	**12**	**%**	9	%
Off balance sheet—Collateral received[2]	**11**	**%**	12	%

1. Other sovereign government obligations included in Trading assets primarily consist of obligations of the U.K., Japan and Brazil.
2. Collateral received is primarily related to Securities purchased under agreements to resell and Securities borrowed.

The Firm is subject to concentration risk by holding large positions in certain types of securities, loans or commitments to purchase securities of a single issuer, including sovereign governments and other entities, issuers located in a particular country or geographic area, public and private issuers involving developing countries or issuers engaged in a particular industry.

Positions taken and underwriting and financing commitments, including those made in connection with the Firm's private equity, principal investment and lending activities, often involve substantial amounts and significant exposure to individual issuers and businesses, including investment grade and non-investment grade issuers.

Customer Margin and Other Lending

$ in millions	**At December 31, 2023**	At December 31, 2022
Margin and other lending	**$ 45,644**	$ 38,524

The Firm provides margin lending arrangements that allow customers to borrow against the value of qualifying securities. Receivables from these arrangements are included within Customer and other receivables in the balance sheet. Under these arrangements, the Firm receives collateral, which includes U.S. government and agency securities, other sovereign government obligations, corporate and other debt, and corporate equities. Margin loans are collateralized by customer-owned securities held by the Firm. The Firm monitors required margin levels and established credit terms daily and, pursuant to such guidelines, requires customers to deposit additional collateral, or reduce positions, when necessary.

Margin loans are extended on a demand basis and generally are not committed facilities. Factors considered in the review of margin loans are the amount of the loan, the intended purpose, the degree of leverage being employed in the account and the amount of collateral, as well as an overall evaluation of the portfolio to ensure proper diversification or, in the case of concentrated positions, appropriate liquidity of the underlying collateral or potential hedging strategies to reduce risk. Underlying collateral for margin loans is reviewed with respect to the liquidity of the proposed collateral positions, valuation of securities, historic trading range, volatility analysis and an evaluation of industry concentrations. For these transactions, adherence to the Firm's collateral policies significantly limits its credit exposure in the event of a customer default. The Firm may request additional margin collateral from customers, if appropriate, and, if necessary, may sell securities that have not been paid for or purchase securities sold but not delivered from customers.

Also included in the amounts in the previous table is non-purpose securities-based lending on entities in the Wealth Management business segment.

Other Secured Financings

Other secured financings include the liabilities related to collateralized notes, transfers of financial assets that are accounted for as financings rather than sales and consolidated VIEs where the Firm is deemed to be the primary beneficiary. These liabilities are generally payable from the cash flows of the related assets accounted for as Trading assets (see Notes 13 and 15). Additionally, for certain secured financing transactions that the Firm entered into during 2023 that meet applicable netting criteria, the Firm offsets Other secured financing liabilities against financing receivables recorded within Trading assets in the amount of $3,472 million at December 31, 2023.

9. Loans, Lending Commitments and Related Allowance for Credit Losses

The Firm's held-for-investment and held-for-sale loan portfolios consist of the following types of loans:

- *Corporate.* Corporate includes revolving lines of credit, term loans and bridge loans made to corporate entities for a variety of purposes.
- *Secured Lending Facilities.* Secured lending facilities include loans provided to clients, which are collateralized by various assets, including residential and commercial real estate mortgage loans, investor commitments for capital calls, corporate loans and other assets.
- *Commercial Real Estate*. Commercial real estate loans include owner-occupied loans and income-producing loans.
- *Residential Real Estate.* Residential real estate loans mainly include non-conforming loans and HELOC.
- *Securities-based Lending and Other.* Securities-based lending includes loans that allow clients to borrow money against the value of qualifying securities, generally for any suitable purpose other than purchasing, trading, or carrying securities or refinancing margin debt. The majority of these loans are structured as revolving lines of credit. Other primarily includes certain loans originated in the tailored lending business within the Wealth Management business segment.

Loans by Type

	At December 31, 2023		
$ in millions	HFI Loans	HFS Loans	Total Loans
Corporate	**$ 6,758**	**$ 11,862**	**$ 18,620**
Secured lending facilities	**39,498**	**3,161**	**42,659**
Commercial real estate	**8,678**	**209**	**8,887**
Residential real estate	**60,375**	**22**	**60,397**
Securities-based lending and Other loans	**89,245**	**1**	**89,246**
Total loans	**204,554**	**15,255**	**219,809**
ACL	**(1,169)**		**(1,169)**
Total loans, net	**$ 203,385**	**$ 15,255**	**$ 218,640**
Loans to non-U.S. borrowers, net	**$ 21,152**	**$ 5,043**	**$ 26,195**

	At December 31, 2022		
$ in millions	HFI Loans	HFS Loans	Total Loans
Corporate	$ 6,589	$ 10,634	$ 17,223
Secured lending facilities	35,606	3,176	38,782
Commercial real estate	8,515	926	9,441
Residential real estate	54,460	4	54,464
Securities-based lending and Other loans	94,666	48	94,714
Total loans	199,836	14,788	214,624
ACL	(839)		(839)
Total loans, net	$ 198,997	$ 14,788	$ 213,785
Loans to non-U.S. borrowers, net	$ 17,979	$ 5,672	$ 23,651

Loans by Interest Rate Type

	At December 31, 2023		At December 31, 2022	
$ in millions	Fixed Rate	Floating or Adjustable Rate	Fixed Rate	Floating or Adjustable Rate
Corporate	**$ —**	**$ 18,620**	$ —	$ 17,223
Secured lending facilities	**—**	**42,659**	—	38,782
Commercial real estate	**141**	**8,746**	204	9,237
Residential real estate	**28,934**	**31,464**	24,903	29,561
Securities-based lending and Other loans	**23,922**	**65,323**	24,077	70,637
Total loans, before ACL	**$ 52,997**	**$ 166,812**	$ 49,184	$ 165,440

See Note 4 for further information regarding Loans and lending commitments held at fair value. See Note 14 for details of current commitments to lend in the future.

Credit Quality

The CRM evaluates new obligors before credit transactions are initially approved and at least annually thereafter for corporate and commercial real estate loans. For Corporate, Secured lending facilities and Other loans, credit evaluations typically involve the evaluation of financial statements, assessment of leverage, liquidity, capital strength, asset composition and quality, market capitalization and access to capital markets, cash flow projections and debt service requirements, and the adequacy of collateral, if applicable. The CRM also evaluates strategy, market position, industry dynamics, obligor's management and other factors that could affect an obligor's risk profile.

For Commercial real estate loans, the credit evaluation is focused on property and transaction metrics, including property type, LTV ratio, occupancy levels, debt service ratio, prevailing capitalization rates and market dynamics.

For Residential real estate and Securities-based loans, the initial credit evaluation typically includes, but is not limited to, review of the obligor's income, net worth, liquidity, collateral, LTV ratio and credit bureau information. Subsequent credit monitoring for residential real estate loans is performed at the portfolio level. Securities-based loan collateral values are monitored on an ongoing basis.

For information related to credit quality indicators considered in developing the ACL, see Note 2.

Loans Held for Investment before Allowance by Origination Year

	At December 31, 2023			At December 31, 2022		
	Corporate					
$ in millions	IG	NIG	Total	IG	NIG	Total
Revolving	**$ 2,350**	**$ 3,863**	**$ 6,213**	$ 2,554	$ 3,456	$ 6,010
2023	**—**	**88**	**88**			
2022	**—**	**166**	**166**	6	107	113
2021	**15**	**89**	**104**	—	139	139
2020	**29**	**25**	**54**	—	58	58
2019	**—**	**133**	**133**	—	154	154
Prior	**—**	**—**	**—**	115	—	115
Total	**$ 2,394**	**$ 4,364**	**$ 6,758**	$ 2,675	$ 3,914	$ 6,589

	At December 31, 2023			At December 31, 2022		
	Secured Lending Facilities					
$ in millions	IG	NIG	Total	IG	NIG	Total
Revolving	**$ 9,494**	**$ 22,240**	**$ 31,734**	$ 9,445	$ 21,243	$ 30,688
2023	**1,535**	**1,459**	**2,994**			
2022	**392**	**2,390**	**2,782**	1,135	1,336	2,471
2021	**—**	**365**	**365**	254	208	462
2020	**—**	**80**	**80**	—	98	98
2019	**60**	**333**	**393**	60	486	546
Prior	**296**	**854**	**1,150**	215	1,126	1,341
Total	**$ 11,777**	**$ 27,721**	**$ 39,498**	$ 11,109	$ 24,497	$ 35,606

	At December 31, 2023			At December 31, 2022		
	Commercial Real Estate					
$ in millions	IG	NIG	Total	IG	NIG	Total
Revolving	**$ —**	**$ 170**	**$ 170**	$ —	$ 204	$ 204
2023	**261**	**1,067**	**1,328**			
2022	**284**	**1,900**	**2,184**	379	2,201	2,580
2021	**370**	**1,494**	**1,864**	239	1,609	1,848
2020	**—**	**756**	**756**	—	728	728
2019	**195**	**1,369**	**1,564**	659	1,152	1,811
Prior	**—**	**812**	**812**	211	1,133	1,344
Total	**$ 1,110**	**$ 7,568**	**$ 8,678**	$ 1,488	$ 7,027	$ 8,515

	At December 31, 2023					
	Residential Real Estate					
	by FICO Scores			by LTV Ratio		
$ in millions	≥ 740	680-739	≤ 679	≤ 80%	> 80%	Total
Revolving	**$ 108**	**$ 33**	**$ 8**	**$ 149**	**$ —**	**$ 149**
2023	**7,390**	**1,517**	**230**	**8,168**	**969**	**9,137**
2022	**10,927**	**2,424**	**389**	**12,650**	**1,090**	**13,740**
2021	**11,075**	**2,376**	**239**	**12,763**	**927**	**13,690**
2020	**6,916**	**1,430**	**104**	**8,017**	**433**	**8,450**
2019	**3,965**	**890**	**131**	**4,686**	**300**	**4,986**
Prior	**7,677**	**2,241**	**305**	**9,420**	**803**	**10,223**
Total	**$ 48,058**	**$ 10,911**	**$ 1,406**	**$ 55,853**	**$ 4,522**	**$ 60,375**

	At December 31, 2022					
	Residential Real Estate					
	by FICO Scores			by LTV Ratio		
$ in millions	≥ 740	680-739	≤ 679	≤ 80%	> 80%	Total
Revolving	$ 90	$ 29	$ 5	$ 124	$ —	$ 124
2022	11,481	2,533	411	13,276	1,149	14,425
2021	11,604	2,492	257	13,378	975	14,353
2020	7,292	1,501	115	8,452	456	8,908
2019	4,208	946	137	4,968	323	5,291
Prior	8,488	2,519	352	10,457	902	11,359
Total	$ 43,163	$ 10,020	$ 1,277	$ 50,655	$ 3,805	$ 54,460

	At December 31, 2023			
		Other[2]		
$ in millions	Securities-based Lending[1]	IG	NIG	Total
Revolving	**$ 71,474**	**$ 5,230**	**$ 1,362**	**$ 78,066**
2023	**1,612**	**627**	**346**	**2,585**
2022	**1,128**	**816**	**804**	**2,748**
2021	**165**	**330**	**377**	**872**
2020	**—**	**435**	**414**	**849**
2019	**13**	**769**	**628**	**1,410**
Prior	**202**	**1,327**	**1,186**	**2,715**
Total	**$ 74,594**	**$ 9,534**	**$ 5,117**	**$ 89,245**

	At December 31, 2022			
		Other[2]		
$ in millions	Securities-based Lending[1]	IG	NIG	Total
Revolving	$ 77,115	$ 5,760	$ 1,480	$ 84,355
2022	1,425	1,572	269	3,266
2021	725	525	223	1,473
2020	—	580	418	998
2019	16	913	644	1,573
Prior	202	1,849	950	3,001
Total	$ 79,483	$ 11,199	$ 3,984	$ 94,666

IG—Investment Grade
NIG—Non-investment Grade
1. Securities-based loans are subject to collateral maintenance provisions, and at December 31, 2023 and December 31, 2022, these loans are predominantly over-collateralized. For more information on the ACL methodology related to securities-based loans, see Note 2.
2. Other loans primarily include tailored lending. For a further discussion of Other loans, see "Quantitative and Qualitative Disclosures about Risk—Credit Risk" herein.

Past Due Loans Held for Investment before Allowance[1]

$ in millions	At December 31, 2023	At December 31, 2022
Corporate	**$ 47**	$ 112
Secured lending facilities	**—**	85
Commercial real estate	**185**	—
Residential real estate	**160**	158
Securities-based lending and Other loans	**1**	1
Total	**$ 393**	$ 356

1. As of December 31, 2023, the majority of the amounts are past due for a period of less than 90 days. As of December 31, 2022, the majority of the amounts are 90 days or more past due.

Nonaccrual Loans Held for Investment before Allowance[1]

$ in millions	At December 31, 2023	At December 31, 2022
Corporate	**$ 95**	$ 71
Secured lending facilities	**87**	94
Commercial real estate	**426**	209
Residential real estate	**95**	118
Securities-based lending and Other loans	**174**	10
Total	**$ 877**	$ 502
Nonaccrual loans without an ACL	**$ 86**	$ 117

1. There were no loans held for investment that were 90 days or more past due and still accruing as of December 31, 2023 and December 31, 2022. For further information on the Firm's nonaccrual policy, see Note 2 to the financial statements.

The Firm may modify the terms of certain loans for economic or legal reasons related to a borrower's financial difficulties, and these modifications include interest rate reductions, principal forgiveness, term extensions and other-than-insignificant payment delays or a combination of these

aforementioned modifications. Modified loans are typically evaluated individually for allowance for credit losses. As of December 31, 2023, there were no loans held for investment modified in the current year with subsequent default.

Modified Loans Held for Investment

Modified during the year ended December 31, 2023[1]

$ in millions	At December 31, 2023 Amortized Cost	% of Total Loans[2]
	Term Extension	
Corporate	**$ 183**	**2.7 %**
Commercial real estate	**199**	**2.3 %**
Residential real estate	**1**	**0.1 %**
Securities-based lending and Other loans	**145**	**0.2 %**
Total	**$ 528**	
	Other-than-insignificant Payment Delay	
Securities-based lending and Other loans	**$ 71**	**0.1 %**
Total	**$ 71**	
	Combination - Multiple Modifications[3]	
Commercial real estate	**$ 24**	**0.3 %**
Residential real estate	**1**	**— %**
Total	**$ 25**	

1. Lending commitments to borrowers for which the Firm modified terms of the receivable were $1,062 million as of December 31, 2023.
2. Percentage of total loans represents the percentage of modified loans to total loans held for investment by loan type.
3. Combination - Multiple Modifications primarily includes loans with Term extension and Other-than-insignificant payment delay.

Financial Impact on Modified Loans Held for Investment

Modified during the year ended December 31, 2023[1]

	At December 31, 2023
	Term Extension
Corporate	Added 1 year, 10 months to the life of the modified loan(s)
Commercial real estate	Added 4 years, 2 months to the life of the modified loan(s)
Residential real estate	Added 4 months to the life of the modified loan(s)
Securities-based lending and Other loans	Added 7 months to the life of the modified loan(s)
	Other-than-insignificant Payment Delay
Securities-based lending and Other loans	Added 6 months to the life of the modified loan(s)
	Combination - Multiple Modification
Commercial real estate	Added 7 months of Term extension and 6 months of Other-than-insignificant payment delay to the life of the modified loan(s)
Residential real estate	Added 10 years of Term extension and reduced the interest rate by 1% on the modified loan(s)

1. In instances where more than one loan was modified, modification impact is presented on a weighted-average basis.

Past Due Status for Loans Held for Investment Modified in the Last 12 months

$ in millions	At December 31, 2023 30-89 Days Past Due	90+ Days Past Due	Total
Commercial real estate	**$ 24**	**$ 21**	**$ 45**
Residential real estate	**—**	**1**	**1**
Total	**$ 24**	**$ 22**	**$ 46**

Gross Charge-offs by Origination Year

$ in millions	Year Ended December 31, 2023 Corporate	Secured Lending Facilities	CRE	Residential Real Estate	SBL and Other	Total
Revolving	**$ (34)**	**$ —**	**$ —**	**$ —**	**$ —**	**$ (34)**
2020	**—**	**—**	**—**	**—**	**(3)**	**(3)**
2019	**—**	**—**	**(85)**	**—**	**(1)**	**(86)**
Prior	**—**	**—**	**(44)**	**—**	**—**	**(44)**
Total	**$ (34)**	**$ —**	**$ (129)**	**$ —**	**$ (4)**	**$ (167)**

CRE—Commercial real estate
SBL—Securities-based lending

Allowance for Credit Losses Rollforward and Allocation—Loans and Lending Commitments

$ in millions	Year Ended December 31, 2023 Corporate	Secured Lending Facilities	CRE	Residential Real Estate	SBL and Other	Total
ACL—Loans						
Beginning balance	$ 235	$ 153	$ 275	$ 87	$ 89	$ 839
Gross charge-offs	**(34)**	**—**	**(129)**	**—**	**(4)**	**(167)**
Recoveries	**1**	**—**	**—**	**1**	**—**	**2**
Net (charge-offs) recoveries	**(33)**	**—**	**(129)**	**1**	**(4)**	**(165)**
Provision (release)	**37**	**—**	**314**	**13**	**124**	**488**
Other	**2**	**—**	**3**	**(1)**	**3**	**7**
Ending balance	**$ 241**	**$ 153**	**$ 463**	**$ 100**	**$ 212**	**$ 1,169**
Percent of loans to total loans[1]	**3 %**	**19 %**	**4 %**	**30 %**	**44 %**	**100 %**
ACL—Lending commitments						
Beginning balance	$ 411	$ 51	$ 15	$ 4	$ 23	$ 504
Provision (release)	**16**	**18**	**11**	**—**	**(1)**	**44**
Other	**4**	**1**	**—**	**—**	**(2)**	**3**
Ending balance	**$ 431**	**$ 70**	**$ 26**	**$ 4**	**$ 20**	**$ 551**
Total ending balance	**$ 672**	**$ 223**	**$ 489**	**$ 104**	**$ 232**	**$ 1,720**

$ in millions	Year Ended December 31, 2022 Corporate	Secured Lending Facilities	CRE	Residential Real Estate	SBL and Other	Total
ACL—Loans						
Beginning balance	$ 165	$ 163	$ 206	$ 60	$ 60	$ 654
Gross charge-offs	—	(3)	(7)	—	(21)	(31)
Recoveries	6	—	—	1	—	7
Net (charge-offs) recoveries	6	(3)	(7)	1	(21)	(24)
Provision (release)	65	(6)	80	26	51	216
Other	(1)	(1)	(4)	—	(1)	(7)
Ending balance	$ 235	$ 153	$ 275	$ 87	$ 89	$ 839
Percent of loans to total loans[1]	3 %	18 %	4 %	27 %	48 %	100 %
ACL—Lending commitments						
Beginning balance	$ 356	$ 41	$ 20	$ 1	$ 26	$ 444
Provision (release)	59	10	(5)	3	(3)	64
Other	(4)	—	—	—	—	(4)
Ending balance	$ 411	$ 51	$ 15	$ 4	$ 23	$ 504
Total ending balance	$ 646	$ 204	$ 290	$ 91	$ 112	$ 1,343

	Year Ended December 31, 2021					
$ in millions	Corporate	Secured Lending Facilities	CRE	Residential Real Estate	SBL and Other	Total
ACL—Loans						
Beginning balance	$ 309	$ 198	$ 211	$ 59	$ 58	$ 835
Gross charge-offs	(23)	(67)	(27)	(1)	(8)	(126)
Provision (release)	(119)	34	25	1	11	(48)
Other	(2)	(2)	(3)	1	(1)	(7)
Ending balance	$ 165	$ 163	$ 206	$ 60	$ 60	$ 654
Percent of loans to total loans[1]	3 %	18 %	4 %	25 %	50 %	100 %
ACL—Lending commitments						
Beginning balance	$ 323	$ 38	$ 11	$ 1	$ 23	$ 396
Provision (release)	37	2	10	—	3	52
Other	(4)	1	(1)	—	—	(4)
Ending balance	$ 356	$ 41	$ 20	$ 1	$ 26	$ 444
Total ending balance	$ 521	$ 204	$ 226	$ 61	$ 86	$ 1,098

1. Percent of loans to total loans represents loans held for investment by loan type to total loans held for investment.

The allowance for credit losses for loans and lending commitments increased in 2023, primarily related to deteriorating conditions in the commercial real estate sector, including provisions for certain specific loans, mainly in the office portfolio, and modest growth in certain other loan portfolios. Charge-offs in 2023 were primarily related to Commercial real estate and Corporate loans. The base scenario used in our ACL models as of December 31, 2023 was generated using a combination of consensus economic forecasts, forward rates, and internally developed and validated models, and assumes slow economic growth in 2024, followed by a gradual improvement in 2025. Given the nature of our lending portfolio, the most sensitive model input is U.S. GDP.

See Note 2 for a description of the ACL calculated under the CECL methodology, including credit quality indicators, used for held-for-investment loans.

Selected Credit Ratios

	At December 31, 2023	At December 31, 2022
ACL for loans to total HFI loans	**0.6 %**	0.4 %
Nonaccrual HFI loans to total HFI loans	**0.4 %**	0.3 %
ACL for loans to nonaccrual HFI loans	**133.3 %**	167.1 %

Employee Loans

$ in millions	**At December 31, 2023**	At December 31, 2022
Currently employed by the Firm[1]	**$ 4,257**	$ 4,023
No longer employed by the Firm[2]	**92**	97
Employee loans	**$ 4,349**	$ 4,120
ACL	**(121)**	(139)
Employee loans, net of ACL	**$ 4,228**	$ 3,981
Remaining repayment term, weighted average in years	5.8	5.8

1. These loans are predominantly current.
2. These loans are predominantly past due for a period of 90 days or more.

Employee loans are granted in conjunction with a program established primarily to recruit certain Wealth Management financial advisors, are full recourse and generally require periodic repayments, and are due in full upon termination of employment with the Firm. These loans are recorded in Customer and other receivables in the balance sheet. See Note 2 for a description of the CECL allowance methodology, including credit quality indicators, for employee loans.

10. Goodwill and Intangible Assets

Goodwill Rollforward

$ in millions	IS	WM	IM	Total
At December 31, 2021[1]	$ 475	$ 10,325	$ 6,033	$ 16,833
Foreign currency	(39)	(7)	(12)	(58)
Disposals	(7)	(116)	—	(123)
At December 31, 2022[1]	$ 429	$ 10,202	$ 6,021	$ 16,652
Foreign currency	**(5)**	**2**	**7**	**4**
Acquired	**—**	**—**	**56**	**56**
Disposals	**—**	**(5)**	**—**	**(5)**
At December 31, 2023[1]	**$ 424**	**$ 10,199**	**$ 6,084**	**$ 16,707**
Accumulated impairments[2]	$ 673	$ —	$ 27	$ 700

1. Balances represent the amount of the Firm's goodwill after accumulated impairments.
2. There were no impairments recorded in 2023, 2022 or 2021.

Intangible Assets Rollforward

$ in millions	IS	WM	IM	Total
At December 31, 2021	$ 104	$ 4,463	$ 3,793	$ 8,360
Acquired	23	41	—	64
Disposals	(75)	(106)	—	(181)
Amortization expense	(16)	(483)	(111)	(610)
Other	—	(4)	(11)	(15)
At December 31, 2022	$ 36	$ 3,911	$ 3,671	$ 7,618
Acquired	**—**	**9**	**37**	**46**
Disposals	**—**	**(13)**	**—**	**(13)**
Amortization expense	**(10)**	**(481)**	**(110)**	**(601)**
Other	**—**	**1**	**4**	**5**
At December 31, 2023	**$ 26**	**$ 3,427**	**$ 3,602**	**$ 7,055**

Intangible Assets by Type

	Non-amortizable	Amortizable	
$ in millions	Gross Carrying Amount	Gross Carrying Amount	Accumulated Amortization
At December 31, 2023			
Management contracts	**$ 2,113**	**$ 245**	**$ 72**
Customer relationships	**—**	**8,763**	**4,582**
Trade names	**—**	**767**	**187**
Other	**—**	**14**	**6**
Total	**$ 2,113**	**$ 9,789**	**$ 4,847**
At December 31, 2022			
Management contracts	2,110	245	51
Customer relationships	—	8,766	4,046
Trade names	—	736	151
Other	—	14	5
Total	$ 2,110	$ 9,761	$ 4,253

Intangible Assets Estimated Future Amortization Expense

$ in millions	At December 31, 2023
2024	**$ 600**
2025	**455**
2026	**348**
2027	**343**
2028	**337**

The Firm's annual goodwill and non-amortizable intangible asset impairment testing as of July 1, 2023 did not indicate any impairment. For more information, see Note 2.

