UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, DC 20549

Form 10-K

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

For the fiscal year ended December 31, 2023

OR

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

For the transition period from

to

Commission File No. 001-07511

STATE STREET CORPORATION

(Exact name of registrant as specified in its charter)

Massachusetts

(State or other jurisdiction of incorporation)

One Congress Street

Boston, MA

(Address of principal executive offices)

(617) 786-3000

(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 each exchange on which registered
Common Stock, \$1 par value per share	STT	New York Stock Exchange
Depositary Shares, each representing a 1/4,000th ownership interest in a share of Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series D, without par value per share	STT.PRD	New York Stock Exchange
Depositary Shares, each representing a 1/4,000th ownership interest in a share of Fixed-to-Floating Rate Non-Cumulative Perpetual Preferred Stock, Series G, without par value per share	STT.PRG	New York Stock Exchange

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

None

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 Section 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.

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 Act).

Yes
No

The aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the per share price (\$73.18) at which the common equity was last sold as of the last business day of the registrant's most recently completed second fiscal quarter (June 30, 2023) was approximately \$23.52 billion.

The number of shares of the registrant's common stock outstanding as of January 31, 2024 was 301,943,571.

Portions of the following documents are incorporated by reference into Parts of this Report on Form 10-K, to the extent noted in such Parts, as indicated below:

(1) The registrant's definitive Proxy Statement for the 2024 Annual Meeting of Shareholders to be filed pursuant to Regulation 14A on or before April 29, 2024 (Part III).

(I.R.S. Employer Identification No.)

04-2456637

02114

(Zip Code)

STATE STREET CORPORATION ANNUAL REPORT ON FORM 10-K FOR THE YEAR ENDED December 31, 2023

TABLE OF CONTENTS

		<u>Page</u>
	Forward-Looking Statements	4
	Risk Factors Summary	4
PART I		
Item 1	Business	6
Item 1A	Risk Factors	24
Item 1B	Unresolved Staff Comments	54
Item 1C	Cybersecurity	54
Item 2	Properties	54
Item 3	Legal Proceedings	54
Item 4	Mine Safety Disclosures	54
Supplemental Item PART II	Information about our Executive Officers	55
Item 5	Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities	58
Item 6	[Reserved]	61
Item 7	Management's Discussion and Analysis of Financial Condition and Results of Operations	61
	General	61
	Overview of Financial Results	62
	Consolidated Results of Operations	65
	Total Revenue	65
	Net Interest Income	73
	Provision for Credit Losses	76
	Expenses	76
	Acquisition and Restructuring Costs	77
	Repositioning Charges	77
	Income Tax Expense	77
	Line of Business Information	77
	Investment Servicing	77
	Investment Management	78
	Financial Condition	79
	Investment Securities	79
	Loans Diele Management	83
	Risk Management	84
	Credit Risk Management Liquidity Risk Management	90
		94 100
	Operational Risk Management Information Technology Risk Management	100 101
	Market Risk Management	101
	Model Risk Management	103
	Strategic Risk Management	111
	Capital	112
	Off-Balance Sheet Arrangements	121
	Significant Accounting Estimates	121
	Recent Accounting Developments	124
	Other Matters	124
Item 7A	Quantitative and Qualitative Disclosures About Market Risk	124
Item 8	Financial Statements and Supplementary Data	124
	Report of Independent Registered Public Accounting Firm (PCAOB ID: 42)	124
	Consolidated Statement of Income	123
		121

Consolidated Statement of Comprehensive Income	128
Consolidated Statement of Condition	129
Consolidated Statement of Changes in Shareholders' Equity	130
Consolidated Statement of Cash Flows	131
Note 1. Summary of Significant Accounting Policies	132
Note 2. Fair Value	134
Note 3. Investment Securities	140
Note 4. Loans and Allowance for Credit Losses	146
Note 5. Goodwill and Other Intangible Assets	151
Note 6. Other Assets	152
Note 7. Deposits	153
Note 8. Short-Term Borrowings	153
Note 9. Long-Term Debt	154
Note 10. Derivative Financial Instruments	155
Note 11. Offsetting Arrangements	159
Note 12. Commitments and Guarantees	162
Note 13. Contingencies	163
Note 14. Variable Interest Entities	165
Note 15. Shareholders' Equity	167
Note 16. Regulatory Capital	169
Note 17. Net Interest Income	171
Note 18. Equity-Based Compensation	171
Note 19. Employee Benefits	173
Note 20. Occupancy Expense and Information Systems and Communications Expense	173
Note 21. Expenses	175
Note 22. Income Taxes	175
Note 23. Earnings Per Common Share	177
Note 24. Line of Business Information	177
Note 25. Revenue from Contracts with Customers	179
Note 26. Non-U.S. Activities	182
Note 27. Parent Company Financial Statements	183
Note 28. Subsequent Events	184
Supplemental Financial Data	185
Changes in and Disagreements with Accountants on Accounting and Financial Disc	
Controls and Procedures	189
Other Information	192
Disclosure Regarding Foreign Jurisdictions that Prevent Inspections	192
Directors, Executive Officers and Corporate Governance	192
Executive Compensation	192
Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters	192
Certain Relationships and Related Transactions, and Director Independence	193
Principal Accounting Fees and Services	193
Exhibits, Financial Statement Schedules	194
Form 10-K Summary	194
EXHIBIT INDEX	195
SIGNATURES	198

Item 9 Item 9A Item 9B Item 9C PART III Item 10 Item 11 Item 12

Item 13 Item 14 PART IV Item 15 Item 16

Forward-Looking Statements

This Form 10-K, as well as other reports and proxy materials submitted by us under the Securities Exchange Act of 1934, registration statements filed by us under the Securities Act of 1933, our annual report to shareholders and other public statements we may make, may contain statements (including statements in our Management's Discussion and Analysis included in such reports, as applicable) that are considered "forward-looking statements" within the meaning of U.S. securities laws, including statements about our goals and expectations regarding our business, financial and capital condition, results of operations. strategies. cost savings and transformation initiatives, investment portfolio performance, climate, dividend and stock purchase outcomes programs, acquisitions, of legal proceedings, market growth, joint ventures and divestitures, client growth, new technologies, services and opportunities, sustainability and impact, human capital, as well as industry, governmental, regulatory, economic and market trends, initiatives and developments, the business environment and other matters that do not relate strictly to historical facts.

Terminology such as "expect," "outlook," "will," "goal," "target," "strategy" "may," "estimate," "plan," "intend," "objective," "forecast," "believe," "priority," "anticipate," "seek," and "trend," or similar statements or variations of such terms, are intended to identify forward-looking statements, although not all forwardlooking statements contain such terms.

Forward-looking statements are subject to various risks and uncertainties, which change over time, are based on management's expectations and assumptions at the time the statements are made and are not guarantees of future results. Management's expectations and assumptions, and the continued validity of the forward-looking statements, are subject to change due to a broad range of factors affecting U.S. and global economies, regulatory the environment and the equity, debt, currency and other financial markets, as well as factors specific to State Street and its subsidiaries, including State Street Bank. Factors that could cause changes in the expectations or assumptions on which forwardlooking statements are based cannot be foreseen with certainty and include the factors described under the headings "Risk Factors Summary" and "Risk Factors" and elsewhere in this Form 10-K, including under "Management's Discussion and Analysis."