11. Other Assets—Equity Method Investments and Leases

Equity Method Investments

$ in millions	At December 31, 2023	At December 31, 2022
Investments	**$ 1,915**	$ 1,927

$ in millions	2023	2022	2021
Income (loss)	**$ 124**	$ 39	$ 104

Equity method investments, other than investments in certain fund interests, are summarized above and are included in Other assets in the balance sheet with related income or loss included in Other revenues in the income statement. See "Net Asset Value Measurements—Fund Interests" in Note 4 for the carrying value of certain of the Firm's fund interests, which are composed of general and limited partnership interests, as well as any related carried interest.

Japanese Securities Joint Venture

$ in millions	2023	2022	2021
Income (loss) from investment in MUMSS	**$ 129**	$ 35	$ 168

The Firm and Mitsubishi UFJ Financial Group, Inc. ("MUFG") formed a joint venture in Japan comprising their respective investment banking and securities businesses by forming two joint venture companies, Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. ("MUMSS") and Morgan Stanley MUFG Securities Co., Ltd. ("MSMS") (collectively, the "Joint Venture"). The Firm owns a 40% economic interest in the Joint Venture, and MUFG owns the other 60%.

The Firm's 40% voting interest in MUMSS is accounted for under the equity method within the Institutional Securities business segment and is included in the equity method investment balances above. The Firm consolidates MSMS into the Institutional Securities business segment, based on its 51% voting interest.

The Firm engages in transactions in the ordinary course of business with MUFG and its affiliates; for example, investment banking, financial advisory, sales and trading, derivatives, investment management, lending, securitization and other financial services transactions. Such transactions are on substantially the same terms as those that would be available to unrelated third parties for comparable transactions.

Leases

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

Balance Sheet Amounts Related to Leases

$ in millions	At December 31, 2023	At December 31, 2022
Other assets—ROU assets	**$ 4,368**	$ 4,073
Other liabilities and accrued expenses—Lease liabilities	**5,417**	4,901
Weighted average:		
Remaining lease term, in years	**8.7**	8.6
Discount rate	**4.0 %**	3.3 %

Lease Liabilities

$ in millions	At December 31, 2023	At December 31, 2022
2023		$ 870
2024	**$ 913**	785
2025	**846**	673
2026	**774**	604
2027	**716**	548
2028	**644**	462
Thereafter	**2,637**	1,747
Total undiscounted cash flows	**6,530**	5,689
Imputed interest	**(1,113)**	(788)
Amount on balance sheet	**$ 5,417**	$ 4,901
Committed leases not yet commenced	**$ 248**	$ 970

Lease Costs

$ in millions	2023	2022	2021
Fixed costs	**$ 938**	$ 841	$ 852
Variable costs[1]	**206**	170	187
Less: Sublease income	**(10)**	(7)	(6)
Total lease cost, net	**$ 1,134**	$ 1,004	$ 1,033

1. Includes common area maintenance charges and other variable costs not included in the measurement of ROU assets and lease liabilities.

Cash Flows Statement Supplemental Information

$ in millions	2023	2022	2021
Cash outflows—Lease liabilities	**$ 892**	$ 881	$ 879
Non-cash—ROU assets recorded for new and modified leases	**1,055**	544	578

Occupancy lease agreements, in addition to base rentals, generally provide for rent and operating expense escalations resulting from increased assessments for real estate taxes and other charges.

12. Deposits

Deposits

$ in millions	At December 31, 2023	At December 31, 2022
Savings and demand deposits	$ 288,252	$ 319,948
Time deposits	63,552	36,698
Total deposits	$ 351,804	$ 356,646
Deposits subject to FDIC insurance	$ 276,598	$ 260,420
Deposits not subject to FDIC insurance	$ 75,206	$ 96,226

Time Deposit Maturities

$ in millions	At December 31, 2023
2024	$ 33,649
2025	16,220
2026	5,726
2027	3,757
2028	3,708
Thereafter	492
Total	$ 63,552

Uninsured Non-U.S. Time Deposit Maturities

$ in millions	At December 31, 2023
Less than 3 months	$ 1,602
3 - 6 months	540
6 - 12 months	381
Over 12 months	48
Total	$ 2,571

Deposits in U.S. Bank Subsidiaries from Non-U.S. Depositors

$ in millions	At December 31, 2023	At December 31, 2022
Deposits in U.S. bank subsidiaries from non-U.S. depositors	$ 880	$ 1,220

13. Borrowings and Other Secured Financings

Maturities and Terms of Borrowings

$ in millions	Parent Company: Fixed Rate[1]	Parent Company: Variable Rate[2]	Subsidiaries: Fixed Rate[1]	Subsidiaries: Variable Rate[2]	At December 31, 2023	At December 31, 2022
Original maturities of one year or less:						
Next 12 months	$ —	$ —	$ 84	$ 3,104	$ 3,188	$ 4,191
Original maturities greater than one year:						
2023						$ 18,910
2024	$ 8,526	$ 389	$ 607	$ 10,629	$ 20,151	29,842
2025	18,994	3,036	2,655	10,838	35,523	30,235
2026	23,038	1,478	3,764	7,143	35,423	28,998
2027	18,935	347	973	5,083	25,338	23,561
2028	11,058	374	622	9,185	21,239	15,698
Thereafter	87,841	2,794	9,392	22,843	122,870	86,623
Total greater than one year	$ 168,392	$ 8,418	$ 18,013	$ 65,721	$ 260,544	$ 233,867
Total	$ 168,392	$ 8,418	$ 18,097	$ 68,825	$ 263,732	$ 238,058
Weighted average coupon at period end[3]	3.5 %	6.1 %	5.2 %	N/M	3.6 %	3.2 %

1. Fixed rate borrowings include instruments with step-up, step-down and zero coupon features.
2. Variable rate borrowings include those that bear interest based on a variety of indices, including SOFR and federal funds rates, in addition to certain notes carried at fair value with various payment provisions, including notes linked to the performance of a specific index, a basket of stocks, a specific equity security, a commodity, a credit exposure or basket of credit exposures.
3. Only includes borrowings with original maturities greater than one year. Weighted average coupon is calculated utilizing U.S. and non-U.S. dollar interest rates and excludes financial instruments for which the fair value option was elected. Virtually all of the variable rate notes issued by subsidiaries are carried at fair value so a weighted average coupon is not meaningful.

Borrowings with Original Maturities Greater than One Year

$ in millions	At December 31, 2023	At December 31, 2022
Senior	$ 248,174	$ 221,667
Subordinated	12,370	12,200
Total	$ 260,544	$ 233,867
Weighted average stated maturity, in years	6.6	6.7

Certain senior debt securities are denominated in various non-U.S. dollar currencies and may be structured to provide a return that is linked to equity, credit, commodity or other indices (e.g., the consumer price index). Senior debt also may be structured to be callable by the Firm or extendible at the option of holders of the senior debt securities.

The Firm's Borrowings include notes carried and managed on a fair value basis. These include instruments whose payments and redemption values are linked to the performance of a specific index, a basket of stocks, a specific equity security, a commodity, a credit exposure or basket of credit exposures; and instruments with various interest rate-related features, including step-ups, step-downs and zero coupons. Also included are unsecured contracts that are not classified as OTC derivatives because they fail initial net investment criteria. To minimize the exposure from such instruments, the Firm has entered into various swap contracts and purchased options that effectively convert the borrowing costs into floating rates. The swaps and purchased options used to economically hedge the embedded features are derivatives and also are carried at fair value. Changes in fair value related to the notes and economic hedges are reported in Trading

revenues. See Notes 2 and 5 for further information on borrowings carried at fair value.

Senior Debt Subject to Put Options or Liquidity Obligations

$ in millions	**At December 31, 2023**	At December 31, 2022
Put options embedded in debt agreements	**$ 1,571**	$ 496
Liquidity obligations[1]	**$ 3,166**	$ 2,423

1. Includes obligations to support secondary market trading.

Subordinated Debt

	2023	2022
Contractual weighted average coupon	**4.3 %**	4.1 %

Subordinated debt generally is issued to meet the capital requirements of the Firm or its regulated subsidiaries and primarily is U.S. dollar denominated. Maturities of subordinated debt range from 2025 to 2038.

Rates for Borrowings with Original Maturities Greater than One Year

	At December 31,		
	2023	2022	2021
Contractual weighted average coupon[1]	**3.6 %**	3.2 %	2.7 %
Weighted average coupon after swaps	**6.5 %**	5.1 %	1.6 %

1. Weighted average coupon was calculated utilizing U.S. and non-U.S. dollar interest rates and excludes financial instruments for which the fair value option was elected.

In general, other than securities inventories and customer balances financed by secured funding sources, the majority of the Firm's assets are financed with a combination of deposits, short-term funding, floating rate long-term debt or fixed rate long-term debt swapped to a floating rate. The Firm uses interest rate swaps to more closely match these borrowings to the duration, holding period and interest rate characteristics of the assets being funded and to manage interest rate risk. These swaps effectively convert certain of the Firm's fixed rate borrowings into floating rate obligations. In addition, for non-U.S. dollar currency borrowings that are not used to fund assets in the same currency, the Firm has entered into currency swaps that effectively convert the borrowings into U.S. dollar obligations.

The Firm's use of swaps for asset and liability management affects its effective average borrowing rate.

Other Secured Financings

$ in millions	**At December 31, 2023**	At December 31, 2022
Original maturities:		
One year or less	**$ 5,732**	$ 944
Greater than one year	**6,923**	7,214
Total	**$ 12,655**	$ 8,158
Transfers of assets accounted for as secured financings	**5,848**	1,119

Maturities and Terms of Other Secured Financings[1]

	At December 31, 2023			At December 31, 2022
$ in millions	Fixed Rate	Variable Rate[2]	Total	
Original maturities of one year or less:				
Next 12 months	**$ 8**	**$ —**	**$ 8**	$ 501
Original maturities greater than one year:				
2023				$ 5,200
2024	**$ —**	**$ 5,085**	**$ 5,085**	343
2025	**—**	**95**	**95**	131
2026	**5**	**87**	**92**	2
2027	**—**	**—**	**—**	—
2028	**—**	**434**	**434**	—
Thereafter	**7**	**1,086**	**1,093**	862
Total	**$ 12**	**$ 6,787**	**$ 6,799**	$ 6,538
Weighted average coupon at period-end[3]	**N/M**	**5.6 %**	**5.6 %**	4.9 %

1. Excludes transfers of assets accounted for as secured financings. See subsequent table.
2. Variable rate other secured financings bear interest based on a variety of indices, including SOFR and federal funds rates. Amounts include notes carried at fair value with various payment provisions, including notes linked to equity, credit, commodity or other indices.
3. Includes only other secured financings with original maturities greater than one year. Weighted average coupon is calculated utilizing U.S. and non-U.S. dollar interest rates and excludes other secured financings that are linked to non-interest indices and for which the fair value option was elected.

Other secured financings include the liabilities related to collateralized notes, transfers of financial assets that are accounted for as financings rather than sales and consolidated VIEs where the Firm is deemed to be the primary beneficiary. These liabilities are generally payable from the cash flows of the related assets accounted for as Trading assets. See Note 15 for further information on other secured financings related to VIEs and securitization activities.

Maturities of Transfers of Assets Accounted for as Secured Financings[1]

$ in millions	**At December 31, 2023**	At December 31, 2022
2023		$ 987
2024	**$ 5,749**	4
2025	**9**	60
2026	**36**	35
2027	**21**	21
2028	**11**	—
Thereafter	**22**	12
Total	**$ 5,848**	$ 1,119

1. Excludes Securities sold under agreements to repurchase and Securities loaned.

For transfers of assets that fail to meet accounting criteria for a sale, the Firm continues to record the assets and recognizes the associated liabilities in the balance sheet.

14. Commitments, Guarantees and Contingencies

Commitments

	Years to Maturity at December 31, 2023				
$ in millions	Less than 1	1-3	3-5	Over 5	Total
Lending:					
Corporate	$ 17,036	$ 36,214	$ 54,411	$ 1,134	$ 108,795
Secured lending facilities	8,043	5,936	3,466	2,424	19,869
Commercial and Residential real estate	217	28	28	352	625
Securities-based lending and Other	16,483	3,488	319	394	20,684
Forward-starting secured financing receivables[1]	60,261	—	—	—	60,261
Central counterparty	300	—	—	14,910	15,210
Investment activities	1,659	119	80	551	2,409
Letters of credit and other financial guarantees	51	17	—	6	74
Total	$ 104,050	$ 45,802	$ 58,304	$ 19,771	$ 227,927
Lending commitments participated to third parties					$ 7,213

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

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

Types of Commitments

Lending Commitments. Lending commitments primarily represent the notional amount of legally binding obligations to provide funding to clients for different types of loan transactions. For syndications that are led by the Firm, the lending commitments accepted by the borrower but not yet closed are net of the amounts agreed to by counterparties that will participate in the syndication. For syndications that the Firm participates in and does not lead, lending commitments accepted by the borrower but not yet closed include only the amount that the Firm expects it will be allocated from the lead syndicate bank. Due to the nature of the Firm's obligations under the commitments, these amounts include certain commitments participated to third parties.

Forward-Starting Secured Financing Receivables. This amount includes securities purchased under agreements to resell and securities borrowed that the Firm has entered into prior to the balance sheet date that will settle after the balance sheet date. These transactions are primarily secured by collateral from U.S. government agency securities and other sovereign government obligations when they are funded.

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

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

Investment Activities. The Firm sponsors several non-consolidated investment management funds for third-party investors where it typically acts as general partner of, and investment adviser to, these funds and typically commits to invest a minority of the capital of such funds, with subscribing third-party investors contributing the majority. The Firm has contractual capital commitments, guarantees and counterparty arrangements with respect to these investment management funds.

Letters of Credit and Other Financial Guarantees. The Firm has outstanding letters of credit and other financial guarantees issued by third-party banks to certain of the Firm's counterparties. The Firm is contingently liable for these letters of credit and other financial guarantees, which are primarily used to provide collateral for securities and commodities traded and to satisfy various margin requirements in lieu of depositing cash or securities with these counterparties.

Guarantees

	At December 31, 2023				
	Maximum Potential Payout/Notional of Obligations by Years to Maturity				Carrying Amount Asset (Liability)
$ in millions	Less than 1	1-3	3-5	Over 5	
Non-credit derivatives[1]	1,546,134	1,342,622	268,865	777,285	(44,539)
Standby letters of credit and other financial guarantees issued[2]	1,495	977	1,322	2,688	(2)
Market value guarantees	1	—	—	—	—
Liquidity facilities	2,092	—	—	—	(1)
Whole loan sales guarantees	—	77	10	23,075	—
Securitization representations and warranties[3]	—	—	—	80,667	(3)
General partner guarantees	398	32	139	24	(89)
Client clearing guarantees	228	—	—	—	—

1. The carrying amounts of derivative contracts that meet the accounting definition of a guarantee are shown on a gross basis. For further information on derivative contracts, see Note 6.
2. These amounts include certain issued standby letters of credit participated to third parties, totaling $0.9 billion of notional and collateral/recourse, due to the nature of the Firm's obligations under these arrangements. As of December 31, 2023, the carrying amount of standby letters of credit and other financial guarantees issued includes an allowance for credit losses of $70 million.
3. Related to commercial and residential mortgage securitizations.

Types of Guarantees

Non-Credit Derivatives. Certain derivative contracts meet the accounting definition of a guarantee, including certain written options, contingent-forward contracts and CDS (see Note 6 regarding credit derivatives in which the Firm has sold credit protection to the counterparty which are excluded from the previous table). For non-credit derivative contracts that meet the accounting definition of a guarantee the notional amount is used as the maximum potential payout for certain derivative contracts, such as written interest rate caps and written foreign currency options. The Firm evaluates collateral requirements for all derivatives, including derivatives that do not meet the

accounting definition of a guarantee. For the effects of cash collateral and counterparty netting, see Note 6.

In certain situations, collateral may be held by the Firm for those contracts that meet the definition of a guarantee. Generally, the Firm sets collateral requirements by counterparty so that the collateral covers various transactions and products and is not allocated specifically to individual contracts. Also, the Firm may recover amounts related to the underlying asset delivered to the Firm under the derivative contract.

Standby Letters of Credit and Other Financial Guarantees Issued. Generally, in connection with its lending businesses, the Firm provides standby letters of credit and other financial guarantees to counterparties. Such arrangements represent obligations to make payments to third parties if the counterparty fails to fulfill its obligation under a borrowing arrangement or other contractual obligation. A majority of the Firm's standby letters of credit are provided on behalf of counterparties that are investment grade. If the counterparty fails to fulfill its contractual obligation, the Firm has access to collateral or recourse that would approximate its obligation.

Market Value Guarantees. Market value guarantees are issued to guarantee timely payment of a specified return to investors in certain affordable housing tax credit funds. These guarantees are designed to return an investor's contribution to a fund and the investor's share of tax losses and tax credits expected to be generated by a fund.

Liquidity Facilities. The Firm has entered into liquidity facilities with SPEs and other counterparties, whereby the Firm is required to make certain payments if losses or defaults occur. Primarily, the Firm acts as liquidity provider to municipal bond securitization SPEs and for stand-alone municipal bonds in which the holders of beneficial interests issued by these SPEs or the holders of the individual bonds, respectively, have the right to tender their interests for purchase by the Firm on specified dates at a specified price. The Firm often may have recourse to the underlying assets held by the SPEs in the event payments are required under such liquidity facilities, as well as make-whole or recourse provisions with the trust sponsors. The recourse amount often exceeds the maximum potential payout amount of the guarantee. Substantially all of the underlying assets in the SPEs are investment grade. Liquidity facilities provided to municipal tender option bond trusts are classified as derivatives.

Whole Loan Sales Guarantees. The Firm has provided, or otherwise agreed to be responsible for, representations and warranties regarding certain whole loan sales. Under certain circumstances, the Firm may be required to repurchase such assets or make other payments related to such assets if such representations and warranties are breached. The Firm's maximum potential payout related to such representations and warranties is equal to the current UPB of such loans. Since the Firm no longer services these loans, it has no information on the current UPB of those loans, and, accordingly, the amount included in the previous table represents the UPB at the time of the whole loan sale or at the time when the Firm last serviced any of those loans. The current UPB balances could be substantially lower than the maximum potential payout amount included in the previous table. The related liability primarily relates to sales of loans to the federal mortgage agencies.

Securitization Representations and Warranties. As part of the Firm's Institutional Securities business segment's securitizations and related activities, the Firm has provided, or otherwise agreed to be responsible for, representations and warranties regarding certain assets transferred in securitization transactions sponsored by the Firm. The extent and nature of the representations and warranties, if any, vary among different securitizations. Under certain circumstances, the Firm may be required to repurchase certain assets or make other payments related to such assets if such representations and warranties are breached. The maximum potential amount of future payments the Firm could be required to make would be equal to the current outstanding balances of, or losses associated with, the assets subject to breaches of such representations and warranties. The amount included in the previous table for the maximum potential payout includes the current UPB or historical losses where known and the UPB at the time of sale when the current UPB is not known.

General Partner Guarantees. As a general partner in certain investment management funds, the Firm receives certain distributions from the partnerships when the return exceeds specified performance targets according to the provisions of the partnership agreements. The Firm may be required to return all or a portion of such distributions to the limited partners in the event the limited partners do not achieve a certain return as specified in the various partnership agreements, subject to certain limitations.

Client Clearing Guarantees. The Firm is a sponsoring member of the Government Securities Division of the FICC's Sponsored Clearing Model. Clients of the Firm, as sponsored members, can transact in overnight and term securities repurchase and resale agreements, which are cleared through the FICC. As sponsoring member, the Firm guarantees to the FICC the prompt and full payment and performance of its clients' obligations. In 2020, the FICC's sponsored clearing model was updated such that the Firm could be responsible for liquidation of a sponsored member's account and guarantees any resulting loss to the FICC in the event the sponsored member fails to fully pay any net liquidation amount due from the sponsored member to the FICC. Accordingly, the Firm's maximum potential payout amount reflects the total of the estimated net liquidation amounts for sponsored member accounts. The Firm minimizes credit exposure under this guarantee by obtaining a security interest in its sponsored member clients' collateral and their contractual rights under sponsored member transactions. Therefore, the Firm's exposure is estimated to be an amount substantially lower than the maximum potential payout

amount. The collateral amount in which the Firm has a security interest is approximately equal to the maximum potential payout amount of the guarantee.

Other Guarantees and Indemnities

In the normal course of business, the Firm provides guarantees and indemnifications in a variety of transactions. These provisions generally are standard contractual terms. Certain of these guarantees and indemnifications are described below:

- *Indemnities*. The Firm provides standard indemnities to counterparties for certain contingent exposures and taxes, including U.S. and foreign withholding taxes, on interest and other payments made on derivatives, securities and stock lending transactions, certain annuity products and other financial arrangements. These indemnity payments could be required based on a change in the tax laws, a change in interpretation of applicable tax rulings or a change in factual circumstances. Certain contracts contain provisions that enable the Firm to terminate the agreement upon the occurrence of such events. The Firm may also provide indemnities when it sells a business or assets to a third-party, pursuant to which it indemnifies the third-party for losses incurred on assets acquired or liabilities assumed or due to actions taken by the Firm prior to the sale of the business or assets. The Firm expects the risk of loss associated with indemnities related to the sale of businesses or assets to be remote. The maximum potential amount of future payments that the Firm could be required to make under these indemnifications cannot be estimated.

- *Exchange/Clearinghouse Member Guarantees.* The Firm is a member of various exchanges and clearinghouses that trade and clear securities and/or derivative contracts. Associated with its membership, the Firm may be required to pay a certain amount as determined by the exchange or the clearinghouse in case of a default of any of its members or pay a proportionate share of the financial obligations of another member that may default on its obligations to the exchange or the clearinghouse. While the rules governing different exchange or clearinghouse memberships and the forms of these guarantees may vary, in general the Firm's obligations under these rules would arise only if the exchange or clearinghouse had previously exhausted its resources.

  In addition, some clearinghouse rules require members to assume a proportionate share of losses resulting from the clearinghouse's investment of guarantee fund contributions and initial margin and of other losses unrelated to the default of a clearing member, if such losses exceed the specified resources allocated for such purpose by the clearinghouse.

  The maximum potential payout under these rules cannot be estimated. The Firm has not recorded any contingent liability in its financial statements for these agreements and believes that any potential requirement to make payments under these agreements is remote.

- *Merger and Acquisition Guarantees.* The Firm may, from time to time, in its role as investment banking advisor be required to provide guarantees in connection with certain European merger and acquisition transactions. If required by the regulating authorities, the Firm provides a guarantee that the acquirer in the transaction has or will have sufficient funds to complete the transaction and would then be required to make the acquisition payments in the event the acquirer's funds are insufficient at the completion date of the transaction. These arrangements generally cover the time frame from the transaction offer date to its closing date and, therefore, are generally short term in nature. The Firm believes the likelihood of any payment by the Firm under these arrangements is remote given the level of its due diligence in its role as investment banking advisor.

In addition, in the ordinary course of business, the Firm guarantees the debt and/or certain trading obligations (including obligations associated with derivatives, foreign exchange contracts and the settlement of physical commodities) of certain subsidiaries. These guarantees generally are entity or product specific and are required by investors or trading counterparties. The activities of the Firm's subsidiaries covered by these guarantees (including any related debt or trading obligations) are included in the financial statements.

Finance Subsidiary

The Parent Company fully and unconditionally guarantees the securities issued by Morgan Stanley Finance LLC, a wholly owned finance subsidiary. No other subsidiary of the Parent Company guarantees these securities.