Actual outcomes and results may differ materially from what is expressed in our forwardlooking statements and from our historical financial results due to the factors discussed in this section and elsewhere in this Form 10-K or disclosed in our other SEC filings. Forward-looking statements in this Form 10-K should not be relied on as representing our expectations or assumptions as of any time subsequent to the time this Form 10-K is filed with the SEC. We undertake no obligation to revise our forward-looking statements after the time they are made. The factors discussed herein are not intended to be a complete statement of all risks and uncertainties that may affect our businesses. We cannot anticipate all developments that may adversely affect our business or operations or our consolidated results of operations, financial condition or cash flows.

Forward-looking statements should not be viewed as predictions and should not be the primary basis on which investors evaluate State Street. Any investor in State Street should consider all risks and uncertainties disclosed in our SEC filings, including our filings under the Securities Exchange Act of 1934, in particular our annual reports on Form 10-K, our quarterly reports on Form 10-Q and our current reports on Form 8-K, or registration statements filed under the Securities Act of 1933, all of which are accessible on the SEC's website at *www.sec.gov* or on the "Filings & reports" tab of our website at *investors.statestreet.com*.

Risk Factors Summary

The following is a summary of material risks we are exposed to in the course of our business activities and which could have an adverse effect on our business or consolidated results of operations or financial condition. It does not contain all of the information that may be important to you and should be read together with the more detailed discussion of risks under the heading "Risk Factors," as well as elsewhere in this Form 10-K under the heading "Management's Discussion and Analysis."

Strategic Risks

- We are subject to intense competition, which could negatively affect our profitability;
- We are subject to significant pricing pressure and variability in our financial results and our AUC/A and AUM;
- Our development and completion of new products and services, including State Street Alpha[®] and those related to digital assets and artificial intelligence, may impose costs on us, involve dependencies on third parties and may expose us to increased operational, model and other risks;
- Acquisitions, strategic alliances, joint ventures and divestitures, and the integration, retention and development of the benefits of these transactions, including the consolidation of our operations joint ventures in India, pose risks for our business; and

• Competition for qualified members of our workforce is intense, and we may not be able to attract and retain the highly skilled people we need to support our business.

Financial Market Risks

- We could be adversely affected by political, geopolitical, economic and market conditions including, for example, as a result of liquidity or capital deficiencies (actual or perceived) by other financial institutions and related market and government actions, the Israel-Hamas war, ongoing war in Ukraine, major political elections globally, actions taken by central banks to address inflationary and growth pressures, monetary policy tightening, periods of significant volatility in valuations and liquidity or other disruptions in the markets for equity, fixed income and other assets classes globally or within specific markets:
- We have significant global operations and clients that can be adversely impacted by disruptions in key global economies, including local, regional and geopolitical developments affecting those economies;
- Our investment securities portfolio, consolidated financial condition and consolidated results of operations could be adversely affected by changes in the financial markets, governmental action or monetary policy. For example, among other risks, increases in prevailing interest rates or market conditions have led, and were they to occur in the future could further lead, to reduced levels of client deposits and resulting decreases in our NII or to portfolio decisions resulting management in reductions in our capital or liquidity ratios;
- Our business activities expose us to interest rate risk;
- We assume significant credit risk of counterparties, who may also have substantial financial dependencies on other financial institutions, and these credit exposures and concentrations could expose us to financial loss;
- Our fee revenue represents a significant portion of our revenue and is subject to decline based on, among other factors, market and currency declines, investment activities and preferences of our clients and their business mix;
- If we are unable to effectively manage our capital and liquidity, our financial condition, capital ratios, results of operations and

business prospects could be adversely affected;

- Our calculations of risk exposures, total RWA and capital ratios depend on data inputs, formulae, models, correlations and assumptions that are subject to change, which could materially impact our risk exposures, our total RWA and our capital ratios from period to period;
- We may need to raise additional capital or debt in the future, which may not be available to us or may only be available on unfavorable terms; and
- If we experience a downgrade in our credit ratings, or an actual or perceived reduction in our financial strength, our borrowing and capital costs, liquidity and reputation could be adversely affected.

Compliance and Regulatory Risks

- Our business and capital-related activities, including common share repurchases, may be adversely affected by regulatory requirements and considerations, including capital, credit and liquidity;
- We face extensive and changing government regulation and supervision in the jurisdictions in which we operate, which may increase our costs and compliance risks and may affect our business activities and strategies;
- Our businesses may be adversely affected by government enforcement and litigation;
- Our businesses may be adversely affected by increased and conflicting political and regulatory scrutiny of asset management stewardship and corporate sustainability or ESG practices;
- Any misappropriation of the confidential information we possess could have an adverse impact on our business and could subject us to regulatory actions, litigation and other adverse effects;
- Changes in accounting standards may adversely affect our consolidated results of operations and financial condition;
- Changes in tax laws, rules or regulations, challenges to our tax positions and changes in the composition of our pre-tax earnings may increase our effective tax rate;
- We could face liabilities for withholding and other non-income taxes, including in connection with our services to clients, as a result of tax authority examinations; and
- Our businesses may be negatively affected by adverse publicity or other reputational harm.

Operational and Technology Risks

Our internal control environment may be inadequate, fail or be circumvented, and actual results may differ from those expressed as a result of a number of factors, including the manifestation of operational risk as follows:

- Our business may be negatively affected by our failure to update and maintain our technology infrastructure, or otherwise meet the increasing resiliency expectations of our clients and regulators, or as a result of a cyber-attack or similar vulnerability in our or business partners' infrastructure;
- Our risk management framework, models and processes may not be effective in identifying or mitigating risk and reducing the potential for related losses, and a failure or circumvention of our controls and procedures, or errors or delays in our operational and transaction processing, or those of third parties, could have an adverse effect on our business, financial condition, operating results and reputation;
- Shifting and maintaining operational activities to non-U.S. jurisdictions, changing our operating model and outsourcing to, or insourcing from, third parties may expose us to increased operational risk, geopolitical risk and reputational harm and may not result in expected cost savings or operational improvements;
- Attacks or unauthorized access to our or our business partners' or clients' information technology systems or facilities, such as cyber-attacks or other disruptions to our or their operations, could result in significant costs, reputational damage and impacts on our business activities;
- Long-term contracts and customizing service delivery for clients expose us to increased operational risk, pricing and performance risk;
- We may not be able to protect our intellectual property or may infringe upon the rights of third parties;
- The quantitative models we use to manage our business may contain errors that could adversely impact our business, financial condition, operating results and regulatory compliance;
- Our reputation and business prospects may be damaged if investors in the collective investment pools we sponsor or manage incur substantial losses in these investment pools or are restricted in redeeming their interests in these investment pools;

- Our efforts to improve our billing processes and practices are ongoing and may result in the identification of additional errors or areas for remediation;
- The impacts of climate change, and regulatory responses, and disclosure requirements related to such risks, could adversely affect us; and
- We may incur losses or face negative impacts on our business as a result of unforeseen events including terrorist attacks, natural disasters, climate change, pandemics, global conflicts, an abrupt banking crisis and other geopolitical events which may have a negative impact on our business and operations.

PART I

ITEM 1. BUSINESS

OVERVIEW

State Street Corporation is one of the world's largest providers of financial services to institutional investors. We believe we are an essential partner to institutional investors and operate with the purpose of helping to create better outcomes for the world's investors and the people they serve. Our clients asset managers and owners, insurance companies, official institutions, and central banks - rely on us to deliver solutions that support their goals across the investment life cycle.

Through our subsidiaries, including our principal banking subsidiary, State Street Bank and Trust Company, referred to as State Street Bank, we operate in more than 100 geographic markets worldwide, including the United States, Canada, Latin America, Europe, the Middle East and Asia. We provide a broad range of financial products and services to institutional investors worldwide, with \$41.81 trillion of AUC/A and \$4.13 trillion of AUM as of December 31, 2023.

We had consolidated total assets of \$297.26 billion, consolidated total deposits of \$220.97 billion, consolidated total shareholders' equity of \$23.80 billion and approximately 46,000 employees as of December 31, 2023.

State Street Corporation, referred to as the Parent Company, was organized in 1969 under the laws of the Commonwealth of Massachusetts, and is a financial holding company. We conduct our business primarily through State Street Bank, which traces its beginnings to the founding of the Union Bank in 1792. State Street Bank's current charter was authorized by a special Act of the Massachusetts Legislature in 1891, and its present name was adopted in 1960. State Street Bank operates as a specialized bank, referred to as a trust or custody bank, that services and manages assets on behalf of its institutional clients.

Our executive offices are located at One Congress Street, Boston, Massachusetts 02114 (telephone (617) 786-3000). For purposes of this Form 10-K, unless the context requires otherwise, references to "State Street," "we," "us," "our" or similar terms mean State Street Corporation and its subsidiaries on a consolidated basis. The Parent Company is a source of financial and managerial strength to our subsidiaries.

ADDITIONAL INFORMATION

On the "Filings & reports" tab of our website at investors.statestreet.com, we make available, free of charge, all reports we electronically file with, or furnish to, the SEC including our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q and Current Reports on Form 8-K, as well as any amendments to those reports, as soon as reasonably practicable after those documents have been filed with, or furnished to, the SEC. These documents are also accessible on the SEC's website at www.sec.gov. We have included the website addresses of State Street and the SEC in this report as inactive textual references only. Information on those websites (or any other) is not incorporated by reference in this Form 10-K.

We have Corporate Governance Guidelines, as well as written charters for the Examining and Audit Committee, the Executive Committee, the Human Resources Committee, the Nominating and Corporate Governance Committee, the Risk Committee and the Technology and Operations Committee of our Board of Directors, or Board, and a Code of Ethics for Senior Financial Officers, a Standard of Conduct for Directors and a Standard of Conduct for our employees. Each of these documents is accessible on the "Corporate governance" tab of our website at *investors.statestreet.com*.

We provide additional disclosures required by applicable bank regulatory standards, including supplemental qualitative and quantitative information with respect to regulatory capital (including market risk associated with our trading activities), the LCR and the NSFR, summary results of annual State Street-run stress tests that we conduct under the Dodd-Frank Act, and resolution plan disclosures required under the Dodd-Frank Act. These additional disclosures are accessible on the "Filings & reports" tab of our website at *investors.statestreet.com*.

We use acronyms and other defined terms for certain business terms and abbreviations, as defined on the acronyms list and glossary under Item 8 in this Form 10-K.

LINES OF BUSINESS

Our operations are organized into two lines of business: Investment Servicing and Investment

Management, which are defined based on products and services provided.

Investment Servicing

Our Investment Servicing line of business provides a range of services to our clients. Through State Street Investment Services, State Street Global Markets[®], State Street Alpha[®], and State Street Digital[®], we provide investment services for institutional clients, including mutual funds, collective investment funds and other investment pools, corporate and public retirement plans, insurance companies, investment managers, foundations and endowments worldwide. Our financial services and products allow our large institutional investor clients to execute financial transactions on a daily basis in markets across the globe. As most institutional investors cannot economically or efficiently build their own technology and operational processes necessary to facilitate all of their global securities settlement needs, our primary role as a global trust and custody bank is to aid our clients to efficiently perform services associated with the clearing, settlement and execution of securities transactions and related payments.

Products under the Investment Servicing line of business include: back office products such as custody, accounting, regulatory reporting, investor services, performance and analytics; middle office products such as investment book of record, transaction management, loans, cash, derivatives and collateral services, record keeping, client investment analytics; investment reporting and manager and alternative investment manager operations outsourcing; performance, risk and compliance analytics; financial data management to support institutional investors; foreign exchange, brokerage and other trading services; securities finance, including prime services products; and deposit and short-term investment facilities.

We provide some or all of the Investment Servicing integrated products and services to clients in the United States and in many other markets, including, among others, Australia, Brazil, Canada, Cayman Islands, Germany, Hong Kong, Ireland, Italy, Japan, Luxembourg, South Korea and the United Kingdom. As of December 31, 2023, we serviced AUC/A of approximately \$29.95 trillion in the Americas, approximately \$8.91 trillion in Europe and the Middle East and approximately \$2.95 trillion in the Asia-Pacific region.

Included within our Investment Servicing line of business is the Charles River Investment Management Solution, a technology offering which is designed to automate and simplify the institutional investment process across asset classes, from portfolio management and risk analytics through trading and post-trade settlement, with integrated compliance and managed data throughout. With the acquisition of CRD in 2018, we took the first step in building our front-to-back platform, State Street Alpha. In 2021, we further expanded State Street Alpha's technology offering with the acquisition of Mercatus, Inc., enabling the launch of Alpha for Private Markets. In 2023, we enhanced State Street Alpha with the release of two notable upgrades to its fixed income management module. Today our State Street Alpha platform combines portfolio management, trading and execution, analytics and compliance tools, and advanced data aggregation and integration with other industry platforms and providers.

In 2021, we established State Street Digital to focus on the development of services related to digital assets and related technologies, such as blockchain, tokenization, cryptocurrency, and central bank digital currency, including the evolution of a new integrated business and digital operating model designed to support primarily our institutional clients' digital investment cycle.

Investment Management

Our Investment Management line of business provides a broad range of investment management strategies and products for our clients through State Street Global Advisors. Our investment management strategies and products for equity, fixed income and cash assets, including core and enhanced indexing, multi-asset strategies, active guantitative and fundamental active capabilities and alternative investment strategies, span the risk/reward spectrum of these investment products. Our AUM is currently primarily weighted to indexed strategies. In addition, we provide a breadth of services and solutions, including ESG investing, defined benefit and defined contribution products, and Global Fiduciary Solutions. State Street Global Advisors is also a provider of ETFs, including the SPDR[®] ETF brand. As of December 31, 2023, State Street Global Advisors had AUM of approximately \$4.13 trillion.

Additional information about our lines of business is provided under "Line of Business Information" included in our Management's Discussion and Analysis, and in Note 24 to the consolidated financial statements in this Form 10-K. Additional information about our non-U.S. activities is included in Note 26 to the consolidated financial statements in this Form 10-K.

COMPETITION

We operate in a highly competitive environment in all areas of our business globally. Our competitors include a broad range of financial institutions and servicing companies, including other custodial banks, deposit-taking institutions, investment management firms, insurance companies, mutual funds, broker/ dealers, investment banks, benefits consultants, investment analytics businesses, business service and software companies, technology companies, data providers and information services firms. As our businesses grow and markets evolve, we may encounter increasing and new forms of competition around the world.

We believe that many key factors drive competition in the markets for our business. Technological expertise, economies of scale, required levels of capital, pricing, quality and scope of services, and sales and marketing are critical to our Investment Servicing line of business. For our Investment Management line of business, key competitive factors include expertise, experience, availability of related service offerings, quality of service, price, efficiency of our products and services, and performance.

Our success and competitive position may depend on our ability to develop and market new and innovative services, to adopt or develop new technologies, to implement efficiencies into our operational processes, to bring new services to market in a timely fashion at competitive prices, to integrate existing and future products and services effectively into State Street Alpha and State Street Digital, to continue to expand our relationships with existing clients, and to attract new clients.