Contingencies

Legal

In addition to the matters described below, in the normal course of business, the Firm has been named, from time to time, as a defendant in various legal actions, including arbitrations, class actions and other litigation, arising in connection with its activities as a global diversified financial services institution. Certain of the actual or threatened legal actions include claims for substantial compensatory and/or punitive damages or claims for indeterminate amounts of damages. In some cases, the third-party entities that are, or would otherwise be, the primary defendants in such cases are bankrupt, in financial distress, or may not honor applicable indemnification obligations. These actions have included, but are not limited to, antitrust claims, claims under various false claims act statutes, and matters arising from our sales and trading businesses and our activities in the capital markets.

The Firm is also involved, from time to time, in other reviews, investigations and proceedings (both formal and informal) by

governmental and self-regulatory agencies regarding the Firm's business, and involving, among other matters, sales, trading, financing, prime brokerage, market-making activities, investment banking advisory services, capital markets activities, financial products or offerings sponsored, underwritten or sold by the Firm, wealth and investment management services, and accounting and operational matters, certain of which may result in adverse judgments, settlements, fines, penalties, disgorgement, restitution, forfeiture, injunctions, limitations on our ability to conduct certain business, or other relief.

The Firm contests liability and/or the amount of damages as appropriate in each pending matter. Where available information indicates that it is probable a liability had been incurred at the date of the financial statements and the Firm can reasonably estimate the amount of that loss or the range of loss, the Firm accrues an estimated loss by a charge to income, including with respect to certain of the individual proceedings or investigations described below.

$ in millions	**2023**	2022	2021
Legal expenses	**$ 488**	$ 443	$ 157

The Firm's legal expenses can, and may in the future, fluctuate from period to period, given the current environment regarding government or self-regulatory agency investigations and private litigation affecting global financial services firms, including the Firm.

In many legal proceedings and investigations, it is inherently difficult to determine whether any loss is probable or reasonably possible, or to estimate the amount of any loss. In addition, even where the Firm has determined that a loss is probable or reasonably possible or an exposure to loss or range of loss exists in excess of the liability already accrued with respect to a previously recognized loss contingency, the Firm is often unable to reasonably estimate the amount of the loss or range of loss. It is particularly difficult to determine if a loss is probable or reasonably possible, or to estimate the amount of loss, where the factual record is being developed or contested or where plaintiffs or government entities seek substantial or indeterminate damages, restitution, forfeiture, disgorgement or penalties. Numerous issues may need to be resolved in an investigation or proceeding before a determination can be made that a loss or additional loss (or range of loss or range of additional loss) is probable or reasonably possible, or to estimate the amount of loss, including through potentially lengthy discovery or determination of important factual matters, determination of issues related to class certification, the calculation of damages or other relief, and consideration of novel or unsettled legal questions relevant to the proceedings or investigations in question.

The Firm has identified below any individual proceedings or investigations where the Firm believes a material loss (or where an accrual has occurred, a material loss beyond the amount already accrued) to be reasonably possible. In many legal proceedings in which the Firm has determined that a material loss (or where an accrual has occurred, a material loss beyond the amount already accrued) is reasonably possible, the Firm is unable to reasonably estimate the loss or range of loss. There are other matters in which the Firm has determined a loss or range of loss to be reasonably possible, but the Firm does not believe, based on current knowledge and after consultation with counsel, that such losses could have a material adverse effect on the Firm's financial statements as a whole, although the outcome of such proceedings or investigations may significantly impact the Firm's business or results of operations for any particular reporting period, or cause significant reputational harm.

While the Firm has identified below certain proceedings or investigations that the Firm believes to be material, individually or collectively, there can be no assurance that material losses will not be incurred from claims that have not yet been asserted or those where potential losses have not yet been determined to be probable or reasonably possible.

Block Trading Matter

On January 12, 2024, the U.S. Attorney's Office for the Southern District of New York ("USAO") and the SEC announced they had reached settlement agreements with the Firm in connection with their investigations into the Firm's blocks business. Specifically, the Firm entered into a three-year non-prosecution agreement ("NPA") with the USAO that included the payment of forfeiture, restitution, and a criminal fine for making false statements in connection with the sale of certain block trades from 2018 through August 2021. The NPA required the Firm to admit responsibility for certain acts of its employees and to continue to cooperate with and provide certain information to the USAO for the term of the agreement. Additionally, the SEC charged the Firm with violations of Section 10(b) of the Exchange Act and Rule 10b-5(b) thereunder for the disclosure of confidential information about block trades and also violations of Section 15(g) of the Exchange Act for the failure to enforce its policies concerning the misuse of material non-public information related to block trades. As part of the SEC agreement, the Firm paid disgorgement and a civil penalty. After the agreed-upon credits were applied, the Firm paid a total amount of approximately $249 million under both settlements. The Firm also faces potential civil liability arising from claims that have been or may be asserted by, among others, block transaction participants who contend they were harmed or disadvantaged including, among other things, as a result of a share price decline allegedly caused by the activities of the Firm and/or its employees, or as a result of the Firm's and/or its employees' failure to adhere to applicable laws and regulations. In addition, the Firm has responded to demands from shareholders under Section 220 of the Delaware General Corporation Law for books and records concerning the investigations.

Antitrust Related Matters

The Firm and other financial institutions are responding to a number of governmental investigations and civil litigation matters related to allegations of anticompetitive conduct in various aspects of the financial services industry, including the matters described below.

Beginning in February of 2016, the Firm was named as a defendant in multiple purported antitrust class actions now consolidated into a single proceeding in the United States District Court for the Southern District of New York ("SDNY") styled *In Re: Interest Rate Swaps Antitrust Litigation*. Plaintiffs allege, inter alia, that the Firm, together with a number of other financial institution defendants, violated U.S. and New York state antitrust laws from 2008 through December of 2016 in connection with their alleged efforts to prevent the development of electronic exchange-based platforms for interest rate swaps trading. Complaints were filed both on behalf of a purported class of investors who purchased interest rate swaps from defendants, as well as on behalf of three operators of swap execution facilities that allegedly were thwarted by the defendants in their efforts to develop such platforms. The consolidated complaints seek, among other relief, certification of the investor class of plaintiffs and treble damages. On July 28, 2017, the court granted in part and denied in part the defendants' motion to dismiss the complaints. On December 15, 2023, the court denied the class plaintiffs' motion for class certification. On December 29, 2023, the class plaintiffs petitioned the United States Court of Appeals for the Second Circuit for leave to appeal that decision.

In August of 2017, the Firm was named as a defendant in a purported antitrust class action in the United States District Court for the SDNY styled *Iowa Public Employees' Retirement System et al. v. Bank of America Corporation et al.* Plaintiffs allege, inter alia, that the Firm, together with a number of other financial institution defendants, violated U.S. antitrust laws and New York state law in connection with their alleged efforts to prevent the development of electronic exchange-based platforms for securities lending. The class action complaint was filed on behalf of a purported class of borrowers and lenders who entered into stock loan transactions with the defendants. The class action complaint seeks, among other relief, certification of the class of plaintiffs and treble damages. On September 27, 2018, the court denied the defendants' motion to dismiss the class action complaint. Plaintiffs' motion for class certification was referred by the District Court to a magistrate judge who, on June 30, 2022, issued a report and recommendation that the District Court certify a class. On May 20, 2023, the Firm reached an agreement in principle to settle the litigation. On September 1, 2023, the court granted preliminary approval of the settlement.

The Firm is a defendant in three antitrust class action complaints which have been consolidated into one proceeding in the United States District Court for the SDNY under the caption *City of Philadelphia, et al. v. Bank of America Corporation, et al.* Plaintiffs allege, inter alia, that the Firm, along with a number of other financial institution defendants, violated U.S. antitrust laws and relevant state laws in connection with alleged efforts to artificially inflate interest rates for Variable Rate Demand Obligations ("VRDO"). Plaintiffs seek, among other relief, treble damages. The class action complaint was filed on behalf of a class of municipal issuers of VRDO for which defendants served as remarketing agent. On November 2, 2020, the court granted in part and denied in part the defendants' motion to dismiss the consolidated complaint, dismissing state law claims, but denying dismissal of the U.S. antitrust claims. On September 21, 2023, the court granted plaintiffs' motion for class certification. On October 5, 2023, defendants petitioned the United States Court of Appeals for the Second Circuit for leave to appeal that decision, which was granted on February 5, 2024.

***Qui Tam* Matters**

The Firm and other financial institutions are defending against qui tam litigations brought under various state false claims statutes, including the matter described below. Such matters may involve the same types of claims pursued in multiple jurisdictions and may include claims for treble damages.

On August 18, 2009, Relators Roger Hayes and C. Talbot Heppenstall, Jr., filed a qui tam action in New Jersey state court styled *State of New Jersey ex. rel. Hayes v. Bank of America Corp., et al.* The complaint, filed under seal pursuant to the New Jersey False Claims Act, alleged that the Firm and several other underwriters of municipal bonds had defrauded New Jersey issuers by misrepresenting that they would achieve the best price or lowest cost of capital in connection with certain municipal bond issuances. On March 17, 2016, the court entered an order unsealing the complaint. On November 17, 2017, Relators filed an amended complaint to allege the Firm mispriced certain bonds issued in twenty-three bond offerings between 2008 and 2017, having a total par amount of $6.9 billion. The complaint seeks, among other relief, treble damages. On February 22, 2018, the Firm moved to dismiss the amended complaint, and on July 17, 2018, the court denied the Firm's motion. On October 13, 2021, following a series of voluntary and involuntary dismissals, Relators limited their claims to certain bonds issued in five offerings the Firm underwrote between 2008 and 2011, having a total par amount of $3.9 billion. On August 22, 2023, the Firm reached an agreement in principle to settle the litigation.

European Matters

Tax

In matters styled *Case number 15/3637* and *Case number 15/4353*, the Dutch Tax Authority ("Dutch Authority") is challenging in the Dutch courts the prior set-off by the Firm

of approximately €124 million (approximately $137 million) plus accrued interest of withholding tax credits against the Firm's corporation tax liabilities for the tax years 2007 to 2012. The Dutch Authority alleges that the Firm was not entitled to receive the withholding tax credits on the basis, inter alia, that a Firm subsidiary did not hold legal title to certain securities subject to withholding tax on the relevant dates. The Dutch Authority has also alleged that the Firm failed to provide certain information to the Dutch Authority and to keep adequate books and records. On April 26, 2018, the District Court in Amsterdam issued a decision dismissing the Dutch Authority's claims with respect to certain of the tax years in dispute. On May 12, 2020, the Court of Appeal in Amsterdam granted the Dutch Authority's appeal in matters re-styled *Case number 18/00318* and *Case number 18/00319*. On January 19, 2024, the Dutch High Court granted the Firm's appeal in matters re-styled *Case number 20/01884* and referred the case to the Court of Appeal in The Hague.

On June 22, 2021, Dutch criminal authorities sought various documents in connection with an investigation of the Firm related to the civil claims asserted by the Dutch Authority concerning the accuracy of the Firm subsidiary's tax returns and the maintenance of its books and records for 2007 to 2012. The Dutch criminal authorities have requested additional information, and the Firm is continuing to respond to them in connection with their ongoing investigation.

Danish Underwriting Matter

On October 5, 2017, various institutional investors filed a claim against the Firm and another bank in a matter now styled *Case number B-803-18* (previously *BS 99-6998/2017*), in the City Court of Copenhagen, Denmark concerning their roles as underwriters of the initial public offering ("IPO") in March 2014 of the Danish company OW Bunker A/S. The claim seeks damages of approximately DKK529 million (approximately $79 million) plus interest in respect of alleged losses arising from investing in shares in OW Bunker, which entered into bankruptcy in November 2014. Separately, on November 29, 2017, another group of institutional investors joined the Firm and another bank as defendants to pending proceedings in the High Court of Eastern Denmark against various other parties involved in the IPO in a matter styled *Case number B-2073-16*. The claim brought against the Firm and the other bank has been given its own *Case number B-2564-17*. The investors claim damages of approximately DKK767 million (approximately $114 million) plus interest from the Firm and the other bank on a joint and several basis with the Defendants to these proceedings. Both claims are based on alleged prospectus liability; the second claim also alleges professional liability of banks acting as financial intermediaries. On June 8, 2018, the City Court of Copenhagen, Denmark ordered that the matters now styled *Case number B-803-18*, *Case number B-2073-16*, and *Case number B-2564-17* be heard together before the High Court of Eastern Denmark. On June 29, 2018, the Firm filed its defense to the matter now styled *Case number B-2564-17*. On February 4, 2019, the Firm filed its defense to the matter now styled *Case number B-803-18*.

U.K. Government Bond Matter

The Firm is engaging with the UK Competition and Markets Authority in connection with its investigation of suspected anti-competitive arrangements in the financial services sector, specifically regarding the Firm's activities concerning certain liquid fixed income products between 2009 and 2012. On May 24, 2023, the U.K. Competition and Markets Authority issued a Statement of Objections setting out its provisional findings that the Firm had breached U.K. competition law by sharing competitively sensitive information in connection with gilts and gilt asset swaps between 2009 and 2012. The Firm is contesting the provisional findings. Separately, on June 16, 2023, the Firm was named as a defendant in a purported antitrust class action in the United States District Court for the SDNY styled *Oklahoma Firefighters Pension and Retirement System v. Deutsche Bank Aktiengesellschaft, et al.*, alleging, inter alia, that the Firm, together with a number of other financial institution defendants, violated U.S. antitrust laws in connection with their alleged effort to fix prices of gilts traded in the United States between 2009 and 2013. On September 28, 2023, the defendants filed a joint motion to dismiss the complaint, which has been fully briefed.

Other

On August 13, 2021, the plaintiff in *Camelot Event Driven Fund, a Series of Frank Funds Trust v. Morgan Stanley & Co. LLC, et al.* filed in the Supreme Court of the State of New York, New York County ("Supreme Court of NY") a purported class action complaint alleging violations of the federal securities laws against ViacomCBS ("Viacom"), certain of its officers and directors, and the underwriters, including the Firm, of two March 2021 Viacom offerings: a $1.7 billion Viacom Class B Common Stock offering and a $1 billion offering of 5.75% Series A Mandatory Convertible Preferred Stock (collectively, the "Offerings"). The complaint alleges, inter alia, that the Viacom offering documents for both issuances contained material omissions because they did not disclose that certain of the underwriters, including the Firm, had prime brokerage relationships and served as counterparties to certain derivative transactions with Archegos Capital Management LP, ("Archegos"), a fund with significant exposure to Viacom securities across multiple prime brokers. The complaint, which seeks, among other things, unspecified compensatory damages, alleges that the offering documents did not adequately disclose the risks associated with Archegos's concentrated Viacom positions at the various prime brokers, including that the unwind of those positions could have a deleterious impact on the stock price of Viacom. On November 5, 2021, the complaint was amended to add allegations that defendants failed to disclose that certain underwriters, including the Firm, had intended to unwind Archegos's Viacom positions while simultaneously distributing the Offerings. On February 6, 2023, the court issued a decision denying the motions to dismiss as to the

Firm and the other underwriters, but granted the motion to dismiss as to Viacom and the Viacom individual defendants. On February 15, 2023, the underwriters, including the Firm, filed their notices of appeal of the denial of their motions to dismiss. On March 10, 2023, the plaintiff appealed the dismissal of Viacom and the individual Viacom defendants. On January 4, 2024, the court granted the plaintiff's motion for class certification. On February 14, 2024, the defendants filed their notice of appeal.

On May 17, 2013, the plaintiff in *IKB International S.A. in Liquidation, et al. v. Morgan Stanley, et al.* filed a complaint against the Firm and certain affiliates in the Supreme Court of NY. The complaint alleges that defendants made material misrepresentations and omissions in the sale to plaintiff of certain mortgage pass-through certificates backed by securitization trusts containing residential mortgage loans. The total amount of certificates allegedly sponsored, underwritten and/or sold by the Firm to plaintiffs was approximately $133 million. The complaint alleges causes of action against the Firm for common law fraud, fraudulent concealment, aiding and abetting fraud, and negligent misrepresentation, and seeks, among other things, compensatory and punitive damages. On October 29, 2014, the court granted in part and denied in part the Firm's motion to dismiss. All claims regarding four certificates were dismissed. After these dismissals, the remaining amount of certificates allegedly issued by the Firm or sold to plaintiffs by the Firm was approximately $116 million. On August 11, 2016, the Appellate Division, First Department affirmed the trial court's order denying in part the Firm's motion to dismiss the complaint. On July 15, 2022, the Firm filed a motion for summary judgment on all remaining claims. On March 1, 2023, the court granted in part and denied in part the Firm's motion for summary judgment, narrowing the alleged misrepresentations at issue in the case. On March 14, 2023, the Firm filed its notice of appeal, and on March 21, 2023, plaintiffs filed their notice of cross appeal.

15. Variable Interest Entities and Securitization Activities

Overview

The Firm is involved with various SPEs in the normal course of business. In most cases, these entities are deemed to be VIEs.

The Firm's variable interests in VIEs include debt and equity interests, commitments, guarantees, derivative instruments and certain fees. The Firm's involvement with VIEs arises primarily from:

- Interests purchased in connection with market-making activities, securities held in its Investment securities portfolio and retained interests held as a result of securitization activities, including re-securitization transactions.
- Guarantees issued and residual interests retained in connection with municipal bond securitizations.
- Loans made to and investments in VIEs that hold debt, equity, real estate or other assets.
- Derivatives entered into with VIEs.
- Structuring of CLNs or other asset-repackaging notes designed to meet the investment objectives of clients.
- Other structured transactions designed to provide tax-efficient yields to the Firm or its clients.

The Firm determines whether it is the primary beneficiary of a VIE upon its initial involvement with the VIE and reassesses whether it is the primary beneficiary on an ongoing basis as long as it has any continuing involvement with the VIE. This determination is based upon an analysis of the design of the VIE, including the VIE's structure and activities, the power to make significant economic decisions held by the Firm and by other parties, and the variable interests owned by the Firm and other parties.

The power to make the most significant economic decisions may take a number of different forms in different types of VIEs. The Firm considers servicing or collateral management decisions as representing the power to make the most significant economic decisions in transactions such as securitizations or CDOs. As a result, the Firm does not consolidate securitizations or CDOs for which it does not act as the servicer or collateral manager unless it holds certain other rights to replace the servicer or collateral manager or to require the liquidation of the entity. If the Firm serves as servicer or collateral manager, or has certain other rights described in the previous sentence, the Firm analyzes the interests in the VIE that it holds and consolidates only those VIEs for which it holds a potentially significant interest in the VIE.

For many transactions, such as re-securitization transactions, CLNs and other asset-repackaging notes, there are no significant economic decisions made on an ongoing basis. In these cases, the Firm focuses its analysis on decisions made prior to the initial closing of the transaction and at the termination of the transaction. The Firm concluded in most of these transactions that decisions made prior to the initial closing were shared between the Firm and the initial investors based upon the nature of the assets, including whether the assets were issued in a transaction sponsored by the Firm and the extent of the information available to the Firm and to investors, the number, nature and involvement of investors, other rights held by the Firm and investors, the standardization of the legal documentation and the level of continuing involvement by the Firm, including the amount and type of interests owned by the Firm and by other investors. The Firm focused its control decision on any right held by the Firm or investors related to the termination of the VIE. Most re-securitization transactions, CLNs and other asset-repackaging notes have no such termination rights.

Consolidated VIE Assets and Liabilities by Type of Activity

	At December 31, 2023		At December 31, 2022	
$ in millions	VIE Assets	VIE Liabilities	VIE Assets	VIE Liabilities
MABS[1]	**$ 597**	**$ 256**	$ 1,153	$ 520
Investment vehicles[2]	**753**	**502**	638	272
MTOB	**582**	**520**	371	322
Other	**378**	**97**	519	199
Total	**$ 2,310**	**$ 1,375**	$ 2,681	$ 1,313

MTOB—Municipal tender option bonds
1. Amounts include transactions backed by residential mortgage loans, commercial mortgage loans and other types of assets, including consumer or commercial assets and may be in loan or security form. The value of assets is determined based on the fair value of the liabilities and the interests owned by the Firm in such VIEs as the fair values for the liabilities and interests owned are more observable.
2. Amounts include investment funds and CLOs.

Consolidated VIE Assets and Liabilities by Balance Sheet Caption

$ in millions	At December 31, 2023	At December 31, 2022
Assets		
Cash and cash equivalents	**$ 164**	$ 142
Trading assets at fair value	**1,557**	2,066
Investment securities	**492**	255
Securities purchased under agreements to resell	**67**	200
Customer and other receivables	**26**	16
Other assets	**4**	2
Total	**$ 2,310**	$ 2,681
Liabilities		
Other secured financings	**$ 1,222**	$ 1,185
Other liabilities and accrued expenses	**121**	124
Borrowings	**32**	4
Total	**$ 1,375**	$ 1,313
Noncontrolling interests	**$ 54**	$ 71

Consolidated VIE assets and liabilities are presented in the previous tables after intercompany eliminations. Generally, most assets owned by consolidated VIEs cannot be removed unilaterally by the Firm and are not available to the Firm while the related liabilities issued by consolidated VIEs are non-recourse to the Firm. However, in certain consolidated VIEs, the Firm either has the unilateral right to remove assets or provides additional recourse through derivatives such as total return swaps, guarantees or other forms of involvement.

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

Non-consolidated VIEs

	At December 31, 2023				
$ in millions	MABS[1]	CDO	MTOB	OSF	Other[2]
VIE assets (UPB)	**$ 144,906**	**$ 1,526**	**$ 3,152**	**$ 3,102**	**$ 50,052**
Maximum exposure to loss[3]					
Debt and equity interests	**$ 21,203**	**$ 52**	**$ —**	**$ 2,049**	**$ 9,076**
Derivative and other contracts	**—**	**—**	**2,092**	**—**	**4,452**
Commitments, guarantees and other	**3,439**	**—**	**—**	**—**	**55**
Total	**$ 24,642**	**$ 52**	**$ 2,092**	**$ 2,049**	**$ 13,583**
Carrying value of variable interests—Assets					
Debt and equity interests	**$ 21,203**	**$ 52**	**$ —**	**$ 1,682**	**$ 9,075**
Derivative and other contracts	**—**	**—**	**2**	**—**	**1,330**
Total	**$ 21,203**	**$ 52**	**$ 2**	**$ 1,682**	**$ 10,405**
Additional VIE assets owned[4]					**$ 15,002**
Carrying value of variable interests—Liabilities					
Derivative and other contracts	**$ —**	**$ —**	**$ 3**	**$ —**	**$ 452**

	At December 31, 2022				
$ in millions	MABS[1]	CDO	MTOB	OSF	Other[2]
VIE assets (UPB)	$ 123,601	$ 3,162	$ 4,632	$ 2,403	$ 50,178
Maximum exposure to loss[3]					
Debt and equity interests	$ 13,104	$ 274	$ —	$ 1,694	$ 11,596
Derivative and other contracts	—	—	3,200	—	5,211
Commitments, guarantees and other	674	—	—	—	1,410
Total	$ 13,778	$ 274	$ 3,200	$ 1,694	$ 18,217
Carrying value of variable interests—Assets					
Debt and equity interests	$ 13,104	$ 274	$ —	$ 1,577	$ 11,596
Derivative and other contracts	—	—	3	—	1,564
Total	$ 13,104	$ 274	$ 3	$ 1,577	$ 13,160
Additional VIE assets owned[4]					$ 13,708
Carrying value of variable interests—Liabilities					
Derivative and other contracts	$ —	$ —	$ 3	$ —	$ 281

1. Amounts include transactions backed by residential mortgage loans, commercial mortgage loans and other types of assets, including consumer or commercial assets, and may be in loan or security form.
2. Other primarily includes exposures to commercial real estate property and investment funds.
3. Where notional amounts are utilized in quantifying the maximum exposure related to derivatives, such amounts do not reflect changes in fair value recorded by the Firm.
4. Additional VIE assets owned represents the carrying value of total exposure to non-consolidated VIEs for which the maximum exposure to loss is less than specific thresholds, primarily interests issued by securitization SPEs. The Firm's maximum exposure to loss generally equals the fair value of the assets owned. These assets are primarily included in Trading assets and Investment securities and are measured at fair value (see Note 4). The Firm does not provide additional support in these transactions through contractual facilities, guarantees or similar derivatives.