We are a G-SIB and are subject to extensive regulation and supervision with respect to our operations and activities. Not all of our competitors have similarly been designated as systemically important nor are all of them subject to the same degree of regulation as a bank or financial holding company, and therefore some of our competitors may not be subject to the same limitations, requirements and standards with respect to their operations and activities. Most other financial institutions designated as systemically important have substantially greater financial resources and a broader base of operations than we do and are, consequently, in a better competitive position to manage and bear the costs of this enhanced regulatory requirement. See "Supervision and Regulation" in this Item for more information.

HUMAN CAPITAL

Our human capital strategy is a meaningful driver of our overall enterprise strategy and our longterm performance. Our employees drive the company's value proposition, innovate better ways to serve our clients and act as custodians of our reputation. We seek to empower our employees by providing development and learning opportunities to help each person reach their full potential, by promoting an inclusive, diverse and equitable workplace and by improving organizational effectiveness.

In 2023, we continued to execute on our human capital strategy, as described in the sections below. Our employee population at December 31, 2023 increased approximately 10% compared to December 31, 2022 to approximately 46,000 employees. This increase was almost entirely driven by the consolidation of one of our operations joint ventures in India in the fourth quarter of 2023, as described below in this "Human Capital" section. Approximately 74% of our employees are located outside the United States.

The Board of Directors' Human Resources Committee oversees our human capital management strategy, and receives regular updates on matters such as recruitment, retention, development, culture and inclusion, diversity and equity initiatives. Our Enterprise Talent Management Committee, which consists of senior executives, provides leadership, input and advice on our global talent-related initiatives to support our strategic priority to continually seek to become a higher-performing organization.

Organizational Effectiveness

Driving improvements in both individual and organizational productivity is a key enabler of our overall human capital management strategy, and we are focused on strategic workforce planning, building upon current headcount budgeting and forecasting activities. Our productivity efforts aim to promote the optimal cost and efficiency of our human capital through clear alignment between our business strategy and our organizational structure, headcount, personnel expense. geographic footprint. performance management, people development and reward systems. We focus on cultivating a high performing workforce that is adept at achieving profitable growth, responsive to changing business needs, and structured and resourced to deliver desired outcomes. Professional development and employee learning are necessary to achieve our human capital goals, and we seek to align our learning and development offerings with our corporate strategy as described in more detail below under "Attracting and Retaining Top Talent." We believe that improving the productivity of our workforce and strengthening our operational and execution focus will yield more engaged and higher performing employees and optimize our ability to serve our clients, grow revenues and improve operating margin.

In 2023, we continued to streamline and increase the efficiency of our operations to drive sustained productivity improvements, which we expect to enable us to further enhance our client service model. As noted above, in the fourth quarter of 2023, as part of ongoing transformation and productivity initiatives, we completed the consolidation of one of our operations joint ventures in India. Subsequently in 2023, we announced plans to assume full ownership of a second operations joint venture in India, which is expected to be completed in 2024 and further streamline our operating model in India.

Workforce Engagement and Culture

Our culture and values help to define us as a company and provide employees with a clear and compelling value proposition. Our culture traits provide a blueprint for employees in carrying out their work:

- Choose to Own It;
- Break Through Silos;
- Deliver Results with Integrity and Speed;
- Do Better Every Day; and
- Care for Our Colleagues, Clients and Community.

We aim to promote strong levels of employee commitment and connection to the company by highlighting our shared culture traits and the behaviors that drive our business strategy. Our leadership training programs are designed to embed these culture traits into our development processes. We also provide multiple avenues for recognition of employees who role-model our culture traits, such as through our Risk Excellence Awards, which recognize and reward employees who demonstrate exemplary risk management behaviors. Through our Bravo program, employees recognized their colleagues over 118,000 times for outstanding work in 2023. We believe that a culture where employees feel valued, engaged and empowered makes State Street a more desirable place to work, helps us attract key talent and retain employees as they grow in their careers, fostering an environment that enhances each individual's productivity and professional satisfaction.

We use our compensation program to incentivize our executives to role-model these shared culture traits. In determining executive compensation, we first measure enterprise-level performance. We then evaluate executives' performance against individual objectives derived from our corporate goals, including their performance advancing and role-modeling the critical leadership behaviors and culture traits that drive our business strategy.

The integrity and ethical decision-making of our employees is also paramount for our culture and we want our employees to know their opinions are valued, to feel comfortable asking questions and raising concerns, and to have no fear of retaliation. We encourage employees to speak up if they see behavior that is inconsistent with our Standard of Conduct, policies, culture or values, and we regularly communicate the multiple channels provided for them to do so, including our Speak Up Line (which can be used to report anonymous concerns). Global Human Resources team and other avenues. Reports are provided to State Street's Lead Director, General Counsel and General Auditor, depending on the nature of the reported concern. Encouraging professional challenge and debate is also a key leadership behavior that we use in evaluating candidates for executive promotions. Our approach is to promote ethical conduct by treating minor policy breaches as learning opportunities, and treating major policy breaches and misconduct promptly, professionally and seriously.

Attracting and Retaining Top Talent

Our talent management efforts are focused on developing and retaining top talent and industry leaders in markets that align with current and future demands and the evolution of our business. Retention and ongoing development of our talent requires competitive compensation and benefits, a wide range of learning and development offerings, strong support by engaged and well-trained leaders and managers and a culture where employees feel valued, engaged and empowered. As such, we carefully monitor our hiring, promotion and turnover rates and implement programs to help retain and develop our employees.

In 2023, we continued to focus on our strategic workforce planning efforts to improve internal mobility, upskilling employees capable of expanding or changing their contributions, and limiting our external hiring to priority areas. Through our various internal mobility efforts, more than one-third of open roles in 2023 were filled with internal candidates. Hiring managers have visibility into internal talent pools, allowing us to continue to leverage our global employee population as our talent source.

As a critical component of our ability to attract and retain employees, we regularly monitor our compensation program to maintain competitiveness. Our overall aim with respect to compensation is to reward high performance, motivate employees and provide competitive incentive opportunities. Compensation typically comprises fixed compensation, which reflects individual skills and abilities relative to role requirements, and variable compensation, which is designed to link total compensation to organizational, business line, risk management and individual performance. Our compensation program is intended to drive our business strategy by differentiating pay based on performance, including, as described above, the performance of our executives in advancing and rolemodeling the leadership behaviors and culture traits that drive that strategy.

Professional development and emplovee learning are also key elements of our talent retention strategy. We seek to align our learning and development offerings with our corporate strategy by offering skill enhancement opportunities addressing the rapidly changing, technology-centric demands of the financial services industry. This includes structured, pre-defined 'learning-pathways' like the Global Deliverv Academy, which provides standardized technical training support for new employees, as well as individual access to a wide range of learning offerings that allow manager and employee to define a personalized development journey. We also provide professional development opportunities and access to enhanced or new roles to help deepen our employees' skillsets and provide them with a broader perspective on the company.

Inclusion, Diversity and Equity

Inclusion, diversity and equity have long been a focus for our company, and we aim to deliver programs, resources and support that foster an environment in which every employee feels valued, inspired and empowered to leverage their diverse experiences and identities to provide innovative and authentic service to our clients, community and each other.