The previous tables include VIEs sponsored by unrelated parties, as well as VIEs sponsored by the Firm; examples of the Firm's involvement with these VIEs include its secondary market-making activities and the securities held in its Investment securities portfolio (see Note 7).

The Firm's maximum exposure to loss is dependent on the nature of the Firm's variable interest in the VIE and is limited to the notional amounts of certain liquidity facilities and other credit support, total return swaps and written put options, as well as the fair value of certain other derivatives and investments the Firm has made in the VIE.

The Firm's maximum exposure to loss in the previous tables does not include the offsetting benefit of hedges or any reductions associated with the amount of collateral held as

part of a transaction with the VIE or any party to the VIE directly against a specific exposure to loss.

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

Detail of Mortgage- and Asset-Backed Securitization Assets

	At December 31, 2023		At December 31, 2022	
$ in millions	UPB	Debt and Equity Interests	UPB	Debt and Equity Interests
Residential mortgages	**$ 17,346**	**$ 3,355**	$ 20,428	$ 2,570
Commercial mortgages	**74,590**	**8,342**	67,540	4,236
U.S. agency collateralized mortgage obligations	**42,917**	**6,675**	32,567	4,729
Other consumer or commercial loans	**10,053**	**2,831**	3,066	1,569
Total	**$ 144,906**	**$ 21,203**	$ 123,601	$ 13,104

Securitization Activities

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

In many securitization transactions involving commercial mortgage loans, the Firm transfers a portion of the assets to the SPE with unrelated parties transferring the remaining assets. In addition, mainly in securitization transactions involving residential mortgage loans, the Firm may also enter into derivative transactions, primarily interest rate swaps or interest rate caps, with the SPE.

Although not obligated, the Firm generally makes a market in the securities issued by SPEs in securitization transactions. As a market maker, the Firm offers to buy these securities from, and sell these securities to, investors. Securities purchased through these market-making activities are not considered to be retained interests; these beneficial interests generally are included in Trading assets—Corporate and other debt and are measured at fair value.

The Firm enters into derivatives, generally interest rate swaps and interest rate caps, with a senior payment priority in many securitization transactions. The risks associated with these and similar derivatives with SPEs are essentially the same as similar derivatives with non-SPE counterparties and are managed as part of the Firm’s overall exposure. See Note 6 for further information on derivative instruments and hedging activities.

Investment Securities

The Firm holds securities issued by VIEs within the Investment securities portfolio. These securities are composed of those related to transactions sponsored by the federal mortgage agencies and predominantly the most senior securities issued by VIEs backed by student loans and commercial mortgage loans. Transactions sponsored by the federal mortgage agencies include an explicit or implicit guarantee provided by the U.S. government. Additionally, the Firm holds certain commercial mortgage-backed securities issued by VIEs retained as a result of the Firm's securitization activities. See Note 7 for further information on the Investment securities portfolio.

Municipal Tender Option Bond Trusts

In a municipal tender option bond trust transaction, the client transfers a municipal bond to a trust. The trust issues short-term securities that the Firm, as the remarketing agent, sells to investors. The client generally retains a residual interest. The short-term securities are supported by a liquidity facility pursuant to which the investors may put their short-term interests. In most programs, a third-party provider will provide such liquidity facility; in some programs, the Firm provides this liquidity facility.

The Firm may, in lieu of purchasing short-term securities for remarketing, decide to extend a temporary loan to the trust. The client can generally terminate the transaction at any time. The liquidity provider can generally terminate the transaction upon the occurrence of certain events. When the transaction is terminated, the municipal bond is generally sold or returned to the client. Any losses suffered by the liquidity provider upon the sale of the bond are the responsibility of the client. This obligation is generally collateralized. Liquidity facilities provided to municipal tender option bond trusts are classified as derivatives. The Firm consolidates any municipal tender option bond trusts in which it holds the residual interest.

Credit Protection Purchased through Credit-Linked Notes

CLN transactions are designed to provide investors with exposure to certain credit risk on referenced assets. In these transactions, the Firm transfers assets (generally high-quality securities or money-market investments) to an SPE, enters into a derivative transaction in which the SPE sells protection on an unrelated referenced asset or group of assets, through a credit derivative, and sells the securities issued by the SPE to investors. In some transactions, the Firm may also enter into interest rate or currency swaps with the SPE. Depending on the structure, the assets and liabilities of the SPE may be consolidated and recognized in the Firm’s balance sheet or accounted for as a sale of assets.

Upon the occurrence of a credit event related to the referenced asset, the SPE will deliver securities collateral as payment to the Firm, which exposes the Firm to changes in the collateral’s value.

Derivative payments by the SPE are collateralized. The risks associated with these and similar derivatives with SPEs are essentially the same as those with non-SPE counterparties and are managed as part of the Firm’s overall exposure.

Other Structured Financings

The Firm invests in interests issued by entities that develop and own low-income communities (including low-income housing projects) and entities that construct and own facilities that will generate energy from renewable resources. The interests entitle the Firm to a share of tax credits and tax losses generated by these projects. In addition, the Firm has issued guarantees to investors in certain low-income housing funds. The guarantees are designed to return an investor's contribution to a fund and the investor's share of tax losses and tax credits expected to be generated by the fund. The Firm is also involved with entities designed to provide tax-efficient yields to the Firm or its clients.

Collateralized Loan and Debt Obligations

CLOs and CDOs are SPEs that purchase a pool of assets consisting of corporate loans, corporate bonds, ABS or synthetic exposures on similar assets through derivatives and issue multiple tranches of debt and equity securities to investors. The Firm underwrites the securities issued in certain CLO transactions on behalf of unaffiliated sponsors and provides advisory services to these unaffiliated sponsors. The Firm sells corporate loans to many of these SPEs, in some cases representing a significant portion of the total assets purchased. Although not obligated, the Firm generally makes a market in the securities issued by SPEs in these transactions and may retain unsold securities. These beneficial interests are included in Trading assets and are measured at fair value.

Equity-Linked Notes

ELN transactions are designed to provide investors with exposure to certain risks related to the specific equity security, equity index or other index. In an ELN transaction, the Firm typically transfers to an SPE either a note issued by the Firm, the payments on which are linked to the performance of a specific equity security, equity index or other index, or debt securities issued by other companies and a derivative contract, the terms of which will relate to the performance of a specific equity security, equity index or other index. These ELN transactions with SPEs were not consolidated at December 31, 2023 or December 31, 2022.

Transferred Assets with Continuing Involvement

	At December 31, 2023			
$ in millions	RML	CML	U.S. Agency CMO	CLN and Other[1]
SPE assets (UPB)[2, 3]	**$ 4,333**	**$ 73,818**	**$ 12,083**	**$ 12,438**
Retained interests				
Investment grade	**$ 149**	**$ 653**	**$ 460**	**$ —**
Non-investment grade	**83**	**788**	**—**	**69**
Total	**$ 232**	**$ 1,441**	**$ 460**	**$ 69**
Interests purchased in the secondary market[3]				
Investment grade	**$ 20**	**$ 22**	**$ 42**	**$ —**
Non-investment grade	**—**	**16**	**—**	**—**
Total	**$ 20**	**$ 38**	**$ 42**	**$ —**
Derivative assets	**$ —**	**$ —**	**$ —**	**$ 1,073**
Derivative liabilities	**—**	**—**	**—**	**426**

	At December 31, 2022			
$ in millions	RML	CML	U.S. Agency CMO	CLN and Other[1]
SPE assets (UPB)[2, 3]	$ 3,732	$ 73,069	$ 6,448	$ 10,928
Retained interests				
Investment grade	$ 137	$ 927	$ 367	$ —
Non-investment grade	26	465	11	44
Total	$ 163	$ 1,392	$ 378	$ 44
Interests purchased in the secondary market[5]				
Investment grade	$ 82	$ 51	$ 10	$ —
Non-investment grade	35	23	—	—
Total	$ 117	$ 74	$ 10	$ —
Derivative assets	$ —	$ —	$ —	$ 1,114
Derivative liabilities	—	—	—	201

	Fair Value at December 31, 2023		
$ in millions	Level 2	Level 3	Total
Retained interests			
Investment grade	**$ 576**	**$ —**	**$ 576**
Non-investment grade	**10**	**56**	**66**
Total	**$ 586**	**$ 56**	**$ 642**
Interests purchased in the secondary market[3]			
Investment grade	**$ 77**	**$ 7**	**$ 84**
Non-investment grade	**12**	**4**	**16**
Total	**$ 89**	**$ 11**	**$ 100**
Derivative assets	**$ 1,073**	**$ —**	**$ 1,073**
Derivative liabilities	**426**	**—**	**426**

	Fair Value at December 31, 2022		
$ in millions	Level 2	Level 3	Total
Retained interests			
Investment grade	$ 489	$ —	$ 489
Non-investment grade	25	16	41
Total	$ 514	$ 16	$ 530
Interests purchased in the secondary market[3]			
Investment grade	$ 140	$ 3	$ 143
Non-investment grade	42	16	58
Total	$ 182	$ 19	$ 201
Derivative assets	$ 1,114	$ —	$ 1,114
Derivative liabilities	153	48	201

RML—Residential mortgage loans
CML—Commercial mortgage loans
1. Amounts include CLO transactions managed by unrelated third parties.
2. Amounts include assets transferred by unrelated transferors.
3. Amounts include transactions where the Firm also holds retained interests as part of the transfer.

The previous tables include transactions with SPEs in which the Firm, acting as principal, transferred financial assets with

continuing involvement and received sales treatment. The transferred assets are carried at fair value prior to securitization, and any changes in fair value are recognized in the income statement. The Firm may act as underwriter of the beneficial interests issued by these securitization vehicles, for which Investment banking revenues are recognized. The Firm may retain interests in the securitized financial assets as one or more tranches of the securitization. Certain retained interests are carried at fair value in the balance sheet with changes in fair value recognized in the income statement. Fair value for these interests is measured using techniques that are consistent with the valuation techniques applied to the Firm's major categories of assets and liabilities as described in Notes 2 and 4. Further, as permitted by applicable guidance, certain transfers of assets where the Firm's only continuing involvement is a derivative are only reported in the following Assets Sold with Retained Exposure table.

Proceeds from New Securitization Transactions and Sales of Loans

$ in millions	**2023**	2022	2021
New transactions[1]	**$ 21,051**	$ 22,136	$ 57,528
Retained interests	**4,311**	4,862	8,822
Sales of corporate loans to CLO SPEs[1, 2]	**24**	62	169

1. Net gains on new transactions and sales of corporate loans to CLO entities at the time of the sale were not material for all periods presented.
2. Sponsored by non-affiliates.

The Firm has provided, or otherwise agreed to be responsible for, representations and warranties regarding certain assets transferred in securitization transactions sponsored by the Firm (see Note 14).

Assets Sold with Retained Exposure

$ in millions	**At December 31, 2023**	At December 31, 2022
Gross cash proceeds from sale of assets[1]	**$ 60,766**	$ 49,059
Fair value		
Assets sold	**$ 62,221**	$ 47,281
Derivative assets recognized in the balance sheet	**1,546**	116
Derivative liabilities recognized in the balance sheet	**93**	1,893

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

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

16. Regulatory Requirements

Regulatory Capital Framework

The Firm is an FHC under the Bank Holding Company Act of 1956, as amended, and is subject to the regulation and oversight of the Board of Governors of the Federal Reserve System ("Federal Reserve"). The Federal Reserve establishes capital requirements for the Firm, including "well-capitalized" standards, and evaluates the Firm's compliance with such capital requirements. The OCC establishes similar capital requirements and standards for the Firm's U.S. bank subsidiaries, including, among others, MSBNA and MSPBNA (together, "U.S. Bank Subsidiaries"). The regulatory capital requirements are largely based on the Basel III capital standards established by the Basel Committee on Banking Supervision and also implement certain provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act. In addition, many of the Firm's regulated subsidiaries are subject to regulatory capital requirements, including regulated subsidiaries registered as swap dealers with the CFTC or conditionally registered as security-based swap dealers with the SEC or registered as broker-dealers or futures commission merchants.

Regulatory Capital Requirements

The Firm is required to maintain minimum risk-based and leverage-based capital ratios under regulatory capital requirements. A summary of the calculations of regulatory capital and RWA follows.

Risk-Based Regulatory Capital. Risk-based capital ratio requirements apply to Common Equity Tier 1 capital, Tier 1 capital and Total capital (which includes Tier 2 capital), each as a percentage of RWA, and consist of regulatory minimum required ratios plus the Firm's capital buffer requirement. Capital requirements require certain adjustments to, and deductions from, capital for purposes of determining these ratios.

CECL Deferral. Beginning on January 1, 2020, the Firm elected to defer the effect of the adoption of CECL on its risk-based and leverage-based capital amounts and ratios, as well as RWA, adjusted average assets and supplementary leverage exposure calculations, over a five-year transition period. The deferral impacts began to phase in at 25% per year from January 1, 2022 and are phased-in at 50% from January 1, 2023. The deferral impacts will become fully phased-in beginning on January 1, 2025.

Capital Buffer Requirements

	At December 31, 2023	At December 31, 2022	At December 31, 2023 and December 31, 2022
	Standardized	Standardized	Advanced
Capital buffers			
Capital conservation buffer	**—**	—	**2.5%**
SCB	**5.4%**	5.8%	**N/A**
G-SIB capital surcharge	**3.0%**	3.0%	**3.0%**
CCyB[1]	**0%**	0%	**0%**
Capital buffer requirement	**8.4%**	**8.8%**	**5.5%**

1. The CCyB can be set up to 2.5% but is currently set by the Federal Reserve at zero.

The capital buffer requirement represents the amount of Common Equity Tier 1 capital the Firm must maintain above the minimum risk-based capital requirements in order to avoid restrictions on the Firm's ability to make capital distributions, including the payment of dividends and the repurchase of stock, and to pay discretionary bonuses to executive officers. The Firm's capital buffer requirement computed under the standardized approaches for calculating credit risk and market risk RWA ("Standardized Approach") is equal to the sum of the SCB, G-SIB capital surcharge and CCyB, and the capital buffer requirement computed under the applicable advanced approaches for calculating credit risk, market risk and operational risk RWA ("Advanced Approach") is equal to the sum of the 2.5% capital conservation buffer, G-SIB capital surcharge and CCyB.

Risk-Based Regulatory Capital Ratio Requirements

	Regulatory Minimum	At December 31, 2023	At December 31, 2022	At December 31, 2023 and December 31, 2022
		Standardized	Standardized	Advanced
Required ratios[1]				
Common Equity Tier 1 capital ratio	**4.5 %**	**12.9%**	**13.3%**	**10.0%**
Tier 1 capital ratio	**6.0 %**	**14.4%**	**14.8%**	**11.5%**
Total capital ratio	**8.0 %**	**16.4%**	**16.8%**	**13.5%**

1. Required ratios represent the regulatory minimum plus the capital buffer requirement.

Risk-Weighted Assets

RWA reflects both the Firm's on- and off-balance sheet risk, as well as capital charges attributable to the risk of loss arising from the following:

- Credit Risk: The failure of a borrower, counterparty or issuer to meet its financial obligations to the Firm;
- Market Risk: Adverse changes in the level of one or more market prices, rates, indices, volatilities, correlations or other market factors, such as market liquidity; and
- Operational Risk: Inadequate or failed processes or systems from human factors or from external events (e.g., fraud, theft, legal and compliance risks, cyberattacks or damage to physical assets).

The Firm's risk-based capital ratios are computed under both (i) the Standardized Approach and (ii) the Advanced Approach. The credit risk RWA calculations between the two approaches differ in that the Standardized Approach requires calculation of RWA using prescribed risk weights, whereas the Advanced Approach utilizes models to calculate exposure amounts and risk weights. At December 31, 2023 and December 31, 2022, the differences between the actual and required ratio were lower under the Standardized Approach.

Leverage-Based Regulatory Capital. Leverage-based capital requirements include a minimum Tier 1 leverage ratio of 4%, a minimum SLR of 3% and an enhanced SLR capital buffer of at least 2%.

The Firm's Regulatory Capital and Capital Ratios

$ in millions	Required Ratio[1]	At December 31, 2023	Required Ratio[1]	At December 31, 2022
Risk-based capital				
Common Equity Tier 1 capital		**$ 69,448**		$ 68,670
Tier 1 capital		**78,183**		77,191
Total capital		**88,874**		86,575
Total RWA		**456,053**		447,849
Common Equity Tier 1 capital ratio	**12.9 %**	**15.2 %**	13.3 %	15.3 %
Tier 1 capital ratio	**14.4 %**	**17.1 %**	14.8 %	17.2 %
Total capital ratio	**16.4 %**	**19.5 %**	16.8 %	19.3 %

$ in millions	Required Ratio[1]	At December 31, 2023	At December 31, 2022
Leverage-based capital			
Adjusted average assets[2]		**$ 1,159,626**	$ 1,150,772
Tier 1 leverage ratio	**4.0 %**	**6.7 %**	6.7 %
Supplementary leverage exposure[3]		**$ 1,429,552**	$ 1,399,403
SLR	**5.0 %**	**5.5 %**	5.5 %

1. Required ratios are inclusive of any buffers applicable as of the date presented.
2. Adjusted average assets represents the denominator of the Tier 1 leverage ratio and is composed of the average daily balance of consolidated on-balance sheet assets for the quarters ending on the respective balance sheet dates, reduced by disallowed goodwill, intangible assets, investments in covered funds, defined benefit pension plan assets, after-tax gain on sale from assets sold into securitizations, investments in the Firm's own capital instruments, certain defined tax assets and other capital deductions.
3. Supplementary leverage exposure is the sum of Adjusted average assets used in the Tier 1 leverage ratio and other adjustments, primarily: (i) for derivatives, potential future exposure and the effective notional principal amount of sold credit protection, offset by qualifying purchased credit protection; (ii) the counterparty credit risk for repo-style transactions; and (iii) the credit equivalent amount for off-balance sheet exposures.

U.S. Bank Subsidiaries' Regulatory Capital and Capital Ratios

The OCC establishes capital requirements for the U.S. Bank Subsidiaries, and evaluates their compliance with such capital requirements. Regulatory capital requirements for the U.S. Bank Subsidiaries are calculated in a similar manner to the Firm's regulatory capital requirements, although G-SIB capital surcharge and SCB requirements do not apply to the U.S. Bank Subsidiaries.

The OCC's regulatory capital framework includes Prompt Corrective Action ("PCA") standards, including "well-capitalized" PCA standards that are based on specified regulatory capital ratio minimums. For the Firm to remain an

FHC, its U.S. Bank Subsidiaries must remain well-capitalized in accordance with the OCC's PCA standards. In addition, failure by the U.S. Bank Subsidiaries to meet minimum capital requirements may result in certain mandatory and discretionary actions by regulators that, if undertaken, could have a direct material effect on the U.S. Bank Subsidiaries' and the Firm's financial statements.

At December 31, 2023 and December 31, 2022, MSBNA and MSPBNA risk-based capital ratios are based on the Standardized Approach rules. Beginning on January 1, 2020, MSBNA and MSPBNA elected to defer the effect of the adoption of CECL on risk-based capital amounts and ratios, as well as RWA, adjusted average assets and supplementary leverage exposure calculations, over a five-year transition period. The deferral impacts began to phase in at 25% per year from January 1, 2022 and are phased-in at 50% from January 1, 2023. The deferral impacts will become fully phased-in beginning on January 1, 2025.

MSBNA's Regulatory Capital

$ in millions	Well-Capitalized Requirement	Required Ratio[1]	**At December 31, 2023** Amount	**At December 31, 2023** Ratio	At December 31, 2022 Amount	At December 31, 2022 Ratio
Risk-based capital						
Common Equity Tier 1 capital	**6.5 %**	**7.0 %**	**$ 21,925**	**21.7 %**	$ 20,043	20.5 %
Tier 1 capital	**8.0 %**	**8.5 %**	**21,925**	**21.7 %**	20,043	20.5 %
Total capital	**10.0 %**	**10.5 %**	**22,833**	**22.6 %**	20,694	21.1 %
Leverage-based capital						
Tier 1 leverage	**5.0 %**	**4.0 %**	**$ 21,925**	**10.6 %**	$ 20,043	10.1 %
SLR	**6.0 %**	**3.0 %**	**21,925**	**8.2 %**	20,043	8.1 %

MSPBNA's Regulatory Capital

$ in millions	Well-Capitalized Requirement	Required Ratio[1]	**At December 31, 2023** Amount	**At December 31, 2023** Ratio	At December 31, 2022 Amount	At December 31, 2022 Ratio
Risk-based capital						
Common Equity Tier 1 capital	**6.5 %**	**7.0 %**	**$ 15,388**	**25.8 %**	$ 15,546	27.5 %
Tier 1 capital	**8.0 %**	**8.5 %**	**15,388**	**25.8 %**	15,546	27.5 %
Total capital	**10.0 %**	**10.5 %**	**15,675**	**26.3 %**	15,695	27.8 %
Leverage-based capital						
Tier 1 leverage	**5.0 %**	**4.0 %**	**$ 15,388**	**7.5 %**	$ 15,546	7.6 %
SLR	**6.0 %**	**3.0 %**	**15,388**	**7.2 %**	15,546	7.4 %

1. Required ratios are inclusive of any buffers applicable as of the date presented. Failure to maintain the buffers would result in restrictions on the ability to make capital distributions, including the payment of dividends.

Additionally, MSBNA is conditionally registered with the SEC as a security-based swap dealer and is registered with the CFTC as a swap dealer. However, as MSBNA is prudentially regulated as a bank, its capital requirements continue to be determined by the OCC.

Other Regulatory Capital Requirements

MS&Co. Regulatory Capital

$ in millions	**At December 31, 2023**	At December 31, 2022
Net capital	**$ 18,121**	$ 17,224
Excess net capital	**13,676**	12,861

MS&Co. is registered as a broker-dealer and a futures commission merchant with the SEC and the CFTC, respectively, and is registered as a swap dealer with the CFTC.

As an Alternative Net Capital broker-dealer, and in accordance with Securities Exchange Act of 1934 ("Exchange Act") Rule 15c3-1, Appendix E, MS&Co. is subject to minimum net capital and tentative net capital requirements and operates with capital in excess of its regulatory capital requirements. As a futures commission merchant and registered swap dealer, MS&Co. is subject to CFTC capital requirements. In addition, MS&Co. must notify the SEC if its tentative net capital falls below certain levels. At December 31, 2023 and December 31, 2022, MS&Co. exceeded its net capital requirement and had tentative net capital in excess of the minimum and notification requirements.

Other Regulated Subsidiaries

Certain other subsidiaries are also subject to various regulatory capital requirements. Such subsidiaries include the following, each of which operated with capital in excess of their respective regulatory capital requirements as of December 31, 2023 and December 31, 2022, as applicable:

- MSSB, a registered U.S. broker-dealer and introducing broker for the futures business, is subject to, respectively, the minimum net capital requirements of the SEC and CFTC.
- MSIP, a London-based broker-dealer subsidiary, is subject to the capital requirements of the Prudential Regulation Authority ("PRA"). MSIP is also conditionally registered with the SEC as a security-based swap dealer and registered with the CFTC as a swap dealer. It currently complies with home-country capital requirements in lieu of SEC and CFTC capital requirements pursuant to applicable substituted compliance rules and interim no-action relief, respectively.
- Morgan Stanley Europe Holdings SE Group ("MSEHSE Group"), including MSESE, a Germany-based broker-dealer, is subject to the capital requirements of the European Central Bank, BaFin and the German Central Bank. MSESE is also conditionally registered with the SEC as a security-based swap dealer and registered with the CFTC as a swap dealer. It currently complies with home-country capital requirements in lieu of SEC and CFTC capital requirements pursuant to applicable substituted compliance rules and interim no-action relief, respectively.
- MSMS, a Tokyo-based broker-dealer subsidiary, is subject to the capital requirements of the Financial Services

Agency. MSMS is also registered with the CFTC as a swap dealer but is currently complying with home-country capital requirements in lieu of CFTC capital requirements pursuant to interim no-action relief.
- MSCS, a U.S. entity and the Firm's primary non-bank security-based swap dealer, is conditionally registered with the SEC as a security-based swap dealer, registered with the SEC as an OTC derivatives dealer and registered with the CFTC as a swap dealer. MSCS is subject to the capital requirements of both regulators.
- MSCG, a U.S. entity, is registered with the CFTC as a swap dealer and is subject to its capital requirements.

Certain other U.S. and non-U.S. subsidiaries of the Firm are subject to various securities, commodities and banking regulations, and capital adequacy requirements promulgated by the regulatory and exchange authorities of the countries in which they operate. These subsidiaries have also consistently operated with capital in excess of their local capital adequacy requirements.

Restrictions on Payments

The regulatory capital requirements referred to above, and certain covenants contained in various agreements governing indebtedness of the Firm, may restrict the Firm's ability to withdraw capital from its subsidiaries. The following table represents net assets of consolidated subsidiaries that may be restricted as to the payment of cash dividends and advances to the Parent Company.

$ in millions	**At December 31, 2023**	At December 31, 2022
Restricted net assets	**$ 49,008**	$ 45,896

17. Total Equity

Morgan Stanley Shareholders' Equity

Preferred Stock

$ in millions, except per share data	Shares Outstanding **At December 31, 2023**	Liquidation Preference per Share	Carrying Value **At December 31, 2023**	Carrying Value At December 31, 2022
Series				
A	**44,000**	**$ 25,000**	**$ 1,100**	$ 1,100
C[1]	**519,882**	**1,000**	**408**	408
E	**34,500**	**25,000**	**862**	862
F	**34,000**	**25,000**	**850**	850
I	**40,000**	**25,000**	**1,000**	1,000
K	**40,000**	**25,000**	**1,000**	1,000
L	**20,000**	**25,000**	**500**	500
M	**400,000**	**1,000**	**430**	430
N	**3,000**	**100,000**	**300**	300
O	**52,000**	**25,000**	**1,300**	1,300
P	**40,000**	**25,000**	**1,000**	1,000
Total			**$ 8,750**	$ 8,750
Shares authorized				30,000,000

1. Series C preferred stock is held by MUFG.

The Firm's preferred stock has a preference over its common stock upon liquidation. The Firm's preferred stock qualifies as and is included in Tier 1 capital in accordance with regulatory capital requirements (see Note 16).

Description of Preferred Stock as of December 31, 2023

Series[1, 2]	Shares Issued	Depositary Shares per Share	Redemption Price per Share[3]	Redemption Date[4]
A	44,000	1,000	$ 25,000	Currently redeemable
C[5]	1,160,791	N/A	1,100	Currently redeemable
E	34,500	1,000	25,000	Currently redeemable
F	34,000	1,000	25,000	January 15, 2024
I	40,000	1,000	25,000	October 15, 2024
K	40,000	1,000	25,000	April 15, 2027
L	20,000	1,000	25,000	January 15, 2025
M	400,000	N/A	1,000	September 15, 2026
N	3,000	100	100,000	October 2, 2025
O[6]	52,000	1,000	25,000	January 15, 2027
P[7]	40,000	1,000	25,000	October 15, 2027

1. All shares issued are non-cumulative. Each share has a par value of $ 0.01, except Series C.
2. Dividends on Series A are based on a floating rate, and dividends on Series C, L and O are based on a fixed rate. Dividends on all other Series are based on a fixed-to-floating rate.
3. Series A and C are redeemable at the redemption price plus accrued and unpaid dividends, regardless of whether dividends are actually declared, up to but excluding the date of redemption. All other Series are redeemable at the redemption price plus any declared and unpaid dividends, up to but excluding the date fixed for redemption.
4. Series A and C are currently redeemable at the Firm's option, in whole or in part, from time to time. Series E is currently redeemable, and all other Series are redeemable, at the Firm's option (i) in whole or in part, from time to time, on any dividend payment date on or after the redemption date or (ii) in whole but not in part at any time within 90 days following a regulatory capital treatment event (as described in the terms of that series).
5. Series C is non-voting perpetual preferred stock. Dividends on the Series C preferred stock are payable, on a non-cumulative basis, as and if declared by the Board of Directors, in cash, at the rate of 10% per annum of the liquidation preference of $ 1,000 per share.
6. The Firm issued Series O Preferred Stock on October 25, 2021.
7. The Firm issued Series P Preferred Stock on August 2, 2022.

Common Stock

Rollforward of Common Stock Outstanding

in millions	**2023**	2022
Shares outstanding at beginning of period	**1,675**	1,772
Treasury stock purchases[1]	**(71)**	(124)
Other[2]	**23**	27
Shares outstanding at end of period	**1,627**	1,675

1. The Firm's Board of Directors has authorized the repurchase of the Firm's outstanding stock under a share repurchase program ("Share Repurchase Program"). In addition to the Firm's Share Repurchase Program, Treasury stock purchases include repurchases of common stock for employee tax withholding.
2. Other includes net shares issued to and forfeited from employee stock trusts and issued for RSU conversions.

Share Repurchases

$ in millions	**2023**	2022
Repurchases of common stock under the Firm's Share Repurchase Program	**$ 5,300**	$ 9,865

On June 30, 2023, the Firm announced that its Board of Directors reauthorized a multi-year repurchase program of up to $20 billion of outstanding common stock, without a set expiration date, beginning in the third quarter of 2023, which will be exercised from time to time as conditions warrant.

Pursuant to the Share Repurchase Program, the Firm considers, among other things, business segment capital needs, as well as stock-based compensation and benefit plan requirements. Share repurchases under the program will be exercised from time to time at prices the Firm deems appropriate subject to various factors, including the Firm's capital position and market conditions. The share repurchases may be effected through open market purchases or privately negotiated transactions, including through Rule 10b5-1 plans, and may be suspended at any time.

Common Shares Outstanding for Basic and Diluted EPS

in millions	**2023**	2022	2021
Weighted average common shares outstanding, basic	**1,628**	1,691	1,785
Effect of dilutive RSUs and PSUs	**18**	22	29
Weighted average common shares outstanding and common stock equivalents, diluted	**1,646**	1,713	1,814
Weighted average antidilutive common stock equivalents (excluded from the computation of diluted EPS)	**2**	3	—

Dividends

	2023		2022		2021	
$ in millions, except per share data	Per Share[1]	Total	Per Share[1]	Total	Per Share[1]	Total
Preferred Stock Series						
A	**$ 1,522**	**$ 67**	$ 1,061	$ 47	$ 1,022	$ 44
C	**100**	**52**	100	52	100	52
E	**1,791**	**62**	1,781	60	1,781	60
F	**1,719**	**58**	1,719	59	1,719	60
H[2]	**—**	**—**	—	—	719	38
I	**1,594**	**64**	1,594	64	1,594	64
J	**—**	**—**	—	—	253	15
K	**1,463**	**59**	1,463	59	1,463	59
L	**1,219**	**24**	1,219	24	1,219	24
M[3]	**59**	**24**	59	24	59	24
N[4]	**9,160**	**27**	5,300	16	5,300	16
O	**1,063**	**55**	1,063	55	236	12
P	**1,625**	**65**	736	29	—	—
Total Preferred stock		**$ 557**		$ 489		$ 468
Common stock	**$ 3.25**	**$ 5,393**	$ 2.95	$ 5,108	$ 2.10	$ 3,818

1. Common and Preferred Stock dividends are payable quarterly unless otherwise noted.
2. A notice of redemption was issued for Series H preferred stock on November 19, 2021. Dividends declared on Series H following the issuance of the notice of redemption were recognized as Interest expense and are excluded from the 2021 amounts.
3. Series M is payable semiannually until September 15, 2026 and thereafter will be payable quarterly.
4. Series N was payable semiannually until March 15, 2023 and thereafter is payable quarterly.

Accumulated Other Comprehensive Income (Loss)[1]

$ in millions	CTA	AFS Securities	Pension and Other	DVA	Cash Flow Hedges	Total
December 31, 2020	$ (795)	$ 1,787	$ (498)	$ (2,456)	$ —	$ (1,962)
OCI during the period	(207)	(1,542)	(53)	662	—	(1,140)
December 31, 2021	(1,002)	245	(551)	(1,794)	—	(3,102)
OCI during the period	(202)	(4,437)	43	1,449	(4)	(3,151)
December 31, 2022	(1,204)	(4,192)	(508)	(345)	(4)	(6,253)
OCI during the period	**51**	**1,098**	**(87)**	**(1,250)**	**20**	**(168)**
December 31, 2023	**$ (1,153)**	**$ (3,094)**	**$ (595)**	**$ (1,595)**	**$ 16**	**$ (6,421)**

CTA—Cumulative foreign currency translation adjustments
1. Amounts are net of tax and noncontrolling interests.

Components of Period Changes in OCI

$ in millions	2023 Pre-tax Gain (Loss)	Income Tax Benefit (Provision)	After-tax Gain (Loss)	Non-controlling Interests	Net
CTA					
OCI activity	**$ (73)**	**$ 53**	**$ (20)**	**$ (71)**	**$ 51**
Reclassified to earnings	**—**	**—**	**—**	**—**	**—**
Net OCI	**$ (73)**	**$ 53**	**$ (20)**	**$ (71)**	**$ 51**
Change in net unrealized gains (losses) on AFS securities					
OCI activity	**$ 1,488**	**$ (353)**	**$ 1,135**	**$ —**	**$ 1,135**
Reclassified to earnings	**(49)**	**12**	**(37)**	**—**	**(37)**
Net OCI	**$ 1,439**	**$ (341)**	**$ 1,098**	**$ —**	**$ 1,098**
Pension and other					
OCI activity	**$ (96)**	**$ 24**	**$ (72)**	**$ —**	**$ (72)**
Reclassified to earnings	**(18)**	**3**	**(15)**	**—**	**(15)**
Net OCI	**$ (114)**	**$ 27**	**$ (87)**	**$ —**	**$ (87)**
Change in net DVA					
OCI activity	**$ (1,728)**	**$ 424**	**$ (1,304)**	**$ (40)**	**$ (1,264)**
Reclassified to earnings	**19**	**(5)**	**14**	**—**	**14**
Net OCI	**$ (1,709)**	**$ 419**	**$ (1,290)**	**$ (40)**	**$ (1,250)**
Change in fair value of cash flow hedge derivatives					
OCI activity	**$ 9**	**$ (1)**	**$ 8**	**$ —**	**$ 8**
Reclassified to earnings	**16**	**(4)**	**12**	**—**	**$ 12**
Net OCI	**$ 25**	**$ (5)**	**$ 20**	**$ —**	**$ 20**

$ in millions	2022 Pre-tax Gain (Loss)	Income Tax Benefit (Provision)	After-tax Gain (Loss)	Non-controlling Interests	Net
CTA					
OCI activity	$ (179)	$ (217)	$ (396)	$ (135)	$ (261)
Reclassified to earnings	—	59	59	—	59
Net OCI	$ (179)	$ (158)	$ (337)	$ (135)	$ (202)
Change in net unrealized gains (losses) on AFS securities					
OCI activity	$ (5,720)	$ 1,337	$ (4,383)	$ —	$ (4,383)
Reclassified to earnings	(70)	16	(54)	—	(54)
Net OCI	$ (5,790)	$ 1,353	$ (4,437)	$ —	$ (4,437)
Pension and other					
OCI activity	$ 38	$ (13)	$ 25	$ —	$ 25
Reclassified to earnings	22	(4)	18	—	18
Net OCI	$ 60	$ (17)	$ 43	$ —	$ 43
Change in net DVA					
OCI activity	$ 1,982	$ (480)	$ 1,502	$ 53	$ 1,449
Reclassified to earnings	—	—	—	—	—
Net OCI	$ 1,982	$ (480)	$ 1,502	$ 53	$ 1,449
Change in fair value of cash flow hedge derivatives					
OCI activity	$ (4)	$ —	$ (4)	$ —	$ (4)
Reclassified to earnings	—	—	—	—	—
Net OCI	$ (4)	$ —	$ (4)	$ —	$ (4)

$ in millions	2021 Pre-tax Gain (Loss)	Income Tax Benefit (Provision)	After-tax Gain (Loss)	Non-controlling Interests	Net
CTA					
OCI activity	$ (140)	$ (191)	$ (331)	$ (124)	$ (207)
Reclassified to earnings	—	—	—	—	—
Net OCI	$ (140)	$ (191)	$ (331)	$ (124)	$ (207)
Change in net unrealized gains (losses) on AFS securities					
OCI activity	$ (1,803)	$ 422	$ (1,381)	$ —	$ (1,381)
Reclassified to earnings	(210)	49	(161)	—	(161)
Net OCI	$ (2,013)	$ 471	$ (1,542)	$ —	$ (1,542)
Pension and other					
OCI activity	$ (101)	$ 26	$ (75)	$ —	$ (75)
Reclassified to earnings	31	(9)	22	—	22
Net OCI	$ (70)	$ 17	$ (53)	$ —	$ (53)
Change in net DVA					
OCI activity	$ 882	$ (213)	$ 669	$ 34	$ 635
Reclassified to earnings	36	(9)	27	—	27
Net OCI	$ 918	$ (222)	$ 696	$ 34	$ 662

Cumulative Foreign Currency Translation Adjustments

$ in millions	**At December 31, 2023**	At December 31, 2022
Associated with net investments in subsidiaries with a non-U.S. dollar functional currency	**$ (2,917)**	$ (3,136)
Hedges, net of tax	**1,764**	1,932
Total	**$ (1,153)**	$ (1,204)
Carrying value of net investments in non-U.S. dollar functional currency subsidiaries subject to hedges	**$ 18,761**	$ 17,023

Cumulative foreign currency translation adjustments include gains or losses resulting from translating foreign currency financial statements from their respective functional currencies to U.S. dollars, net of hedge gains or losses and related tax effects. The Firm uses foreign currency contracts to manage the currency exposure relating to its net investments in non-U.S. dollar functional currency subsidiaries and determines the amount of exposure to hedge on a pre-tax basis. The Firm may also elect not to hedge its net investments in certain foreign operations due to market conditions or other reasons, including the availability of various currency contracts at acceptable costs. Information relating to the effects on cumulative foreign currency translation adjustments that resulted from the translation of foreign currency financial statements and from gains and losses from hedges of the Firm's net investments in non-U.S. dollar functional currency subsidiaries is summarized in the previous table.

18. Interest Income and Interest Expense

$ in millions	2023	2022	2021
Interest income			
Cash and cash equivalents[1]	**$ 3,408**	$ 914	$ 7
Investment securities	**3,992**	3,066	2,759
Loans	**12,424**	6,988	4,209
Securities purchased under agreements to resell[2]	**7,762**	2,188	(181)
Securities borrowed[3]	**5,191**	1,020	(1,017)
Trading assets, net of Trading liabilities	**4,488**	2,484	2,038
Customer receivables and Other[1]	**13,016**	4,935	1,596
Total interest income	**$ 50,281**	$ 21,595	$ 9,411
Interest expense			
Deposits	**$ 8,216**	$ 1,825	$ 409
Borrowings	**11,437**	5,054	2,725
Securities sold under agreements to repurchase[4]	**6,737**	1,760	93
Securities loaned[5]	**784**	503	401
Customer payables and Other[6]	**14,877**	3,126	(2,262)
Total interest expense	**$ 42,051**	$ 12,268	$ 1,366
Net interest	**$ 8,230**	$ 9,327	$ 8,045

1. In the fourth quarter of 2023, interest bearing Cash and cash equivalents and related interest were presented separately for the first time. The prior period amounts for Customer receivables and Other have been disaggregated to exclude Cash and cash equivalents to align with the current presentation.
2. Includes interest paid on Securities purchased under agreements to resell.
3. Includes fees paid on Securities borrowed.
4. Includes interest received on Securities sold under agreements to repurchase.
5. Includes fees received on Securities loaned.
6. Includes fees received from Equity Financing customers related to their short transactions, which can be under either margin or securities lending arrangements.

Interest income and Interest expense are classified in the income statement based on the nature of the instrument and related market conventions. When included as a component of the instrument's fair value, interest is included within Trading revenues or Investments revenues. Otherwise, it is included within Interest income or Interest expense.

Accrued Interest

$ in millions	At December 31, 2023	At December 31, 2022
Customer and other receivables	**$ 4,206**	$ 4,139
Customer and other payables	**4,360**	4,273

19. Deferred Compensation Plans and Carried Interest Compensation

Stock-Based Compensation Plans

Certain current and former employees of the Firm participate in the Firm's stock-based compensation plans. These plans include RSUs, PSUs and an ESPP.

Stock-Based Compensation Expense

$ in millions	2023	2022	2021
RSUs	**$ 1,607**	$ 1,827	$ 1,834
PSUs	**91**	40	251
ESPP	**11**	8	—
Total	**$ 1,709**	$ 1,875	$ 2,085
Retirement-eligible awards[1]	**$ 178**	$ 176	$ 192

1. Total expense includes stock-based compensation anticipated to be awarded in January of the following year that does not contain a future service requirement.

Tax Benefit Related to Stock-Based Compensation Expense

$ in millions	2023	2022	2021
Tax benefit[1]	**$ 382**	$ 427	$ 432

1. Excludes income tax consequences related to employee share-based award conversions.

Unrecognized Compensation Cost Related to Stock-Based Awards Granted

$ in millions	At December 31, 2023[1]
To be recognized in:	
2024	**$ 560**
2025	**238**
Thereafter	**66**
Total	**$ 864**

1. Amounts do not include forfeitures or 2023 performance year compensation awarded in January 2024, which will begin to be amortized in 2024.

In connection with awards under its stock-based compensation plans, the Firm is authorized to issue shares of common stock held in treasury or newly issued shares.

The Firm generally uses treasury shares, if available, to deliver shares to employees or employee stock trusts and has an ongoing repurchase authorization that includes repurchases in connection with awards under its stock-based compensation plans.

Common Shares Available for Future Awards under Stock-Based Compensation Plans

in millions	At December 31, 2023
Shares	**121**

See Note 17 for additional information on the Firm's Share Repurchase Program.

Restricted Stock Units

RSUs are subject to vesting over time, generally one to seven years from the date of award, contingent upon continued employment and subject to restrictions on sale, transfer or assignment until conversion to common stock. All or a portion of an award may be forfeited if employment is terminated before the end of the relevant vesting period or canceled after the relevant vesting period in certain situations. Recipients of RSUs may have voting rights, at the Firm's discretion, and generally receive dividend equivalents if the awards vest.

Vested and Unvested RSU Activity

shares in millions	2023 Number of Shares	2023 Weighted Average Award Date Fair Value
RSUs at beginning of period	63	$ 76.31
Awarded	**19**	**93.55**
Conversions to common stock	**(21)**	**61.23**
Forfeited	**(2)**	**88.02**
RSUs at end of period[1]	**59**	**$ 86.92**
Aggregate intrinsic value of RSUs at end of period (dollars in millions)		**$ 5,523**
Weighted average award date fair value		
RSUs awarded in 2022		96.61
RSUs awarded in 2021		77.28

1. At December 31, 2023, the weighted average remaining term until delivery for the outstanding RSUs was approximately 1.1 years.

Unvested RSU Activity

shares in millions	2023 Number of Shares	2023 Weighted Average Award Date Fair Value
Unvested RSUs at beginning of period	35	$ 83.41
Awarded	**19**	**93.55**
Vested	**(25)**	**84.28**
Forfeited	**(1)**	**89.44**
Unvested RSUs at end of period[1]	**28**	**$ 89.16**

1. Unvested RSUs represent awards where recipients have yet to satisfy either the explicit vesting terms or retirement-eligible requirements.

Fair Value of RSU Activity[1]

$ in millions	2023	2022	2021
Conversions to common stock	**$ 2,019**	$ 2,301	$ 1,539
Vested	**2,260**	2,433	1,647

1. Fair value of converted stock is based on the share price at conversion. Fair value of vested stock is based on the share price at date of vesting.

Performance-Based Stock Units

PSUs vest and convert to shares of common stock only if the Firm satisfies, over a three-year performance period, performance goals that are determined on the award date. The number of PSUs that may vest ranges from 0% to 150% of the target award, based on the Firm's level of achievement of the specified performance goals. One-half of a PSU award is earned based on the Firm's average return on tangible common equity ("MS Average ROTCE") over the performance period. The other half of a PSU award is earned based on the Firm's total shareholder return, relative to the total shareholder return of the S&P 500 Financials Sector Index ("MS Relative TSR") for awards granted prior to 2023, or for PSU awards granted in 2023 based on the MS Average ROTCE relative to the Return on Tangible Common Equity of each member of the defined comparison group ("MS Relative ROTCE"). PSUs have vesting, conversion and cancellation provisions that are generally similar to those of RSUs. At December 31, 2023, approximately 2.8 million PSUs at target were outstanding.

PSU Awards - Fair Value on Award Date

	2023	2022	2021
MS Average ROTCE/ Relative ROTCE[1]	**$ 85.76**	$ 100.12	$ 74.87
MS Relative TSR	**—**	102.17	83.70

1. Weighted average price on award date

The MS Relative TSR fair values on the award date were estimated using a Monte Carlo simulation and the following assumptions.

Monte Carlo Simulation Assumptions

	Risk-Free Interest Rate	Expected Stock Price Volatility	Correlation Coefficient
Award year			
2022	1.3 %	38.9 %	0.91
2021	0.2 %	39.0 %	0.92

The risk-free interest rate was determined based on the yields available on U.S. Treasury zero-coupon issues. The expected stock price volatility was determined using historical volatility. The correlation coefficient was developed based on historical price data of the Firm and the S&P 500 Financials Sector Index. The model uses an expected dividend yield equivalent to reinvesting dividends.

Deferred Cash-Based Compensation Plans

DCP generally provide a return to the plan participants based upon the performance of each participant's referenced investments.

Deferred Cash-Based Compensation Expense

$ in millions	2023	2022	2021
Deferred cash-based awards	**$ 693**	$ 761	$ 810
Return on referenced investments	**668**	(716)	526
Total	**$ 1,361**	$ 45	$ 1,336
Retirement-eligible awards[1]	**$ 259**	$ 264	$ 253

1. Total expense includes deferred cash-based compensation anticipated to be awarded in January of the following year that does not contain a future service requirement.

Carried Interest Compensation

The Firm generally recognizes compensation expense for any portion of carried interest (both realized and unrealized) that is allocated to employees.

Carried Interest Compensation Expense

$ in millions	2023	2022	2021
Expense	**$ 44**	$ 225	$ 346

20. Employee Benefit Plans

Pension Plans

Net Periodic Benefit Expense (Income)

	Pension Plans		
$ in millions	**2023**	2022	2021
Service cost, benefits earned during the period	**$ 20**	$ 19	$ 19
Interest cost on projected benefit obligation	**140**	111	104
Expected return on plan assets	**(99)**	(56)	(48)
Net amortization of prior service cost	**1**	1	1
Amortization of net gains and losses	**(9)**	25	34
Plan settlements	**$ 2**	$ —	$ —
Net periodic benefit expense	**$ 55**	$ 100	$ 110

Certain current and former U.S. employees of the Firm and its U.S. affiliates who were hired before July 1, 2007 are covered by the U.S. pension plan, a non-contributory defined benefit pension plan that is qualified under Section 401(a) of the Internal Revenue Code ("U.S. Qualified Plan"). The U.S. Qualified Plan has ceased future benefit accruals.

Unfunded supplementary plans ("Supplemental Plans") cover certain executives. Liabilities for benefits payable under the Supplemental Plans are accrued by the Firm and are funded when paid. The Morgan Stanley Supplemental Executive Retirement and Excess Plan ("SEREP"), a non-contributory defined benefit plan that is not qualified under Section 401(a) of the Internal Revenue Code, has ceased future benefit accruals.

Certain of the Firm's non-U.S. subsidiaries also have defined benefit pension plans covering their eligible current and former employees.

The Firm's pension plans generally provide pension benefits that are based on each employee's years of credited service and on compensation levels specified in the plans.

Rollforward of Pre-tax AOCI

	Pension Plans		
$ in millions	**2023**	2022	2021
Beginning balance	**$ (716)**	$ (768)	$ (691)
Net gain (loss)	**(100)**	26	(112)
Amortization of prior service cost	**1**	1	1
Amortization of net gains and losses	**(9)**	25	34
Plan settlements and curtailments	**3**	—	—
Changes recognized in OCI	**(105)**	52	(77)
Ending balance	**$ (821)**	$ (716)	$ (768)

The Firm generally amortizes into net periodic benefit expense (income) the unrecognized net gains and losses exceeding 10% of the greater of the projected benefit obligation or the market-related value of plan assets. The U.S. pension plans amortize the unrecognized net gains and losses over the average life expectancy of participants. The remaining plans generally amortize the unrecognized net gains and losses and prior service credit over the average remaining service period of active participants.