We believe that our strength comes from our diversity, including with respect to disability, gender, LGBTQ+ identity, race and veteran status, and our objective is to attract, hire and promote the best person for each job, positioning us to be an essential partner to our clients. We established enterprise-wide multi-year diversity goals for gender (globally) and employees who are black, indigenous and people of color (BIPOC) (United States only) in 2017. In 2023, we made progress compared to 2022 in six of the eight goal categories. Although we fell short of achieving all of our diversity goals, we achieved five of our eight goals, including all of our goals for BIPOC employees in the United States in 2023. We are proud of our progress and continue to integrate key learnings as we prepare to establish our next set of multi-year goals.

We are also focused on transparency and accountability and publish information about our inclusion, diversity and equity-related goals and activities on our website because we believe that maintaining transparency about where we are and where we have more work to do is an important part of holding ourselves accountable. We also publish our EEO-1 demographic data and pay equity information on our website.

We continue to accelerate progress via our "10 Actions Against Racism and Inequality," which we established in July 2020. These concrete actions include goals to increase our Black and Latinx representation among our senior leaders, while addressing racial and social injustice and inequity by enhancing inclusion and diversity within our own company and advocating for the same in our industry and communities. In 2023, we announced our achievement of Management Leadership for Tomorrow's (MLT) Black Equity at Work Bronze Certification. State Street became the first global SIFI to earn this designation, which focuses on rigorous accountability, development action with and implementation of a comprehensive Black equity plan.

At the end of 2023, our global workforce was approximately 56% men and 44% women, and women represented approximately 39% of our leadership (defined as senior vice president level and above). In the United States, approximately 37% of our workforce self-identified as members of the BIPOC community.

Community Engagement

Through our community engagement programs, we aim to benefit the communities where our employees work and live, develop employees' professional and leadership skills, and increase employee engagement and retention through meaningful volunteer opportunities that affirm a sense of purpose and demonstrate alignment with our values.

We are proud of our impact on communities around the world through employee volunteering and the financial support of State Street Foundation to non-profit organizations. We provide training and support for State Street employees to serve as members of boards of directors of charitable organizations, expanding their leadership skills through community service. Our skills-based volunteer program gives employees the opportunity to strengthen their communities while also improving their professional skills in alignment with our overall human capital management strategy. Additionally, our matching gifts program recognizes the employees' contributions in the community by monetizing volunteer time, matching personal donations and supporting employee fundraising efforts. We believe that being a good corporate citizen drives employee engagement, enhances our reputation with clients and potential employees, improves brand recognition and builds public trust.

SUPERVISION AND REGULATION

We are registered with the Federal Reserve as a bank holding company pursuant to the Bank Holding Company Act of 1956. The Bank Holding Company Act generally limits the activities in which bank holding companies and their non-banking subsidiaries may engage to managing or controlling banks and to a range of activities that are considered to be closely related to banking. Bank holding companies that have elected to be treated as financial holding companies, such as the Parent Company, may engage in a broader range of activities considered to be "financial in nature." The regulatory limits on our activities also apply to non-banking entities that we are deemed to "control" for purposes of the Bank Holding Company Act, which may include companies of which we own or control 5% or more of a class of voting shares. The Federal Reserve may order a bank holding company to terminate any activity, or its ownership or control of a non-banking subsidiary, if the Federal Reserve finds that the activity, ownership or control constitutes a serious risk to the financial safety, soundness or stability of a banking subsidiary or is inconsistent with sound banking principles or statutory purposes. The Bank Holding Company Act also requires a bank holding company to obtain prior approval of the Federal Reserve before it acquires substantially all the assets of any bank, or ownership or control of more than 5% of the voting shares of any bank.

The Parent Company has elected to be treated as a financial holding company and, as such, may engage in a broader range of non-banking activities than permitted for bank holding companies and their subsidiaries that have not elected to become financial holding companies. Financial holding companies may engage directly or indirectly, either de novo or by acquisition, in activities that are defined by the Federal Reserve to be financial in nature, provided that the financial holding company gives the Federal Reserve after-the-fact notice of the new activities. Activities defined to be financial in nature include, but are not limited to: providing financial or investment advice; underwriting; dealing in or making markets in securities; making merchant banking investments, subject to significant limitations; and any activities previously found by the Federal Reserve to be closely related to banking. In order to maintain our status as a financial holding company, we and each of our U.S. depository institution subsidiaries are expected to be well capitalized and well managed, as defined in applicable regulations and determined in part by the results of regulatory examinations, and must comply with Community Reinvestment Act obligations. Failure to maintain these standards may result in restrictions on our activities and may ultimately permit the Federal Reserve to take enforcement actions against us and restrict our ability to engage in activities defined to be financial in nature.

In response to the 2008 financial crisis, as well as other factors, such as technological and market changes, both the scope of the laws and regulations and the intensity of the supervision to which our business is subject has increased. Regulatory enforcement and fines have also increased across the banking and financial services sector. Many of these changes have occurred as a result of the Dodd-Frank Act and its implementing regulations, most of which are now in place. Subsequently, in 2018, the EGRRCPA was enacted. The EGRRCPA's revisions to the U.S. financial regulatory framework have altered certain laws and regulations applicable to us and other major financial services firms. Changes in key personnel at the federal banking agencies that regulate such banking organizations, including the Federal Reserve, the FDIC and the OCC (U.S. Agencies), may result in increased prudential and conduct oversight, more extensive regulatory requirements, changing interpretations of existing rules and guidelines, and potentially more stringent enforcement and more severe penalties. Irrespective of any regulatory change, we expect that our business will remain subject to extensive regulation and supervision.

In addition, increased regulatory requirements and initiatives have been and are being implemented globally with respect to financial institutions, including the implementation of the Basel III rule (refer to "Regulatory Capital Adequacy and Liquidity Standards" in this "Supervision and Regulation" section and under "Capital" in "Financial Condition" in our Management's Discussion and Analysis in this Form 10-K for a discussion of Basel III, as well as the U.S. Agencies' proposed rule regarding the Basel III endgame), the Capital Requirements Directive and Capital Requirements Regulation and the E.U. Digital Operational Resilience Act (DORA), as well as proposals for amending the Alternative Investment Fund Managers Directive and under the Capital Markets Union Action Plan.

Many aspects of our business are subject to regulation by other U.S. federal and state governmental and regulatory agencies and selfregulatory organizations (including securities exchanges), and by non-U.S. governmental and regulatory agencies and self-regulatory organizations. Some aspects of our public disclosure, corporate governance principles and internal control systems are subject to the Sarbanes-Oxley Act of 2002 (SOX), the Dodd-Frank Act and regulations and rules of the SEC and the New York Stock Exchange.

Regulatory Capital Adequacy and Liquidity Standards

Basel III Rule

We are subject to the Basel III framework (Basel III rule) in the United States. The provisions of the

Basel III rule related to minimum capital requirements, capital buffers and deductions and adjustments to regulatory capital were fully implemented as of January 2019. We are also subject to the market risk capital rule as implemented by U.S. banking regulators.

As required by the Dodd-Frank Act, we are subject to a "capital floor," also referred to as the Collins Amendment, in the assessment of our regulatory capital adequacy. Thus, our risk-based capital ratios for regulatory assessment purposes are the lower of each ratio calculated under the standardized approach and the advanced approaches. We are also subject to the capital conservation buffer and the countercyclical capital buffer described below in this "Supervision and Regulation" section.