Weighted Average Assumptions Used to Determine Net Periodic Benefit Expense (Income)

	Pension Plans		
	2023	2022	2021
Discount rate	**4.93 %**	2.80 %	2.43 %
Expected long-term rate of return on plan assets	**3.54 %**	1.71 %	1.42 %

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

Benefit Obligation and Funded Status

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

	Pension Plans	
$ in millions	**2023**	2022
Rollforward of projected benefit obligation		
Benefit obligation at beginning of year	**$ 2,907**	$ 4,081
Service cost	**20**	19
Interest cost	**140**	111
Actuarial (gain) loss[1]	**79**	(1,064)
Plan settlements	**(13)**	(2)
Benefits paid	**(164)**	(196)
Other[2]	**6**	(42)
Projected benefit obligation at end of year	**$ 2,975**	$ 2,907
Rollforward of fair value of plan assets		
Fair value of plan assets at beginning of year	**$ 2,416**	$ 3,605
Actual return on plan assets	**78**	(982)
Employer contributions	**89**	37
Benefits paid	**(164)**	(196)
Plan settlements	**(13)**	(2)
Other[2]	**16**	(46)
Fair value of plan assets at end of year	**$ 2,422**	$ 2,416
Funded (unfunded) status	**$ (553)**	$ (491)
Amounts recognized in the balance sheet		
Assets	**$ 84**	$ 75
Liabilities	**(637)**	(566)
Net amount recognized	**$ (553)**	$ (491)

1. Primarily reflects the impact of year-over-year discount rate fluctuations.
2. Includes the impact of foreign currency exchange rate changes and plan curtailments.

Accumulated Benefit Obligation

$ in millions	**At December 31, 2023**	At December 31, 2022
Pension plans	**$ 2,956**	$ 2,891

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

$ in millions	**At December 31, 2023**	At December 31, 2022
Projected benefit obligation	**$ 2,821**	$ 2,746
Accumulated benefit obligation	**2,803**	2,731
Fair value of plan assets	**2,184**	2,180

The pension plans included in the table above may differ based on their funding status as of December 31 of each year.

Weighted Average Assumptions Used to Determine Projected Benefit Obligation

	Pension Plans	
	At December 31, 2023	At December 31, 2022
Discount rate	**4.75 %**	4.93 %

The discount rates used to determine the benefit obligation were selected by the Firm, in consultation with its independent actuary. The U.S. pension plans use a pension discount yield curve based on the characteristics of the plans, each determined independently. The pension discount yield curve represents spot discount yields based on duration implicit in a representative broad-based Aa-rated corporate bond universe of high-quality fixed income investments. For all non-U.S. pension plans, the assumed discount rates are based on the nature of liabilities, local economic environments and available bond indices.

Plan Assets

Fair Value of Plan Assets

	At December 31, 2023			
$ in millions	Level 1	Level 2	Level 3	Total
Assets				
Cash and cash equivalents	**$ 6**	**$ —**	**$ —**	**$ 6**
U.S. government and agency securities	**1,800**	**230**	**—**	**2,030**
Corporate and other debt—CDO	**—**	**—**	**—**	**—**
Derivative contracts	**—**	**3**	**—**	**3**
Other investments	**—**	**—**	**71**	**71**
Other receivables[1]	**1**	**15**	**—**	**16**
Total	**$ 1,807**	**$ 248**	**$ 71**	**$ 2,126**
Assets Measured at NAV				
Commingled trust funds:				
Money market				**64**
Foreign funds:				
Fixed income				**62**
Liquidity				**171**
Targeted cash flow				**14**
Total				**$ 311**
Liabilities				
Other payables[1]	**(1)**	**(14)**	**—**	**(15)**
Total liabilities	**$ (1)**	**$ (14)**	**$ —**	**$ (15)**
Fair value of plan assets				**$ 2,422**

	At December 31, 2022			
$ in millions	Level 1	Level 2	Level 3	Total
Assets				
Cash and cash equivalents	$ 4	$ —	$ —	$ 4
U.S. government and agency securities	1,788	267	—	2,055
Corporate and other debt—CDO	—	—	—	—
Derivative contracts	—	(2)	—	(2)
Other investments	—	—	64	64
Other receivables[1]	—	21	—	21
Total	$ 1,792	$ 286	$ 64	$ 2,142
Assets Measured at NAV				
Commingled trust funds:				
Money market				44
Foreign funds:				
Fixed income				55
Liquidity				20
Targeted cash flow				158
Total				$ 277
Liabilities				
Other payables[1]	—	(3)	—	(3)
Total liabilities	$ —	$ (3)	$ —	$ (3)
Fair value of plan assets				$ 2,416

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

Rollforward of Level 3 Plan Assets

$ in millions	**2023**	2022
Balance at beginning of period	$ 64	$ 65
Realized and unrealized gains	**2**	—
Purchases, sales and settlements, net	**5**	(1)
Balance at end of period	**$ 71**	$ 64

There were no transfers between levels during 2023 and 2022.

The U.S. Qualified Plan assets represent 87% and 88% of the Firm's total pension plan assets at December 31, 2023 and December 2022, respectively. The U.S. Qualified Plan uses a combination of active and risk-controlled fixed income investment strategies. The fixed income asset allocation consists primarily of fixed income securities and related derivative instruments designed to approximate the expected cash flows of the plan's liabilities to help reduce plan exposure to interest rate variation and to better align assets with the obligation. The longer-duration fixed income allocation is expected to help protect the plan's funded status and maintain the stability of plan contributions over the long run. The investment portfolio performance is assessed by comparing actual investment performance with changes in the estimated present value of the U.S. Qualified Plan's benefit obligation.

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

As a fundamental operating principle, any restrictions on the underlying assets apply to the respective derivative product. This includes percentage allocations and credit quality. Derivatives are used solely for the purpose of enhancing

investment returns in the underlying assets and not to circumvent portfolio restrictions.

Plan assets are measured at fair value using valuation techniques that are consistent with the valuation techniques applied to the Firm's major categories of assets and liabilities as described in Notes 2 and 4. OTC derivative contracts consist of investments in interest rate swaps and total return swaps. Other investments consist of insurance contracts held by non-U.S.-based plans. The insurance contracts are valued based on the premium reserve of the insurer for a guarantee that the insurer has given to the employee benefit plan that approximates fair value. The insurance contracts are categorized in Level 3 of the fair value hierarchy.

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

Some non-U.S.-based plans hold foreign funds that consist of investments in fixed income funds and liquidity funds. Fixed income funds are designed to provide a series of fixed annual cash flows achieved by investing in government and corporate bonds. Liquidity funds place a high priority on capital preservation, stable value and a high liquidity of assets. Foreign funds are readily redeemable at NAV.

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

Expected Contributions

The Firm's policy is to fund at least the amount sufficient to meet minimum funding requirements under applicable employee benefit and tax laws. At December 31, 2023, the Firm expected to contribute approximately $40 million to its pension plans in 2024 based upon the plans' current funded status and expected asset return assumptions for 2024.

Expected Future Benefit Payments

	At December 31, 2023
$ in millions	Pension Plans
2024	**$ 154**
2025	**160**
2026	**167**
2027	**174**
2028	**180**
2029-2033	**967**

401(k) Plans

$ in millions	**2023**	2022	2021
Expense	**$ 397**	$ 355	$ 357

U.S. employees meeting certain eligibility requirements may participate in the Firm's 401(k) plan.

Eligible employees receive discretionary 401(k) matching cash contributions as determined annually by the Firm. The Firm generally matched eligible employee contributions up to the IRS limit at 4%, or 5% up to a certain compensation level, in 2023 and 2022. Eligible employees with eligible pay less than or equal to $100,000 also received a fixed contribution equal to 2% of eligible pay. Contributions are invested among available funds according to each participant's investment direction and are included in the Firm's 401(k) expense.

Non-U.S. Defined Contribution Pension Plans

$ in millions	**2023**	2022	2021
Expense	**$ 173**	$ 163	$ 149

The Firm maintains separate defined contribution pension plans that cover eligible employees of certain non-U.S. subsidiaries. Under such plans, contributions are generally determined based on a fixed rate of base salary with certain vesting requirements.

21. Income Taxes

Components of Provision for Income Taxes

$ in millions	**2023**	2022	2021
Current			
U.S.:			
Federal	**$ 1,190**	$ 2,518	$ 2,554
State and local	**542**	442	475
Non-U.S.:			
Brazil[1]	**437**	24	197
U.K.	**267**	405	551
Japan	**139**	105	105
Hong Kong	**39**	29	192
Other[2]	**432**	236	470
Total	**$ 3,046**	$ 3,759	$ 4,544
Deferred			
U.S.:			
Federal	**$ (295)**	$ (803)	$ (11)
State and local	**(59)**	(142)	33
Non-U.S.:			
Brazil[1]	**(43)**	25	38
U.K.	**12**	55	(37)
Japan	**(13)**	20	4
Hong Kong	**(2)**	(1)	(9)
Other[2]	**(63)**	(3)	(14)
Total	**$ (463)**	$ (849)	$ 4
Provision for income taxes	**$ 2,583**	$ 2,910	$ 4,548

1. In 2023, Brazil was presented separately for the first time. The prior period amounts for Other have been disaggregated to exclude Brazil to align with the current presentation.
2. Other Non-U.S. tax provisions for 2023, 2022 and 2021 primarily include, Singapore and Germany.

Reconciliation of the U.S. Federal Statutory Income Tax Rate to the Effective Income Tax Rate

	2023	2022	2021
U.S. federal statutory income tax rate	**21.0 %**	21.0 %	21.0 %
U.S. state and local income taxes, net of U.S. federal income tax benefits	**3.4**	1.8	2.1
Domestic tax credits and tax exempt income	**(1.3)**	(0.9)	(0.6)
Non-U.S. earnings	**1.9**	0.6	1.3
Employee share-based awards	**(1.5)**	(1.7)	(0.6)
Non-taxable income[1]	**(2.3)**	(0.8)	(0.4)
Other	**0.7**	0.7	0.3
Effective income tax rate	**21.9 %**	20.7 %	23.1 %

1. In 2023, Non-taxable income was presented separately for the first time. The prior period amounts for Non-U.S. earnings and Other have been disaggregated to exclude Non-taxable income to align with the current presentation.

Deferred Tax Assets and Liabilities

$ in millions	**At December 31, 2023**	At December 31, 2022
Gross deferred tax assets		
Net operating loss and tax credit carryforwards	**$ 255**	$ 288
Employee compensation and benefit plans	**2,636**	2,487
Allowance for credit losses and other reserves	**755**	595
Valuation of net trading inventory, investments and receivables	**1,897**	1,743
Other	**78**	35
Total deferred tax assets	**5,621**	5,148
Less: Deferred tax assets valuation allowance	**211**	205
Deferred tax assets after valuation allowance	**$ 5,410**	$ 4,943
Gross deferred tax liabilities		
Fixed assets	**772**	807
Intangibles and goodwill	**2,003**	2,019
Total deferred tax liabilities	**$ 2,775**	$ 2,826
Net deferred tax assets	**$ 2,635**	$ 2,117

Deferred income taxes reflect the net tax effects of temporary differences between the financial reporting and tax bases of assets and liabilities and are measured using the enacted tax rates and laws that will be in effect when such differences are expected to reverse.

The Firm believes the recognized net deferred tax assets (after valuation allowance) at December 31, 2023 are more likely than not to be realized based on expectations as to future taxable income in the jurisdictions in which it operates.

The earnings of certain foreign subsidiaries and affiliates are indefinitely reinvested due to regulatory and other capital requirements in foreign jurisdictions. As of December 31, 2023 and December 31, 2022, the unrecognized deferred tax liability attributable to indefinitely reinvested earnings is $302 million and $429 million, respectively.

Rollforward of Unrecognized Tax Benefits

$ in millions	**2023**	2022	2021
Balance at beginning of period	$ 1,129	$ 971	$ 755
Increases based on tax positions related to the current period	**147**	256	201
Increases based on tax positions related to prior periods	**141**	64	74
Decreases based on tax positions related to prior periods	**(73)**	(134)	(37)
Decreases related to settlements with taxing authorities	**(79)**	(6)	(10)
Decreases related to lapse of statute of limitations	**(21)**	(22)	(12)
Balance at end of period	**$ 1,244**	$ 1,129	$ 971
Net unrecognized tax benefits[1]	**$ 1,090**	$ 1,007	$ 860

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

It is reasonably possible that significant changes in the balance of unrecognized tax benefits may occur within the next 12 months. At this time, however, it is not possible to reasonably estimate the expected change to the total amount

of unrecognized tax benefits and the impact on the Firm's effective tax rate over the next 12 months.

Interest Expense (Benefit) Associated with Unrecognized Tax Benefits, Net of Federal and State Income Tax Benefits

$ in millions	**2023**	2022	2021
Recognized in income statement	**$ 65**	$ 39	$ 14
Accrued at end of period	**237**	175	142

Interest and penalties related to unrecognized tax benefits are recognized as a component of the provision for income taxes. Penalties related to unrecognized tax benefits for the years mentioned above were immaterial.

Earliest Tax Year Subject to Examination in Major Tax Jurisdictions

Jurisdiction	Tax Year
U.S.	2017
New York State and New York City	2010
U.K.	2014
Japan	2019
Hong Kong	2017

The Firm is routinely under examination by the IRS and other tax authorities in certain countries, such as Japan and the U.K., and in states and localities in which it has significant business operations, such as New York.

The Firm believes that the resolution of these tax examinations will not have a material effect on the annual financial statements, although a resolution could have a material impact in the income statement and on the effective tax rate for any period in which such resolutions occur.

22. Segment, Geographic and Revenue Information

The Firm structures its segments primarily based upon the nature of the financial products and services provided to customers and its management organization. The Firm provides a wide range of financial products and services to its customers in each of its business segments: Institutional Securities, Wealth Management and Investment Management. For a further discussion of the business segments, see Note 1.

Revenues and expenses directly associated with each respective business segment are included in determining its operating results. Other revenues and expenses that are not directly attributable to a particular business segment are generally allocated based on each business segment's respective net revenues, non-interest expenses or other relevant measures.

As a result of revenues and expenses from transactions with other operating segments being treated as transactions with external parties for purposes of segment disclosures, the Firm includes an Intersegment Eliminations category to reconcile the business segment results to the consolidated results.

Selected Financial Information by Business Segment

	2023				
$ in millions	IS	WM	IM	I/E	Total
Investment banking	**$ 4,578**	**$ 454**	**$ —**	**$ (84)**	**$ 4,948**
Trading	**14,468**	**823**	**(59)**	**31**	**15,263**
Investments	**177**	**62**	**334**	**—**	**573**
Commissions and fees[1]	**2,540**	**2,279**	**—**	**(282)**	**4,537**
Asset management[1, 2]	**596**	**14,019**	**5,231**	**(229)**	**19,617**
Other	**480**	**513**	**(7)**	**(11)**	**975**
Total non-interest revenues	**22,839**	**18,150**	**5,499**	**(575)**	**45,913**
Interest income	**36,815**	**15,015**	**135**	**(1,684)**	**50,281**
Interest expense	**36,594**	**6,897**	**264**	**(1,704)**	**42,051**
Net interest	**221**	**8,118**	**(129)**	**20**	**8,230**
Net revenues	**$ 23,060**	**$ 26,268**	**$ 5,370**	**$ (555)**	**$ 54,143**
Provision for credit losses	**$ 401**	**$ 131**	**$ —**	**$ —**	**$ 532**
Compensation and benefits	**8,369**	**13,972**	**2,217**	**—**	**24,558**
Non-compensation expenses	**9,814**	**5,635**	**2,311**	**(520)**	**17,240**
Total non-interest expenses	**$ 18,183**	**$ 19,607**	**$ 4,528**	**$ (520)**	**$ 41,798**
Income before provision for income taxes	**$ 4,476**	**$ 6,530**	**$ 842**	**$ (35)**	**$ 11,813**
Provision for income taxes	**884**	**1,508**	**199**	**(8)**	**2,583**
Net income	**3,592**	**5,022**	**643**	**(27)**	**9,230**
Net income applicable to noncontrolling interests	**139**	**—**	**4**	**—**	**143**
Net income applicable to Morgan Stanley	**$ 3,453**	**$ 5,022**	**$ 639**	**$ (27)**	**$ 9,087**

	2022				
$ in millions	IS	WM	IM	I/E	Total
Investment banking	$ 5,235	$ 438	$ —	$ (74)	$ 5,599
Trading	14,318	(432)	(11)	53	13,928
Investments	(156)	51	120	—	15
Commissions and fees[1]	2,756	2,467	—	(285)	4,938
Asset management[1, 2]	580	13,872	5,332	(206)	19,578
Other	(295)	592	(2)	(12)	283
Total non-interest revenues	22,438	16,988	5,439	(524)	44,341
Interest income	13,276	9,579	56	(1,316)	21,595
Interest expense	11,321	2,150	120	(1,323)	12,268
Net interest	1,955	7,429	(64)	7	9,327
Net revenues	$ 24,393	$ 24,417	$ 5,375	$ (517)	$ 53,668
Provision for credit losses	$ 211	$ 69	$ —	$ —	$ 280
Compensation and benefits	8,246	12,534	2,273	—	23,053
Non-compensation expenses	9,221	5,231	2,295	(501)	16,246
Total non-interest expenses	$ 17,467	$ 17,765	$ 4,568	$ (501)	$ 39,299
Income before provision for income taxes	$ 6,715	$ 6,583	$ 807	$ (16)	$ 14,089
Provision for income taxes	1,308	1,444	162	(4)	2,910
Net income	5,407	5,139	645	(12)	11,179
Net income applicable to noncontrolling interests	165	—	(15)	—	150
Net income applicable to Morgan Stanley	$ 5,242	$ 5,139	$ 660	$ (12)	$ 11,029

	2021				
$ in millions	IS	WM	IM	I/E	Total
Investment banking	$ 10,272	$ 822	$ —	$ (100)	$ 10,994
Trading	12,353	418	(53)	92	12,810
Investments	607	48	721	—	1,376
Commissions and fees[1]	2,878	3,019	1	(377)	5,521
Asset management[1,2]	583	13,966	5,576	(158)	19,967
Other	495	577	(20)	(10)	1,042
Total non-interest revenues	27,188	18,850	6,225	(553)	51,710
Interest income	3,752	5,821	31	(193)	9,411
Interest expense	1,107	428	36	(205)	1,366
Net interest	2,645	5,393	(5)	12	8,045
Net revenues	$ 29,833	$ 24,243	$ 6,220	$ (541)	$ 59,755
Provision for credit losses	$ (7)	$ 11	$ —	$ —	$ 4
Compensation and benefits	9,165	13,090	2,373	—	24,628
Non-compensation expenses	8,861	4,961	2,169	(536)	15,455
Total non-interest expenses	$ 18,026	$ 18,051	$ 4,542	$ (536)	$ 40,083
Income before provision for income taxes	$ 11,814	$ 6,181	$ 1,678	$ (5)	$ 19,668
Provision for income taxes	2,746	1,447	356	(1)	4,548
Net income	9,068	4,734	1,322	(4)	15,120
Net income applicable to noncontrolling interests	111	—	(25)	—	86
Net income applicable to Morgan Stanley	$ 8,957	$ 4,734	$ 1,347	$ (4)	$ 15,034

1. Substantially all revenues are from contracts with customers.
2. Includes certain fees that may relate to services performed in prior periods.

Detail of Investment Banking Revenues

$ in millions	**2023**	2022	2021
Institutional Securities—Advisory	**$ 2,244**	$ 2,946	$ 3,487
Institutional Securities—Underwriting	**2,334**	2,289	6,785
Firm Investment banking revenues from contracts with customers	**91 %**	90 %	91 %

Trading Revenues by Product Type

$ in millions	**2023**	2022	2021
Interest rate	**$ 4,646**	$ 2,808	$ 740
Foreign exchange	**1,054**	1,585	1,008
Equity[1]	**8,929**	7,515	7,331
Commodity and other	**1,624**	1,466	2,599
Credit	**(990)**	554	1,132
Total	**$ 15,263**	$ 13,928	$ 12,810

1. Dividend income is included within equity contracts.

The previous table summarizes realized and unrealized gains and losses primarily related to the Firm's Trading assets and liabilities, from derivative and non-derivative financial instruments, included in Trading revenues in the income statement. The Firm generally utilizes financial instruments across a variety of product types in connection with its market-making and related risk management strategies. The trading revenues presented in the table are not representative of the manner in which the Firm manages its business activities and are prepared in a manner similar to the presentation of trading revenues for regulatory reporting purposes.

Investment Management Investments Revenues—Net Cumulative Unrealized Carried Interest

$ in millions	**At December 31, 2023**	At December 31, 2022
Net cumulative unrealized performance-based fees at risk of reversing	**$ 787**	$ 819

The Firm's portion of net cumulative performance-based fees in the form of unrealized carried interest, for which the Firm is not obligated to pay compensation, is at risk of reversing when the return in certain funds fall below specified performance targets. See Note 14 for information regarding general partner guarantees, which include potential obligations to return performance fee distributions previously received.

Investment Management Asset Management Revenues—Reduction of Fees Due to Fee Waivers

$ in millions	**2023**	2022	2021
Fee waivers	**$ 93**	$ 211	$ 516

The Firm waives a portion of its fees in the Investment Management business segment from certain registered money market funds that comply with the requirements of Rule 2a-7 of the Investment Company Act of 1940.

Certain Other Fee Waivers

Separately, the Firm's employees, including its senior officers, may participate on the same terms and conditions as other investors in certain funds that the Firm sponsors primarily for client investment, and the Firm may waive or lower applicable fees and charges for its employees.

Other Expenses—Transaction Taxes

$ in millions	**2023**	2022	2021
Transaction taxes	**$ 866**	$ 910	$ 969

Transaction taxes are composed of securities transaction taxes and stamp duties, which are levied on the sale or purchase of securities listed on recognized stock exchanges in certain markets. These taxes are imposed mainly on trades of equity securities in Asia and EMEA. Similar transaction taxes are levied on trades of listed derivative instruments in certain countries.

Net Revenues by Region

$ in millions	2023	2022	2021
Americas	**$ 41,651**	$ 40,117	$ 44,605
EMEA	**6,058**	6,811	7,699
Asia	**6,434**	6,740	7,451
Total	**$ 54,143**	$ 53,668	$ 59,755

Income before Provision for Income Taxes

$ in millions	2023	2022	2021
U.S.	**$ 8,334**	$ 9,363	$ 14,082
Non-U.S.[1]	**3,479**	4,726	5,586
Total	**$ 11,813**	$ 14,089	$ 19,668

1. Non-U.S. income is defined as income generated from operations located outside the U.S.

The Firm operates in both U.S. and non-U.S. markets. The Firm's non-U.S. business activities are principally conducted and managed through EMEA and Asia locations. The net revenues disclosed in the previous table reflect the regional view of the Firm's consolidated net revenues on a managed basis, based on the following methodology:

Institutional Securities: Client location for advisory and equity underwriting, syndicate desk location for debt underwriting, trading desk location for sales and trading.

Wealth Management: Americas, where representatives operate.

Investment Management: Client location, except certain closed-end funds, which are based on asset location.

Revenues Recognized from Prior Services

$ in millions	2023	2022	2021
Non-interest revenues	**$ 1,778**	$ 2,538	$ 2,391

The previous table includes revenues from contracts with customers recognized where some or all services were performed in prior periods. These revenues primarily include investment banking advisory fees.

Receivables from Contracts with Customers

$ in millions	At December 31, 2023	At December 31, 2022
Customer and other receivables	**$ 2,339**	$ 2,577

Receivables from contracts with customers, which are included within Customer and other receivables in the balance sheet, arise when the Firm has both recorded revenues and the right per the contract to bill the customer.