On July 27, 2023, the U.S. Agencies issued a proposed rule to implement the Basel III endgame (Basel III Endgame Proposal) for large banks, and separately proposed revisions to the U.S. G-SIB capital surcharge framework (G-SIB Surcharge Proposal). The Basel III Endgame Proposal would, among other things, eliminate the advanced approaches for monitoring capital adequacy in favor of a new standardized expanded risk-based approach that would include, unlike the current standardized approach, operational risk and CVA risk RWA components, and would also replace the existing market risk rule with the new fundamental review of the trading book (FRTB) framework. The G-SIB Surcharge Proposal would, among other things, measure the G-SIB surcharge in more granular 0.1% increments as opposed to the 0.5% increments that currently apply.

The Basel III Endgame Proposal would maintain the current Basel III rule's dual-requirement structure, whereby we and State Street Bank would be required to calculate our risk-based capital ratios under both the expanded risk-based approach and the standardized approach. In addition, the proposal would modify the existing standardized approach by requiring that the proposed new market risk standards, FRTB, also be applied in the standardized approach. The Basel III Endgame Proposal would apply the SCB and G-SIB surcharge to the risk-based capital requirements calculated under both the expanded risk-based approach and the existing standardized approach. The Basel III Endgame Proposal includes an effective date of July 1, 2025, with three-year transition arrangements until the requirements are fully phased in on July 1, 2028. The G-SIB Surcharge Proposal is set to be implemented two calendar quarters after the date of the adoption of the final rule, which is currently to be determined.

Based on our current understanding of the Basel III Endgame Proposal, we estimate that, if the expanded risk-based approach had been 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 risk-based approach RWA as of that date would have been approximately 15% higher than our actual standardized approach RWA as of that date.

Any estimate of how the expanded risk-based approach may impact us is 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 interpretations (including changes in interpretations) of, and potential modifications by the U.S. Agencies to, the proposal.

Risk Weighted Assets

The existing Basel III rule provides two frameworks for the calculation of RWA for purposes of bank regulatory compliance: the "standardized" approach and the "advanced" approaches, which are applicable to advanced approaches banking organizations, like us.

The standardized approach prescribes standardized risk weights for certain on- and offbalance sheet exposures in the calculation of RWA. The advanced approaches consist of the Advanced Internal Ratings-Based Approach (AIRB) used for the calculation of RWA related to credit risk and the Advanced Measurement Approach (AMA) used for the calculation of RWA related to operational risk.

In November 2019, the U.S. Agencies issued a final rule that, among other things, implements the standardized approach for counterparty credit risk (SA-CCR), a methodology for calculating the exposure amount for derivative contracts. Under the final rule, beginning on January 1, 2022, we had the option to use the SA-CCR or the Internal Model Methodology (IMM) to measure the exposure amount of our cleared and uncleared derivative transactions under our advanced approaches calculation. We have elected to use the SA-CCR for purposes of our advanced approaches capital calculations. Since January 1, 2022, we are required to determine the

amount of these exposures under our standardized approach capital calculation using the SA-CCR.

Minimum Risk-Based Capital Requirements

Among other things, the Basel III rule (as amended) requires:

- a minimum CET1 risk-based capital ratio of 4.5% and a minimum SLR of 3% for advanced approaches banking organizations;
- a minimum Tier 1 risk-based capital ratio of 6%;
- a minimum total capital ratio of 8%; and
- the stress capital and countercyclical capital buffers, referenced below, as well as a G-SIB surcharge and the enhanced SLR (which acts as an SLR buffer) described in "Capital" in "Financial Condition" in our Management's Discussion and Analysis in this Form 10-K.

Under the Basel III rule, our total regulatory capital is composed of three tiers: CET1 capital, Tier 1 capital (which includes CET1 capital), and Tier 2 capital. The total of Tier 1 and Tier 2 capital, adjusted as applicable, is referred to as total regulatory capital.

CET1 capital is composed of core capital elements, such as qualifying common shareholders' equity and related surplus plus retained earnings and the cumulative effect of foreign currency translation plus net unrealized gains (losses) on debt and equity securities classified as AFS, less treasury stock and less goodwill and other intangible assets, net of related deferred tax liabilities. Tier 1 capital is composed of CET1 capital plus additional Tier 1 capital instruments which, for us, includes four series of preferred equity outstanding as of December 31, 2023. Tier 2 capital includes certain eligible subordinated long-term debt instruments. Total regulatory capital consists of Tier 1 capital and Tier 2 capital.

Certain other items, if applicable, must be deducted from Tier 1 and Tier 2 capital, including certain investments in the capital of unconsolidated banking, financial and insurance entities and the amount of expected credit losses that exceeds recorded allowances for loan and other credit losses. Expected credit losses are calculated for wholesale credit exposures by formula in conformity with the Basel III rule.

G-SIB Surcharge

The eight U.S. bank holding companies deemed to be G-SIBs, including us, are required to calculate the G-SIB surcharge annually according to two methods, and be bound by the higher of the two:

- Method 1: Assesses systemic importance based upon five equally-weighted components: size, interconnectedness, complexity, cross-jurisdictional activity and substitutability; or
- Method 2: Alters the calculation from Method 1 by factoring in a short-term wholesale funding score in place of substitutability and applying a fixed coefficient to each of the five components.

Method 2 is the binding methodology for us as of December 31, 2023. Our current G-SIB surcharge, through December 31, 2024, is 1.0%. Based upon preliminary calculations using data as of December 31, 2023, we currently anticipate that our surcharge will remain at 1% through December 31, 2025; however, that calculation has not yet been finalized and is subject to many financial, balance sheet, market and other factors, and consequently there is a risk that a higher G-SIB surcharge of 1.5% will result from the final calculation. As noted above, our G-SIB surcharge must be calculated annually, and yearover-year changes in our Method 1 or Method 2 G-SIB scores may therefore result in changes to our G-SIB surcharge. If our Method 1 or Method 2 score changes year-over-year such that we would become subject to a higher surcharge, the higher surcharge would not become effective for two years from the "as of" date (e.g., a higher surcharge calculated as of December 31, 2023 would not become effective until January 1, 2026). If, however, our Method 1 or Method 2 score changes year-over-year such that we would become subject to a lower surcharge, we would be subject to the lower surcharge beginning one full year from the "as of" date (e.g., a lower surcharge calculated as of December 31, 2023 would become effective January 1, 2025).

Stress Capital Buffer

On March 4, 2020, the U.S. Agencies issued the SCB final rule that replaced, under the standardized approach, the fixed capital conservation buffer (2.5%) with an SCB calculated as the difference between the institution's starting and lowest projected CET1 ratio under the severely adverse scenario of the Federal Reserve's supervisory stress test plus planned common stock dividend payments (as a percentage of RWA) from the fourth through seventh quarter of the supervisory stress testing planning horizon. Based on our results from the 2023 supervisory stress test, our SCB for the period of October 1, 2023 through September 30, 2024 is set at the prescribed minimum of 2.5% of RWA. For additional information about the SCB final rule, refer to "Capital Planning, Stress Tests and Dividends" in this "Supervision and Regulation" section.

Under the SCB final rule, a banking organization would be able to make capital distributions and discretionary bonus payments without specified quantitative limitations (although subject to other potential regulatory constraints, such as supervisory limitations), as long as it maintains its required SCB plus the applicable G-SIB surcharge (plus any potentially applicable countercyclical capital buffer) over the minimum required risk-based capital ratios and as long as it satisfies all leverage based capital requirements and buffers. From time to time, under certain economic conditions, banking regulators may establish a minimum countercyclical capital buffer up to a maximum of 2.5% of total RWA. The countercyclical capital buffer was initially set by banking regulators at zero, and has not been increased since its inception.