Assets by Business Segment

$ in millions	At December 31, 2023	At December 31, 2022
Institutional Securities	**$ 810,506**	$ 789,837
Wealth Management	**365,168**	373,305
Investment Management	**18,019**	17,089
Total[1]	**$ 1,193,693**	$ 1,180,231

1. Parent assets have been fully allocated to the business segments.

Total Assets by Region

$ in millions	At December 31, 2023	At December 31, 2022
Americas	**$ 832,714**	$ 853,228
EMEA	**218,923**	197,397
Asia	**142,056**	129,606
Total	**$ 1,193,693**	$ 1,180,231

23. Parent Company

Parent Company Only—Condensed Income Statement and Comprehensive Income Statement

$ in millions	2023	2022	2021
Revenues			
Dividends from bank subsidiaries	**$ 5,770**	$ 2,875	$ —
Dividends from BHC and non-bank subsidiaries	**6,812**	8,661	8,898
Total dividends from subsidiaries	**12,582**	11,536	8,898
Trading	**(775)**	(1,143)	229
Other	**(31)**	170	4
Total non-interest revenues	**11,776**	10,563	9,131
Interest income	**13,596**	5,805	2,648
Interest expense	**13,618**	6,162	2,822
Net interest	**(22)**	(357)	(174)
Net revenues	**11,754**	10,206	8,957
Non-interest expenses	**287**	252	443
Income before income taxes	**11,467**	9,954	8,514
Provision for (benefit from) income taxes	**(520)**	(456)	(203)
Net income before undistributed gain of subsidiaries	**11,987**	10,410	8,717
Undistributed (loss) gain of subsidiaries	**(2,900)**	619	6,317
Net income	**9,087**	11,029	15,034
Other comprehensive income (loss), net of tax:			
Foreign currency translation adjustments	**51**	(202)	(207)
Change in net unrealized gains (losses) on available-for-sale securities	**1,098**	(4,437)	(1,542)
Pensions and other	**(87)**	43	(53)
Change in net debt valuation adjustment	**(1,250)**	1,449	662
Net change in cash flow hedges	**20**	(4)	—
Comprehensive income	**$ 8,919**	$ 7,878	$ 13,894
Net income	**$ 9,087**	$ 11,029	$ 15,034
Preferred stock dividends and other	**557**	489	468
Earnings applicable to Morgan Stanley common shareholders	**$ 8,530**	$ 10,540	$ 14,566

Parent Company Only—Condensed Balance Sheet

$ in millions, except share data	At December 31, 2023	At December 31, 2022
Assets		
Cash and cash equivalents	**$ 16,881**	$ 25,333
Trading assets at fair value	**4,160**	10,391
Investment securities:		
Available-for-sale at fair value (amortized cost of **$22,164** and $18,488; **$10,179** and $14,278 were pledged to various parties)	**21,515**	17,409
Held-to-maturity (fair value of **$14,093** and $17,698; **$10,010** and $12,948 were pledged to various parties)	**15,284**	19,267
Securities purchased under agreement to resell to affiliates	**24,693**	22,987
Advances to subsidiaries:		
Bank and BHC	**38,550**	76,232
Non-bank	**139,250**	93,593
Equity investments in subsidiaries:		
Bank and BHC	**58,949**	59,676
Non-bank	**50,291**	50,366
Other assets	**2,595**	2,071
Total assets	**$ 372,168**	$ 377,325
Liabilities		
Trading liabilities at fair value	**$ 44**	$ 262
Securities sold under agreements to repurchase from affiliates	**20,293**	28,682
Payables to and advances from subsidiaries	**73,370**	76,170
Other liabilities and accrued expenses	**2,539**	2,282
Borrowings (includes **$13,404** and $12,122 at fair value)	**176,884**	169,788
Total liabilities	**273,130**	277,184
Commitments and contingent liabilities (see Note 14)		
Equity		
Preferred stock	**8,750**	8,750
Common stock, $ 0.01 par value:		
Shares authorized: **3,500,000,000**; Shares issued: **2,038,893,979**; Shares outstanding: **1,626,828,437** and 1,675,487,409	**20**	20
Additional paid-in capital	**29,832**	29,339
Retained earnings	**97,996**	94,862
Employee stock trusts	**5,314**	4,881
Accumulated other comprehensive income (loss)	**(6,421)**	(6,253)
Common stock held in treasury at cost, $ 0.01 par value (**412,065,542** and 363,406,570 shares)	**(31,139)**	(26,577)
Common stock issued to employee stock trusts	**(5,314)**	(4,881)
Total shareholders' equity	**99,038**	100,141
Total liabilities and equity	**$ 372,168**	$ 377,325

Parent Company Only—Condensed Cash Flow Statement

$ in millions	2023	2022	2021
Net cash provided by (used for) operating activities	**$ 24,914**	$ (13,064)	$ 4,257
Cash flows from investing activities			
Proceeds from (payments for):			
AFS securities:			
Purchases	**(9,362)**	(1,855)	(6,275)
Proceeds from sales	**300**	676	2,611
Proceeds from paydowns and maturities	**5,479**	3,814	1,940
HTM securities:			
Purchases	**—**	(4,228)	(3,022)
Proceeds from paydowns and maturities	**4,003**	3,434	3,696
Securities purchased under agreements to resell with affiliates	**(1,706)**	(1,871)	13,581
Securities sold under agreements to repurchase with affiliates	**(8,389)**	11,755	(7,422)
Advances to and investments in subsidiaries	**(10,097)**	(10,574)	(17,083)
Net cash provided by (used for) investing activities	**(19,772)**	1,151	(11,974)
Cash flows from financing activities			
Proceeds from:			
Issuance of preferred stock, net of issuance costs	**—**	994	1,275
Issuance of Borrowings	**23,783**	34,431	42,098
Payments for:			
Borrowings	**(22,554)**	(14,441)	(28,592)
Repurchases of common stock and employee tax withholdings	**(6,178)**	(10,871)	(12,075)
Cash dividends	**(5,763)**	(5,401)	(4,171)
Net change in advances from subsidiaries	**(3,029)**	16,707	17,042
Net cash provided by (used for) financing activities	**(13,741)**	21,419	15,577
Effect of exchange rate changes on cash and cash equivalents	**147**	485	380
Net increase (decrease) in cash and cash equivalents	**(8,452)**	9,991	8,240
Cash and cash equivalents, at beginning of period	**25,333**	15,342	7,102
Cash and cash equivalents, at end of period	**$ 16,881**	$ 25,333	$ 15,342
Cash and cash equivalents:			
Cash and due from banks	**$ 107**	$ 75	$ 100
Deposits with bank subsidiaries	**16,774**	25,258	15,242
Cash and cash equivalents, at end of period	**$ 16,881**	$ 25,333	$ 15,342
Restricted cash	**$ 1,086**	$ 836	$ 441
Supplemental Disclosure of Cash Flow Information			
Cash payments for:			
Interest	**$ 14,437**	$ 5,955	$ 2,970
Income taxes, net of refunds[1]	**599**	3,132	2,775

1. Represents total payments, net of refunds, made to various tax authorities and includes taxes paid on behalf of certain subsidiaries that are subsequently settled between the Parent Company and these subsidiaries. The settlements received from subsidiaries were $1.6 billion, $2.6 billion and $3.0 billion for 2023, 2022 and 2021, respectively.

For information on the Parent Company's preferred stock, see Note 17.

Parent Company's Borrowings with Original Maturities Greater than One Year

$ in millions	**At December 31, 2023**	At December 31, 2022
Senior	**$ 164,514**	$ 157,585
Subordinated	**12,370**	12,203
Total	**$ 176,884**	$ 169,788

Transactions with Subsidiaries

The Parent Company has transactions with its consolidated subsidiaries determined on an agreed-upon basis and has guaranteed certain unsecured lines of credit and contractual obligations on certain of its consolidated subsidiaries.

Guarantees

In the normal course of its business, the Parent Company guarantees certain of its subsidiaries' obligations on a transaction-by-transaction basis under various financial arrangements. The Parent Company has issued guarantees on behalf of its subsidiaries to various U.S. and non-U.S. exchanges and clearinghouses that trade and clear securities and/or futures contracts. Under these guarantee arrangements, the Parent Company may be required to pay the financial obligations of its subsidiaries related to business transacted on or with the exchanges and clearinghouses in the event of a subsidiary's default on its obligations to the exchange or the clearinghouse. The Parent Company has not recorded any contingent liability in its condensed financial statements for these arrangements and believes that any potential requirements to make payments under these arrangements are remote.

The Parent Company also, in the normal course of business, provides standard indemnities to counterparties on behalf of its subsidiaries for taxes, including U.S. and foreign withholding taxes, on interest and other payments made on derivatives, securities and stock lending transactions, and certain annuity products, and may also provide indemnities to or on behalf of affiliates from time to time for other arrangements. These indemnity payments could be required, as applicable, based on a change in the tax laws, change in interpretation of applicable tax rulings or claims arising from contractual relationships between affiliates. Certain contracts contain provisions that enable the Parent Company to terminate the agreement upon the occurrence of such events. The maximum potential amount of future payments that the Parent Company could be required to make under these indemnifications cannot be estimated. The Parent Company has not recorded any contingent liability in its condensed financial statements for these indemnifications and believes that the occurrence of any events that would trigger payments under these contracts is remote.

Guarantees of Debt Instruments and Warrants Issued by Subsidiaries

$ in millions	**At December 31, 2023**	At December 31, 2022
Aggregate balance	**$ 60,942**	$ 51,136

Guarantees under Subsidiary Lease Obligations

$ in millions	**At December 31, 2023**	At December 31, 2022
Aggregate balance[1]	**$ 632**	$ 615

1. Amounts primarily relate to the U.K.

Finance Subsidiary

The Parent Company fully and unconditionally guarantees the securities issued by Morgan Stanley Finance LLC, a wholly owned finance subsidiary. No other subsidiary of the Parent Company guarantees these securities.

Resolution and Recovery Planning

As indicated in the Firm's 2023 resolution plan submitted to the Federal Reserve and the FDIC, the Parent Company has entered into an amended and restated support agreement with its material entities (including its wholly owned, direct subsidiary Morgan Stanley Holdings LLC (the "Funding IHC")) and certain other subsidiaries. Under the amended and restated secured support agreement, in the event of a resolution scenario, the Parent Company would be obligated to contribute all of its contributable assets to its supported entities and/or the Funding IHC. The Funding IHC would be obligated to provide capital and liquidity, as applicable, to its supported entities. The obligations of the Parent Company and the Funding IHC under the amended and restated support agreement are in most cases secured on a senior basis by the assets of the Parent Company (other than shares in subsidiaries of the Parent Company and certain other assets) and the assets of the Funding IHC.

Average Balances and Interest Rates and Net Interest Income

$ in millions	2023 Average Daily Balance	2023 Interest	2023 Average Rate	2022 Average Daily Balance	2022 Interest	2022 Average Rate
Interest earning assets						
Cash and cash equivalents[1]:						
U.S.	**$ 56,920**	**$ 2,386**	**4.2 %**	$ 57,889	$ 692	1.2 %
Non-U.S.	**48,373**	**1,022**	**2.1 %**	58,052	222	0.4 %
Investment securities[2]	**153,307**	**3,992**	**2.6 %**	167,494	3,066	1.8 %
Loans[2]	**215,628**	**12,424**	**5.8 %**	205,069	6,988	3.4 %
Securities purchased under agreements to resell[3]:						
U.S.	**47,604**	**4,714**	**9.9 %**	57,565	1,643	2.9 %
Non-U.S.	**61,766**	**3,048**	**4.9 %**	62,585	545	0.9 %
Securities borrowed[4]:						
U.S.	**115,279**	**4,794**	**4.2 %**	123,288	1,039	0.8 %
Non-U.S.	**18,514**	**397**	**2.1 %**	19,345	(19)	(0.1) %
Trading assets, net of Trading liabilities[5]:						
U.S.	**93,409**	**3,792**	**4.1 %**	74,932	2,068	2.8 %
Non-U.S.	**12,788**	**696**	**5.4 %**	14,748	416	2.8 %
Customer receivables and Other[1]:						
U.S.	**45,815**	**9,585**	**20.9 %**	56,040	3,798	6.8 %
Non-U.S.	**14,485**	**3,431**	**23.7 %**	15,891	1,137	7.2 %
Total	**$ 883,888**	**$ 50,281**	**5.7 %**	$ 912,898	$ 21,595	2.4 %
Interest bearing liabilities						
Deposits[2]	**$ 342,583**	**$ 8,216**	**2.4 %**	$ 340,741	$ 1,825	0.5 %
Borrowings[2, 6]	**238,164**	**11,437**	**4.8 %**	229,255	5,054	2.2 %
Securities sold under agreements to repurchase[7,9]:						
U.S.	**22,718**	**3,591**	**15.8 %**	21,481	1,086	5.1 %
Non-U.S.	**46,392**	**3,146**	**6.8 %**	39,631	674	1.7 %
Securities loaned[8,9]:						
U.S.	**4,244**	**67**	**1.6 %**	6,277	37	0.6 %
Non-U.S.	**9,470**	**717**	**7.6 %**	7,669	466	6.1 %
Customer payables and Other[10]:						
U.S.	**133,069**	**10,225**	**7.7 %**	143,448	1,991	1.4 %
Non-U.S.	**63,916**	**4,652**	**7.3 %**	73,291	1,135	1.5 %
Total	**$ 860,556**	**$ 42,051**	**4.9 %**	$ 861,793	$ 12,268	1.4 %
Net interest income and net interest rate spread		**$ 8,230**	**0.8 %**		$ 9,327	1.0 %

Effect of Volume and Rate Changes on Net Interest Income

$ in millions	2023 versus 2022 Increase (Decrease) Due to Change in: Volume	Rate	Net Change
Interest earning assets			
Cash and cash equivalents[1]:			
U.S.	**$ (12)**	**$ 1,706**	**$ 1,694**
Non-U.S.	**(37)**	**837**	**800**
Investment securities[2]	**(260)**	**1,186**	**926**
Loans[2]	**360**	**5,076**	**5,436**
Securities purchased under agreements to resell[3]:			
U.S.	**(284)**	**3,355**	**3,071**
Non-U.S.	**(7)**	**2,510**	**2,503**
Securities borrowed[4]:			
U.S.	**(67)**	**3,822**	**3,755**
Non-U.S.	**1**	**415**	**416**
Trading assets, net of Trading liabilities[5]:			
U.S.	**510**	**1,214**	**1,724**
Non-U.S.	**(55)**	**335**	**280**
Customer receivables and Other[1]:			
U.S.	**(693)**	**6,480**	**5,787**
Non-U.S.	**(101)**	**2,395**	**2,294**
Change in interest income	**$ (645)**	**$ 29,331**	**$ 28,686**
Interest bearing liabilities			
Deposits[2]	**$ 10**	**$ 6,381**	**$ 6,391**
Borrowings[2,6]	**196**	**6,187**	**6,383**
Securities sold under agreements to repurchase[7,9]:			
U.S.	**63**	**2,442**	**2,505**
Non-U.S.	**115**	**2,357**	**2,472**
Securities loaned[8,9]:			
U.S.	**(12)**	**42**	**30**
Non-U.S.	**109**	**142**	**251**
Customer payables and Other[10]:			
U.S.	**(144)**	**8,378**	**8,234**
Non-U.S.	**(145)**	**3,662**	**3,517**
Change in interest expense	**$ 192**	**$ 29,591**	**$ 29,783**
Change in net interest income	**$ (837)**	**$ (260)**	**$ (1,097)**

Average Balances and Interest Rates and Net Interest Income

$ in millions	2021 Average Daily Balance	2021 Interest	2021 Average Rate
Interest earning assets			
Cash and cash equivalents[1]:			
U.S.	$ 62,340	$ 44	0.1 %
Non-U.S.	52,106	(37)	(0.1) %
Investment securities[2]	182,896	2,759	1.5 %
Loans[2]	166,675	4,209	2.5 %
Securities purchased under agreements to resell[3]:			
U.S.	55,274	86	0.2 %
Non-U.S.	53,323	(267)	(0.5) %
Securities borrowed[4]:			
U.S.	99,667	(825)	(0.8) %
Non-U.S.	17,387	(192)	(1.1) %
Trading assets, net of Trading liabilities[5]:			
U.S.	77,916	1,644	2.1 %
Non-U.S.	19,559	394	2.0 %
Customer receivables and Other[1]:			
U.S.	72,665	1,365	1.9 %
Non-U.S.	21,962	231	1.1 %
Total	$ 881,770	$ 9,411	1.1 %
Interest bearing liabilities			
Deposits[2]	$ 325,500	$ 409	0.1 %
Borrowings[2,6]	224,657	2,725	1.2 %
Securities sold under agreements to repurchase[7,9]:			
U.S.	29,383	157	0.5 %
Non-U.S.	27,374	(64)	(0.2) %
Securities loaned[8,9]:			
U.S.	4,816	29	0.6 %
Non-U.S.	5,514	372	6.7 %
Customer payables and Other[10]:			
U.S.	132,899	(1,825)	(1.4) %
Non-U.S.	76,185	(437)	(0.6) %
Total	$ 826,328	$ 1,366	0.2 %
Net interest income and net interest rate spread		$ 8,045	0.9 %

Effect of Volume and Rate Changes on Net Interest Income

$ in millions	2022 versus 2021 Increase (Decrease) Due to Change in: Volume	Rate	Net Change
Interest earning assets			
Cash and cash equivalents[1]:			
U.S.	$ (3)	$ 651	$ 648
Non-U.S.	(4)	263	259
Investment securities[2]	(232)	539	307
Loans[2]	970	1,809	2,779
Securities purchased under agreements to resell[3]:			
U.S.	4	1,553	1,557
Non-U.S.	(46)	858	812
Securities borrowed[4]:			
U.S.	(196)	2,060	1,864
Non-U.S.	(22)	195	173
Trading assets, net of Trading liabilities[5]:			
U.S.	(63)	487	424
Non-U.S.	(97)	119	22
Customer receivables and Other[1]:			
U.S.	(312)	2,745	2,433
Non-U.S.	(64)	970	906
Change in interest income	$ (65)	$ 12,249	$ 12,184
Interest bearing liabilities			
Deposits[2]	$ 19	$ 1,397	$ 1,416
Borrowings[2,6]	56	2,273	2,329
Securities sold under agreements to repurchase[7,9]:			
U.S.	(42)	971	929
Non-U.S.	(29)	767	738
Securities loaned[8,9]:			
U.S.	9	(1)	8
Non-U.S.	145	(51)	94
Customer payables and Other[10]:			
U.S.	(145)	3,961	3,816
Non-U.S.	17	1,555	1,572
Change in interest expense	$ 30	$ 10,872	$ 10,902
Change in net interest income	$ (95)	$ 1,377	$ 1,282

1. In the fourth quarter of 2023, interest bearing Cash and cash equivalents and related interest were presented separately for the first time. The prior period amounts for Customer receivables and Other have been disaggregated to exclude Cash and cash equivalents to align with the current presentation.
2. Amounts include primarily U.S. balances.
3. Includes interest paid on Securities purchased under agreements to resell.
4. Includes fees paid on Securities borrowed.
5. Excludes non-interest earning assets and non-interest bearing liabilities, such as equity securities.
6. Average daily balance includes borrowings carried at fair value, but for certain borrowings, interest expense is considered part of fair value and is recorded in Trading revenues.
7. Includes interest received on Securities sold under agreements to repurchase.
8. Includes fees received on Securities loaned.
9. The annualized average rate was calculated using (a) interest expense incurred on all securities sold under agreements to repurchase and securities loaned transactions, whether or not such transactions were reported in the balance sheet and (b) net average on-balance sheet balances, which exclude certain securities-for-securities transactions.
10. Includes fees received from Equity Financing customers related to their short transactions, which can be under either margin or securities lending arrangements.

Financial Data Supplement (Unaudited)

Deposits

	Average Daily Deposits					
	2023		2022		2021	
$ in millions	Average Amount	Average Rate	Average Amount	Average Rate	Average Amount	Average Rate
Deposits[1]:						
Savings and demand	**$ 286,513**	**2.0 %**	$ 321,316	0.4 %	$ 304,664	— %
Time	**56,070**	**4.3 %**	19,425	2.7 %	20,836	1.7 %
Total	**$ 342,583**	**2.4 %**	$ 340,741	0.5 %	$ 325,500	0.1 %

1. The Firm's deposits were primarily held in U.S. offices.

Glossary of Common Terms and Acronyms

ABS	Asset-backed securities
ACL	Allowance for credit losses
AFS	Available-for-sale
AML	Anti-money laundering
AOCI	Accumulated other comprehensive income (loss)
AUM	Assets under management or supervision
Balance sheet	Consolidated balance sheet
BHC	Bank holding company
bps	Basis points; one basis point equals 1/100th of 1%
Cash flow statement	Consolidated cash flow statement
CCAR	Comprehensive Capital Analysis and Review
CCyB	Countercyclical capital buffer
CDO	Collateralized debt obligation(s), including Collateralized loan obligation(s)
CDS	Credit default swaps
CECL	Current Expected Credit Losses, as calculated under the Financial Instruments—Credit Losses accounting update
CFTC	U.S. Commodity Futures Trading Commission
CLN	Credit-linked note(s)
CLO	Collateralized loan obligation(s)
CMBS	Commercial mortgage-backed securities
CMO	Collateralized mortgage obligation(s)
CRM	Credit Risk Management Department
CTA	Cumulative foreign currency translation adjustments
DCP	Employee deferred cash-based compensation plans linked to investment performance
DCP investments	Investments associated with certain DCP
DVA	Debt valuation adjustment
EBITDA	Earnings before interest, taxes, depreciation and amortization
ELN	Equity-linked note(s)
EMEA	Europe, Middle East and Africa
EPS	Earnings per common share
E.U.	European Union
FDIC	Federal Deposit Insurance Corporation
FFELP	Federal Family Education Loan Program
FHC	Financial holding company
FICC	Fixed Income Clearing Corporation
FICO	Fair Isaac Corporation
Financial statements	Consolidated financial statements
FVA	Funding valuation adjustment
FVO	Fair value option
G-SIB	Global systemically important banks
HELOC	Home Equity Line of Credit
HFI	Held-for-investment
HFS	Held-for-sale
HQLA	High-quality liquid assets
HTM	Held-to-maturity
I/E	Intersegment eliminations
IHC	Intermediate holding company
IM	Investment Management
Income statement	Consolidated income statement
IRS	Internal Revenue Service
IS	Institutional Securities
LCR	Liquidity coverage ratio, as adopted by the U.S. banking agencies
LIBOR	London Interbank Offered Rate
LTV	Loan-to-value
M&A	Merger, acquisition and restructuring transaction
MSBNA	Morgan Stanley Bank, N.A.
MS&Co.	Morgan Stanley & Co. LLC
MSCG	Morgan Stanley Capital Group Inc.
MSCS	Morgan Stanley Capital Services LLC
MSEHSE	Morgan Stanley Europe Holdings SE
MSESE	Morgan Stanley Europe SE
MSIP	Morgan Stanley & Co. International plc
MSMS	Morgan Stanley MUFG Securities Co., Ltd.
MSPBNA	Morgan Stanley Private Bank, National Association
MSSB	Morgan Stanley Smith Barney LLC
MUFG	Mitsubishi UFJ Financial Group, Inc.
MUMSS	Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.
MWh	Megawatt hour
N/A	Not Applicable
N/M	Not Meaningful
NAV	Net asset value
Non-GAAP	Non-generally accepted accounting principles
NSFR	Net stable funding ratio, as adopted by the U.S. banking agencies
OCC	Office of the Comptroller of the Currency
OCI	Other comprehensive income (loss)
OIS	Overnight index swap
OTC	Over-the-counter
PRA	Prudential Regulation Authority
PSU	Performance-based stock unit
RMBS	Residential mortgage-backed securities
ROE	Return on average common equity
ROTCE	Return on average tangible common equity
ROU	Right-of-use
RSU	Restricted stock unit
RWA	Risk-weighted assets
SCB	Stress capital buffer
SEC	U.S. Securities and Exchange Commission
SLR	Supplementary leverage ratio
SOFR	Secured Overnight Financing Rate
S&P	Standard & Poor's
SPE	Special purpose entity
SPOE	Single point of entry
TLAC	Total loss-absorbing capacity
U.K.	United Kingdom
UPB	Unpaid principal balance
U.S.	United States of America
U.S. Bank Subsidiaries	Morgan Stanley Bank, N.A. ("MSBNA") and Morgan Stanley Private Bank, National Association ("MSPBNA")
U.S. GAAP	Accounting principles generally accepted in the United States of America
VaR	Value-at-Risk
VIE	Variable interest entity
WACC	Implied weighted average cost of capital
WM	Wealth Management

Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Controls and Procedures

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures

Under the supervision and with the participation of the Firm's management, including the Chief Executive Officer and Chief Financial Officer, the Firm conducted an evaluation of the effectiveness of the Firm's disclosure controls and procedures (as defined in Rule 13a-15(e) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")). Based on this evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Firm's disclosure controls and procedures were effective as of the end of the period covered by this annual report.