Assuming a countercyclical buffer of 0%, the minimum capital ratios as of January 1, 2024, including a capital conservation buffer and an SCB of 2.5% for advanced and standardized approaches, respectively, and a G-SIB surcharge of 1.0%, are 8.0% for CET1 capital, 9.5% for Tier 1 risk-based capital and 11.5% for total risk-based capital, in order for us to make capital distributions and discretionary bonus payments without limitation.

Leverage Ratios

We are subject to a minimum Tier 1 leverage ratio and SLR. The Tier 1 leverage ratio is based on Tier 1 capital and adjusted quarterly average onbalance sheet assets. The Tier 1 leverage ratio differs from the SLR primarily in that the denominator of the Tier 1 leverage ratio is a quarterly average of onbalance sheet assets, while the SLR additionally includes off-balance sheet exposures. We must maintain a minimum Tier 1 leverage ratio of 4%.

We are also subject to a minimum SLR of 3%, and as a U.S. G-SIB, we must maintain a 2% SLR buffer in order to avoid any limitations on distributions to shareholders and discretionary bonus payments to certain executives. If we do not maintain this buffer, limitations on these distributions and discretionary bonus payments would be increasingly stringent based upon the extent of the shortfall.

In November 2019, pursuant to the EGRRCPA, the U.S. Agencies adopted a final rule that excludes central bank deposits from a custodial banking organization's total leverage exposure for purpose of calculating the SLR. This exclusion is not applicable to total leverage exposure under the calculation of Tier 1 leverage. This exclusion is equal to the lesser of (i) the total amount of funds the custodial banking organization and its consolidated subsidiaries have on deposit at qualifying central banks and (ii) the total amount of client funds on deposit at the custodial banking organization that are linked to fiduciary or custodial and safekeeping accounts. The rule became effective on April 1, 2020. For the quarter ended December 31, 2023, we excluded \$69.6 billion of average balances held on deposit at central banks from the denominator used in the calculation of our SLR based on this custodial banking exclusion. The TLAC and LTD that State Street is required to hold under SLR-based requirements reflect the exclusion of certain central bank balances as a consequence of the rule.

The SA-CCR final rule that went into effect for us on January 1, 2022, also requires us to incorporate the SA-CCR into the calculation of our total leverage exposure for the purpose of calculating SLR.

Total Loss-Absorbing Capacity

The Federal Reserve has implemented rules on TLAC, LTD and clean holding company requirements for U.S. domiciled G-SIBs, such as us. The requirements are intended to improve the resiliency and resolvability of certain U.S. banking organizations through enhanced prudential standards. The TLAC rule imposes: (1) external TLAC requirements (i.e., combined eligible Tier 1 regulatory capital and LTD); (2) separate external LTD requirements; and (3) clean requirements holding company that impose restrictions on certain types of liabilities and limit non-TLAC related third party liabilities to 5% of external TLAC.

Among other things, the TLAC rule requires us to comply with minimum requirements for external TLAC and external LTD. Specifically, since January 2023, we must hold:

- (1) combined eligible Tier 1 regulatory capital and LTD in the amount equal to the greater of 21.5% of total RWA (18.0% minimum plus a 2.5% capital conservation buffer plus a G-SIB surcharge calculated for these purposes under Method 1 of 1.0% plus any applicable counter-cyclical buffer, which is currently 0%) and 9.5% of total leverage exposure (7.5% minimum plus the enhanced SLR buffer of 2.0%), as defined by the SLR rule; and
- (2) qualifying external LTD equal to the greater of 7.0% of RWA (6.0% minimum plus a G-SIB surcharge calculated for these purposes under Method 2 of 1.0%) and 4.5% of total leverage exposure, as defined by the SLR rule.

Additionally, certain large banking organizations, such as us and State Street Bank, are required to make deductions from regulatory capital for investments in certain unsecured debt instruments issued by bank holding companies and U.S. intermediate holding companies of foreign banks that are subject to the Federal Reserve's TLAC and LTD requirements, as well as foreign G-SIBs.

Liquidity Coverage Ratio and Net Stable Funding Ratio

In addition to capital standards, the Basel III framework introduced two quantitative liquidity standards: the LCR and the NSFR.

We are subject to the rule issued by the U.S. Agencies implementing the BCBS's LCR in the United States. The LCR is intended to promote the short-term resilience of internationally active banking organizations, like us, to improve the banking industry's ability to absorb shocks arising from market stress over a 30 calendar day period and improve the measurement and management of liquidity risk.

The LCR measures an institution's HQLA against its net cash outflows under a prescribed stress environment. We report LCR to the Federal Reserve daily and are required to calculate and maintain an LCR that is equal to or greater than 100%. In addition, we publicly disclose certain qualitative and quantitative information about our LCR consistent with the quarterly disclosure requirements of the Federal Reserve's final rule.

Compliance with the LCR has required that we maintain an investment portfolio that contains an adequate amount of HQLA. In general, HQLA investments generate a lower investment return than other types of investments, resulting in a negative impact on our NII and our NIM. In addition, the level of HQLA we are required to maintain under the LCR is dependent upon our client relationships and the nature of services we provide, which may change over time. Deposits resulting from certain services provided ("operational deposits") are treated as more resilient during periods of stress than other deposits. As a result, if balances of operational deposits increased relative to our total client deposit base, we would expect to require less HQLA in order to maintain our LCR. Conversely, if balances of operational deposits decreased relative to our total client deposit base, we would expect to require more HQLA. On May 5, 2020, the U.S. Agencies issued a rule that modified the LCR rule to neutralize the impact on LCR of the advances made by the MMLF (and Paycheck Protection Liquidity Facility program) and the exposures securing such advances.

In October 2020, the U.S. Agencies issued a final rule implementing the BCBS's NSFR in the U.S. The final rule requires large banking organizations to maintain an amount of available stable funding, which is a weighted measure of a company's funding sources over a one-year time horizon, calculated by applying standardized weightings to the company's equity and liabilities based on their expected stability, that is no less than the amount of required stable funding, which is calculated by applying standardized weightings to assets, derivatives exposures and certain other items based on their liquidity characteristics. As a U.S. G-SIB, we are required to maintain an NSFR that is equal to or greater than 100%. In addition, in 2023, we began publicly disclosing certain qualitative and quantitative information about our NSFR consistent with the semiannual disclosure requirements of the Federal Reserve's final rule. Additional information about our NSFR is provided in "Asset Liquidity" in "Liquidity Risk Management" in our Management's Discussion and Analysis in this Form 10-K.

Capital Planning, Stress Tests and Dividends

Pursuant to the Dodd-Frank Act, in March 2020, the Federal Reserve adopted capital planning and stress test requirements for large bank holding companies, including us, which form part of the Federal Reserve's annual stress testing and capital planning framework. The Federal Reserve conducts its own stress tests of our business operations using supervisory models, referred to as supervisory stress tests, the results of which it uses to calibrate our annual SCB, subject to a minimum of 2.5%. In addition, under the Federal Reserve's capital plan rule, we must conduct periodic stress testing of our business operations and submit an annual capital plan to the Federal Reserve, taking into account the results of separate stress tests designed by us and by the Federal Reserve. The Federal Reserve conducts a qualitative assessment of our capital plan as part of the annual supervisory process known as CCAR, to evaluate the strength of our capital planning practices, including our ability to identify, measure, and determine the appropriate amount of capital for our risks, and controls and governance supporting capital planning.