Management's Report on Internal Control Over Financial Reporting

The Firm's management is responsible for establishing and maintaining adequate internal control over financial reporting. The Firm's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America ("U.S. GAAP").

The internal control over financial reporting includes those policies and procedures that:

- Pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Firm;
- Provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. GAAP and that receipts and expenditures are being made only in accordance with authorizations of the Firm's management and directors; and
- Provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of Firm assets that could have a material effect on the Firm's financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. 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 assessed the effectiveness of the Firm's internal control over financial reporting as of December 31, 2023. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control—Integrated Framework (2013). Based on management's assessment and those criteria, management believes that the Firm maintained effective internal control over financial reporting as of December 31, 2023.

The Firm's independent registered public accounting firm has audited and issued a report on the Firm's internal control over financial reporting, which appears below.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of Morgan Stanley:

Opinion on Internal Control over Financial Reporting

We have audited the internal control over financial reporting of Morgan Stanley and subsidiaries (the "Firm") as of December 31, 2023, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). In our opinion, the Firm maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control — Integrated Framework (2013) issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the financial statements of the Firm as of and for the year ended December 31, 2023 and our report dated February 22, 2024 expressed an unqualified opinion on those financial statements.

Basis for Opinion

The Firm's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Firm's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Firm in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. 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.

/s/ Deloitte & Touche LLP
New York, New York
February 22, 2024

Changes in Internal Control Over Financial Reporting

No change in the Firm's internal control over financial reporting (as such term is defined in Exchange Act Rule 13a-15(f)) occurred during the quarter ended December 31, 2023 that materially affected, or is reasonably likely to materially affect, the Firm's internal control over financial reporting.

Other Information

On February 20, 2024 the Compensation, Management Development and Succession Committee of the Board of Directors ("CMDS Committee") of Morgan Stanley approved amendments to each of the award certificates ("Award Certificates") covering all outstanding performance stock units granted under the Morgan Stanley Equity Incentive Compensation Plan, including to executive officers of the Firm. Under the original terms of the Award Certificates, upon termination of employment due to death or disability, the participant vests in a prorated portion of the shares earned by applying the performance multiplier based on service during the performance period. The CMDS Committee amended each Award Certificate to provide that, upon termination of employment due to death or disability, the participant vests in the full number of shares earned by applying the performance multiplier. Providing for full vesting of performance stock units upon termination of employment due to death or disability is consistent with the provisions of Morgan Stanley's restricted stock units.

This description of the Award Certificates is qualified in its entirety by reference to the full text of the Award Certificates, a form of which is filed hereto as Exhibit 10.22.

Disclosure Regarding Foreign Jurisdictions That Prevent Inspections

Not applicable.

Unresolved Staff Comments

The Firm from time to time receives written comments from the staff of the SEC regarding its periodic or current reports under the Exchange Act. There are no comments that remain unresolved that the Firm received not less than 180 days before the end of the year to which this report relates that the Firm believes are material.

Properties

We have offices, operations and data centers located around the world. Our global headquarters and principal executive offices are located at 1585 Broadway, New York, New York. Our other principal offices include locations in Manhattan and the greater New York metropolitan area, London, Frankfurt, Hong Kong and Tokyo. Our current facilities are adequate for our present and future operations for each of our business segments, although we may add offices, depending upon our future operations.

Legal Proceedings

See "Contingencies—Legal" in Note 14 to the Financial Statements for information about our material legal proceedings.

Mine Safety Disclosures

Not applicable.

Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Morgan Stanley's common stock trades under the symbol "MS" on the New York Stock Exchange. As of January 31, 2024, the Firm had 46,887 holders of record; however, the Firm believes the number of beneficial owners of the Firm's common stock exceeds this number.

The table below sets forth the information with respect to purchases made by or on behalf of the Firm of its common stock during the fourth quarter of the year ended December 31, 2023.

Issuer Purchases of Equity Securities

$ in millions, except per share data	Total Number of Shares Purchased[1]	Average Price Paid per Share[2]	Total Shares Purchased as Part of Share Repurchase Program[3, 4]	Dollar Value of Remaining Authorized Repurchase
October	1,948,722	$ 71.77	1,911,600	$ 18,363
November	15,673,256	$ 75.59	15,368,757	$ 17,200
December	201,759	$ 86.45	—	$ 17,200
Three Months Ended December 31, 2023	17,823,737	$ 75.30	17,280,357	

1. Includes 543,380 shares acquired by the Firm in satisfaction of the tax withholding obligations on stock-based awards granted under the Firm's stock-based compensation plans during the three months ended December 31, 2023.
2. Excludes excise tax of $12 million levied on share repurchases, net of issuances, payable in April 2024.
3. Share purchases under publicly announced authorizations are made pursuant to open-market purchases, Rule 10b5-1 plans or privately negotiated transactions (including with employee benefit plans) as market conditions warrant and at prices the Firm deems appropriate and may be suspended at any time.
4. The Firm's Board of Directors has approved the repurchase of the Firm's outstanding common stock under a share repurchase authorization (the "Share Repurchase Authorization") from time to time as conditions warrant and subject to limitations on distributions from the Federal Reserve. The Share Repurchase Authorization is for capital management purposes and considers, among other things, business segment capital needs, as well as equity-based compensation and benefit plan requirements. The Share Repurchase Authorization has no set expiration or termination date.

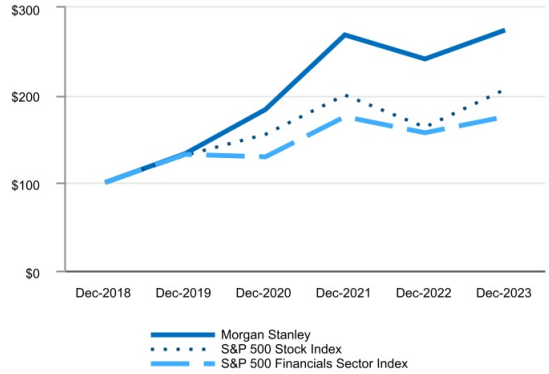
On June 30, 2023, the Firm announced that its Board of Directors reauthorized a multi-year repurchase authorization of up to $20 billion of outstanding common stock, without a set expiration date, beginning in the third quarter of 2023, which will be exercised from time to time as conditions warrant. For further information, see "Liquidity and Capital Resources—Regulatory Requirements—Capital Plans, Stress Tests and the Stress Capital Buffer."

Stock Performance Graph

The following graph compares the cumulative total shareholder return (rounded to the nearest whole dollar) of the Firm's common stock, the S&P 500 Stock Index and the S&P 500 Financials Sector Index for the last five years. The graph assumes a $100 investment at the closing price on December 31, 2018 and reinvestment of dividends on the respective dividend payment dates without commissions. This graph does not forecast future performance of the Firm's common stock.

Cumulative Total Return

December 31, 2018 – December 31, 2023



	At December 31,					
	2018	2019	2020	2021	2022	**2023**
Morgan Stanley	$ 100.00	$ 132.66	$ 183.14	$ 268.50	$ 240.57	**$ 274.03**
S&P 500 Stock Index	100.00	131.21	155.34	199.89	163.65	**206.63**
S&P 500 Financials Sector Index	100.00	132.09	129.77	175.02	156.52	**175.46**

Directors, Executive Officers and Corporate Governance

Information relating to the Firm's directors and nominees in the Firm's definitive proxy statement for its 2024 annual meeting of shareholders ("Morgan Stanley's proxy statement") is incorporated by reference herein.

Information relating to the Firm's executive officers is contained in the "Business" section of this report under "Information about Our Executive Officers."

Morgan Stanley's Code of Ethics and Business Conduct applies to all directors, officers and employees, including its Chief Executive Officer, Chief Financial Officer and Deputy Chief Financial Officer. You can find the Code of Ethics and Business Conduct on the webpage, *www.morganstanley.com/content/dam/msdotcom/en/about-us-governance/pdf/MS_Code_of_Ethics_and_Business_Conduct_2023.pdf*. The Firm will post any amendments to the Code of Ethics and Business Conduct, and any waivers that are required to be disclosed by the rules of either the U.S. Securities and Exchange Commission or the New York Stock Exchange LLC, on the webpage.

Executive Compensation

Information relating to director and executive officer compensation in Morgan Stanley's proxy statement is incorporated by reference herein.

Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information relating to equity compensation plans and security ownership of certain beneficial owners and management in Morgan Stanley's proxy statement is incorporated by reference herein.

Certain Relationships and Related Transactions and Director Independence

Information regarding certain relationships and related transactions in Morgan Stanley's proxy statement is incorporated by reference herein.

Information regarding director independence in Morgan Stanley's proxy statement is incorporated by reference herein.

Principal Accountant Fees and Services

Information regarding principal accountant fees and services in Morgan Stanley's proxy statement is incorporated by reference herein.

Exhibits and Financial Statement Schedules

Documents filed as part of this report

- The financial statements required to be filed in this annual report on Form 10-K are included in the section titled "Financial Statements and Supplementary Data."

Exhibit Index[1]

Certain of the following exhibits, as indicated parenthetically, were previously filed as exhibits to registration statements filed by Morgan Stanley or its predecessor companies under the Securities Act or to reports or registration statements filed by Morgan Stanley or its predecessor companies under the Exchange Act and are hereby incorporated by reference to such statements or reports. Morgan Stanley's Exchange Act file number is 1-11758. The Exchange Act file number of Morgan Stanley Group Inc., a predecessor company ("MSG"), was 1-9085.

Exhibit No.	Description
3.1	Amended and Restated Certificate of Incorporation of Morgan Stanley, as amended to date (Exhibit 3.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended June 30, 2022).
3.2	Amended and Restated Bylaws of Morgan Stanley, as amended to date (Exhibit 3.1 to Morgan Stanley's current report on Form 8-K dated December 8, 2023).
4.1*	Description of Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934.
4.2	Amended and Restated Senior Indenture dated as of May 1, 1999 between Morgan Stanley and The Bank of New York, as trustee (Exhibit 4e to Morgan Stanley's Registration Statement on Form S-3/A (No. 333-75289) as amended by Fourth Supplemental Senior Indenture dated as of October 8, 2007 (Exhibit 4.3 to Morgan Stanley's annual report on Form 10-K for the fiscal year ended November 30, 2007).
4.3	Senior Indenture dated as of November 1, 2004 between Morgan Stanley and The Bank of New York, as trustee (Exhibit 4-f to Morgan Stanley's Registration Statement on Form S-3/A (No. 333-117752), as amended by First Supplemental Senior Indenture dated as of September 4, 2007 (Exhibit 4.5 to Morgan Stanley's annual report on Form 10-K for the fiscal year ended November 30, 2007), Second Supplemental Senior Indenture dated as of January 4, 2008 (Exhibit 4.1 to Morgan Stanley's current report on Form 8-K dated January 4, 2008), Third Supplemental Senior Indenture dated as of September 10, 2008 (Exhibit 4 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended August 31, 2008), Fourth Supplemental Senior Indenture dated as of December 1, 2008 (Exhibit 4.1 to Morgan Stanley's current report on Form 8-K dated December 1, 2008), Fifth Supplemental Senior Indenture dated as of April 1, 2009 (Exhibit 4 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended March 31, 2009), Sixth Supplemental Senior Indenture dated as of September 16, 2011 (Exhibit 4.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended September 30, 2011), Seventh Supplemental Senior Indenture dated as of November 21, 2011 (Exhibit 4.4 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2011), Eighth Supplemental Senior Indenture dated as of May 4, 2012 (Exhibit 4.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended June 30, 2012), Ninth Supplemental Senior Indenture dated as of March 10, 2014 (Exhibit 4.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended March 31, 2014), Tenth Supplemental Senior Indenture dated as of January 11, 2017 (Exhibit 4.1 to Morgan Stanley's current report on Form 8-K dated January 11, 2017) and Eleventh Supplemental Senior Indenture dated as of March 24, 2021 (Exhibit 4.4 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2021).
4.4	The Unit Agreement Without Holders' Obligations, dated as of August 29, 2008, between Morgan Stanley and The Bank of New York Mellon, as Unit Agent, as Trustee and Paying Agent under the Senior Indenture referred to therein and as Warrant Agent under the Warrant Agreement referred to therein (Exhibit 4.1 to Morgan Stanley's current report on Form 8-K dated August 29, 2008).
4.5	Subordinated Indenture dated as of October 1, 2004 between Morgan Stanley and The Bank of New York, as trustee (Exhibit 4-g to Morgan Stanley's Registration Statement on Form S-3/A (No. 333-117752)).
4.6	Junior Subordinated Indenture dated as of October 12, 2006 between Morgan Stanley and The Bank of New York, as trustee (Exhibit 4.1 to Morgan Stanley's current report on Form 8-K dated October 12, 2006).
4.7	Deposit Agreement dated as of July 6, 2006 among Morgan Stanley, JPMorgan Chase Bank, N.A. and the holders from time to time of the depositary receipts described therein (Exhibit 4.3 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended May 31, 2006).
4.8	Form of Deposit Agreement among Morgan Stanley, JPMorgan Chase Bank, N.A. and the holders from time to time of the depositary receipts representing interests in the Series A Preferred Stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated July 5, 2006).
4.9	Depositary Receipt for Depositary Shares, representing Floating Rate Non-Cumulative Preferred Stock, Series A (included in Exhibit 4.8 hereto).
4.10	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series E Preferred Stock described therein (Exhibit 2.6 to Morgan Stanley's Registration Statement on Form 8-A dated September 27, 2013).
4.11	Depositary Receipt for Depositary Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series E (included in Exhibit 4.10 hereto).
4.12	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series F Preferred stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated December 9, 2013).
4.13	Depositary Receipt for Depositary Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series F (included in Exhibit 4.12 hereto).

Exhibit No.	Description
4.14	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series I Preferred stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated September 17, 2014).
4.15	Depositary Receipt for Depositary Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series I (included in Exhibit 4.14 hereto).
4.16	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series K Preferred Stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated January 30, 2017).
4.17	Depositary Receipt for Depositary Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series K (included in Exhibit 4.16 hereto).
4.18	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series L Preferred Stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated November 22, 2019).
4.19	Depositary Receipt for Depositary Shares, representing 4.875% Non-Cumulative Preferred Stock, Series L (included in Exhibit 4.18 hereto).
4.20	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series N Preferred Stock described therein (Exhibit 4.5 to Morgan Stanley's current report on Form 8-K dated October 2, 2020).
4.21	Depositary Receipt for Depositary Shares, representing Fixed-to-Floating Rate Non-Cumulative Preferred Stock, Series N (included in Exhibit 4.20 hereto).
4.22	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series O Preferred Stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated October 22, 2021).
4.23	Depositary Receipt for Depositary Shares, representing 4.250% Non-Cumulative Preferred Stock, Series O (included in Exhibit 4.22 hereto).
4.24	Form of Deposit Agreement among Morgan Stanley, The Bank of New York Mellon and the holders from time to time of the depositary receipts representing interests in the Series P Preferred Stock described therein (Exhibit 2.4 to Morgan Stanley's Registration Statement on Form 8-A dated August 1, 2022).
4.25	Depositary Receipt for Depositary Shares, representing 6.500% Non-Cumulative Preferred Stock, Series P (included in Exhibit 4.24 hereto).

Exhibit No.	Description
10.1	Amended and Restated Trust Agreement dated as of January 1, 2018 by and between Morgan Stanley and State Street Bank and Trust Company (Exhibit 10.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended March 31, 2018).
10.2	Amended and Restated Investor Agreement dated as of June 30, 2011 by and between Morgan Stanley and Mitsubishi UFJ Financial Group, Inc. (Exhibit 10.1 to Morgan Stanley's current report on Form 8-K dated June 30, 2011), as amended by Third Amendment, dated October 3, 2013 (Exhibit 10.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended September 30, 2013), Fourth Amendment, dated April 6, 2016 (Exhibit 10.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended March 31, 2016), Fifth Amendment, dated October 4, 2018 (Exhibit 10.3 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2020), Sixth Amendment, dated April 13, 2021 (Exhibit 10.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended June 30, 2021) and Seventh Amendment, dated October 13, 2023 (Exhibit 10.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended September 30, 2023).
10.3†	Morgan Stanley 401(k) Plan, amended and restated as of January 1, 2018 (Exhibit 10.4 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2018), as amended by Amendment (Exhibit 10.4 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2019) and Amendment (Exhibit 10.6 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2020), Amendment (Exhibit 10.4 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2021) and Amendment (Exhibit 10.4 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2022).
10.4†*	Amendment to Morgan Stanley 401(k) Plan, dated December 15, 2023.
10.5†	Tax Deferred Equity Participation Plan as amended and restated as of November 26, 2007 (Exhibit 10.9 to Morgan Stanley's annual report on Form 10-K for the fiscal year ended November 30, 2007).
10.6†	Directors' Equity Capital Accumulation Plan as amended and restated as of November 1, 2022 (Exhibit 10.6 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2022).
10.7†	Employees' Equity Accumulation Plan as amended and restated as of November 26, 2007 (Exhibit 10.12 to Morgan Stanley's annual report on Form 10-K for the fiscal year ended November 30, 2007).
10.8†	Employee Stock Purchase Plan as amended and restated as of August 1, 2022 (Exhibit 10.8 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2022).

Exhibit No.	Description
10.9†	Morgan Stanley Supplemental Executive Retirement and Excess Plan, amended and restated effective December 31, 2008 (Exhibit 10.2 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended March 31, 2009) as amended by Amendment (Exhibit 10.5 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended June 30, 2009), Amendment (Exhibit 10.19 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2010), Amendment (Exhibit 10.3 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended June 30, 2011) and Amendment (Exhibit 10.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended September 30, 2014).
10.10†	Form of Deferred Compensation Agreement under the Pre-Tax Incentive Program 2 (Exhibit 10.12 to MSG's annual report for the fiscal year ended November 30, 1996).
10.11†	Morgan Stanley UK Share Ownership Plan (Exhibit 4.1 to Morgan Stanley's Registration Statement on Form S-8 (No. 333-146954)).
10.12†	Supplementary Deed of Participation for the Morgan Stanley UK Share Ownership Plan, dated as of November 5, 2009 (Exhibit 10.36 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2009).
10.13†	Aircraft Time-Sharing Agreement, dated as of January 1, 2010, by and between Corporate Services Support Corp. and James P. Gorman (Exhibit 10.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended March 31, 2010).
10.14†	Agreement between Morgan Stanley and James P. Gorman, dated August 16, 2005, and amendment dated December 17, 2008 (Exhibit 10.2 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended March 31, 2010), as amended by Amendment (Exhibit 10.25 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2013).
10.15†	Form of Restrictive Covenant Agreement (Exhibit 10 to Morgan Stanley's current report on Form 8-K dated November 22, 2005).
10.16†	Equity Incentive Compensation Plan, as amended and restated as of December 14, 2020 (Exhibit 10.19 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2020).
10.17†	Morgan Stanley Compensation Incentive Plan, as amended and restated as of December 14, 2020 (Exhibit 10.24 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2020)
10.18†	Morgan Stanley Schedule of Non-Employee Directors Annual Compensation, effective as of November 1, 2022 (Exhibit 10.18 to Morgan Stanley's annual report on Form 10-K for the year ended December 31, 2022).
10.19†	Description of Operating Committee Medical Coverage (Exhibit 10.2 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended March 31, 2015).
10.20†*	Form of Award Certificate for Discretionary Retention Awards of Stock Units.
10.21†*	Form of Award Certificate for Discretionary Retention Awards under the Morgan Stanley Compensation Incentive Plan.
10.22†*	Form of Award Certificate for Long-Term Incentive Program Awards.
10.23†	Form of Aircraft Time-Sharing Agreement (Exhibit 10.1 to Morgan Stanley's quarterly report on Form 10-Q for the quarter ended September 30, 2020).
21*	Subsidiaries of Morgan Stanley.
22*	Guarantor and Subsidiary Issuer of Registered Guaranteed Securities.
23.1*	Consent of Deloitte & Touche LLP.
24	Powers of Attorney (included on signature page).
31.1*	Rule 13a-14(a) Certification of Chief Executive Officer.
31.2*	Rule 13a-14(a) Certification of Chief Financial Officer.
32.1**	Section 1350 Certification of Chief Executive Officer.
32.2**	Section 1350 Certification of Chief Financial Officer.
97*	Morgan Stanley Compensation Recoupment Policy.
101	Interactive Data Files pursuant to Rule 405 of Regulation S-T formatted in Inline eXtensible Business Reporting Language ("Inline XBRL").
104	Cover Page Interactive Data File (formatted in Inline XBRL and contained in Exhibit 101).

1. For purposes of this Exhibit Index, references to "The Bank of New York" mean in some instances the entity successor to JPMorgan Chase Bank, N.A. or J.P. Morgan Trust Company, National Association; references to "JPMorgan Chase Bank, N.A." mean the entity formerly known as The Chase Manhattan Bank, in some instances as the successor to Chemical Bank; references to "J.P. Morgan Trust Company, N.A." mean the entity formerly known as Bank One Trust Company, N.A., as successor to The First National Bank of Chicago.

* Filed herewith.

** Furnished herewith.

† Management contract or compensatory plan or arrangement required to be filed as an exhibit to this Form 10-K pursuant to Item 15(b).

Note: Other instruments defining the rights of holders of long-term debt securities of Morgan Stanley and its subsidiaries are omitted pursuant to Section (b)(4)(iii) of Item 601 of Regulation S-K. Morgan Stanley hereby agrees to furnish copies of these instruments to the U.S. Securities and Exchange Commission upon request.

Form 10-K Summary

None.

Signatures

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on February 22, 2024.

MORGAN STANLEY
(REGISTRANT)

By: /s/ EDWARD PICK
(Edward Pick)
Chief Executive Officer

POWER OF ATTORNEY

We, the undersigned, hereby severally constitute Sharon Yeshaya, Eric F. Grossman and Martin M. Cohen, and each of them singly, our true and lawful attorneys with full power to them and each of them to sign for us, and in our names in the capacities indicated below, any and all amendments to the annual report on Form 10-K filed with the Securities and Exchange Commission, hereby ratifying and confirming our signatures as they may be signed by our said attorneys to any and all amendments to said annual report on Form 10-K.

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities indicated on the 22nd day of February, 2024.

Signature	Title
/s/ EDWARD PICK **(Edward Pick)**	Chief Executive Officer (Principal Executive Officer)
/s/ SHARON YESHAYA **(Sharon Yeshaya)**	Executive Vice President and Chief Financial Officer (Principal Financial Officer)
/s/ RAJA J. AKRAM **(Raja J. Akram)**	Deputy Chief Financial Officer (Chief Accounting Officer and Controller)
/s/ JAMES P. GORMAN **(James P. Gorman)**	Chairman of the Board
/s/ THOMAS H. GLOCER **(Thomas H. Glocer)**	Director
/s/ ROBERT H. HERZ **(Robert H. Herz)**	Director
/s/ ERIKA H. JAMES **(Erika H. James)**	Director
/s/ HIRONORI KAMEZAWA **(Hironori Kamezawa)**	Director
/s/ SHELLEY B. LEIBOWITZ **(Shelley B. Leibowitz)**	Director
/s/ STEPHEN J. LUCZO **(Stephen J. Luczo)**	Director
/s/ JAMI MISCIK **(Jami Miscik)**	Director
/s/ MASATO MIYACHI **(Masato Miyachi)**	Director
/s/ DENNIS M. NALLY **(Dennis M. Nally)**	Director
/s/ MARY L. SCHAPIRO **(Mary L. Schapiro)**	Director
/s/ PERRY M. TRAQUINA **(Perry M. Traquina)**	Director
/s/ RAYFORD WILKINS, JR. **(Rayford Wilkins, Jr.)**	Director