The Federal Reserve's final SCB rule to integrate its annual capital planning and stress testing requirements with certain ongoing regulatory capital requirements applies to certain bank holding companies, including us. The final rule introduced an SCB and related changes to the capital planning and stress testing processes. The standardized approach SCB equals the greater of (i) 2.5%; and (ii) the maximum decline in our CET1 capital ratio under the severely adverse scenario over the supervisory stress test measurement period, plus the ratio of (a) the sum of the dollar amount of our planned common stock dividends for the fourth through seventh quarters of the supervisory stress test projection period to (b) our projected RWA for the quarter in which our projected CET1 capital ratio reaches its minimum in the supervisory stress test. Risked-based regulatory capital requirements under the standardized approach include the SCB, as summarized above, as well as our G-SIB capital surcharge and any applicable countercyclical capital buffer.

The final rule made related changes to capital planning and stress testing processes for bank holding companies subject to the SCB requirement. In particular, the final rule assumes that bank holding companies maintain a constant level of assets and RWA throughout the supervisory stress test projection period. In addition, under the final rule the supervisory stress test no longer assumes that bank holding companies make all nine quarters of planned capital distributions under stress, although the SCB incorporates the dollar amount of four quarters of planned common stock dividends, as described above.

The final rule did not change regulatory capital requirements under the advanced approaches, the Tier 1 leverage ratio or the SLR.

Our SCB requirement was 2.5% for the period from October 1, 2022 through September 30, 2023. On June 28, 2023, we were notified by the Federal Reserve of the results from the 2023 supervisory stress test. Our SCB calculated under the 2023 supervisory stress test was well below the 2.5% minimum, resulting in an SCB at that floor, which went into effect starting October 1, 2023 and will remain effective through September 30, 2024.

Although the final SCB rule changed the effects of the CCAR and supervisory stress test processes so that the SCB, rather than CCAR, is the source of our stress-based capital requirements, we continue to be subject to CCAR's capital plan requirements and the supervisory assessment of our capital planning activities. Under the capital planning requirements, our annual capital plan must include a description of all of our planned capital actions over a nine-guarter planning horizon, including any capital qualifying instruments, any capital distributions, such as payments of dividends on, or repurchases of, our stock, and any similar action that the Federal Reserve determines could affect our consolidated capital. The capital plan must include a discussion of how we will maintain capital above the minimum regulatory capital ratios, including the minimum ratios under the Basel III rule, and serve as a source of strength to State Street Bank under supervisory stress scenarios. Changes in our strategy, merger or acquisition activity or unanticipated uses of capital could result in a change in our capital plan and its associated capital actions, including capital raises or modifications to planned capital actions, such as repurchases of our stock, and may require resubmission of the capital plan to the Federal Reserve if, among other reasons, would not meet our regulatory capital we requirements after making the proposed capital distribution.

In addition to its stress testing and capital planning requirements, the Federal Reserve has the authority to prohibit or to limit the payment of dividends, the repurchase of common stock, or other capital actions that reduce capital by the banking organizations it supervises, including the Parent Company and State Street Bank, if, in the Federal Reserve's opinion, the capital action would constitute an unsafe or unsound practice in light of-the financial condition of the banking organization. All of these policies and other requirements could affect our ability to pay dividends and repurchase our stock or require us to provide capital assistance to State Street Bank and any other banking subsidiary. Our common stock and other stock dividends, including the declaration, timing and amount thereof, remain subject to consideration and approval by our Board of Directors at the relevant times.

The Federal Reserve, under the Dodd-Frank Act, previously required us to conduct semi-annual State Street-run stress tests and to publicly disclose the summary results of our State Street-run stress tests under the severely adverse economic scenario. We are also required to undergo an annual supervisory stress test conducted by the Federal Reserve. The EGRRCPA modifies certain aspects of these stress-testing requirements, reducing the number of scenarios in the Federal Reserve's supervisory stress test from three to two and modifying our obligation to perform company-run stress-tests from semi-annually to annually. The Federal Reserve adopted a final rule in October 2019 among other things, implemented that. this modification.

Enhanced Prudential Standards

The Dodd-Frank Act, as amended by the EGRRCPA, establishes a systemic risk regime to which large bank holding companies with \$100 billion or more in consolidated assets, such as us, are subject. The Federal Reserve is required to tailor the application of the enhanced prudential standards to bank holding companies based on their size, complexity, risk profile and other factors. U.S. G-SIBs, such as us, are subject to the most stringent requirements, including heightened capital, leverage, liquidity and risk management requirements and single-counterparty credit limits (SCCL).

The FSOC can recommend prudential standards, reporting and disclosure requirements for SIFIs to the Federal Reserve, and must approve any finding by the Federal Reserve that a financial institution poses a grave threat to financial stability and must undertake mitigating actions. The FSOC is also empowered to designate systemically important payment, clearing and settlement activities of financial institutions, subjecting them to prudential supervision and regulation, and, assisted by the Office of Financial Research within the U.S. Department of the Treasury, can gather data and reports from financial institutions, including us.

Under the Federal Reserve's enhanced prudential standards regulation under the Dodd-Frank

Act, as amended by the EGRRCPA, we are required to comply with various liquidity-related risk management standards and maintain a liquidity buffer of unencumbered highly liquid assets based on the results of internal liquidity stress testing. This liquidity buffer is in addition to other liquidity requirements, such as the LCR and the NSFR. The regulations also establish requirements and responsibilities for our risk committee and mandate risk management standards.

In 2018, the Federal Reserve finalized rules that established SCCL for large banking organizations. U.S. 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 nonbank SIFIs 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 final SCCL rules became effective for us on January 1, 2020.

The Federal Reserve has established a rule that contractual requirements on certain imposes "gualified financial contracts" to which U.S. G-SIBs, including us, and their subsidiaries are parties. Under the rule, certain qualified financial contracts generally must expressly provide that transfer restrictions and default rights against a U.S. G-SIB, or subsidiary of a U.S. G-SIB, are limited to the same extent as they would be under the Federal Deposit Insurance Act and Title II of the Dodd-Frank Act and their implementing regulations. In addition, certain qualified financial contracts may not, among other things, permit the exercise of any cross-default right against a U.S. G-SIB or subsidiary of a U.S. G-SIB based on an affiliate's entry into insolvency, resolution or similar proceedings, subject to certain creditor protections.

The systemic-risk regime also provides that for U.S. G-SIBs deemed to pose a grave threat to U.S. financial stability, the Federal Reserve, upon an FSOC vote, must limit that institution's ability to merge, restrict its ability to offer financial products, require it to terminate activities, impose conditions on activities or, as a last resort, require it to dispose of assets. Upon a grave threat determination by the FSOC, the Federal Reserve must issue rules that require financial institutions subject to the systemicrisk regime to maintain a debt-to-equity ratio of no more than 15 to 1 if the FSOC considers it necessary to mitigate the risk of the grave threat. The Federal Reserve also has the ability to establish further standards, including those regarding contingent capital, enhanced public disclosures and limits on short-term debt. including off-balance sheet exposures.

As a G-SIB, we are subject to enhanced supervision and prudential standards. Our status as a G-SIB has also resulted in heightened expectations of our U.S. and international regulators with respect to

our capital and liquidity management and our compliance and risk oversight programs. These heightened expectations have increased our regulatory compliance costs, including personnel, technology and systems, as well as significant additional implementation and related costs to enhance our regulatory compliance programs. Regulatory compliance requirements are anticipated to remain at least at the elevated levels we have experienced over the past several years.

Failure to meet current and future regulatory capital requirements could subject us to a variety of enforcement actions, including the termination of State Street Bank's deposit insurance by the FDIC, and to certain restrictions on our business, including those that are described above in this "Supervision and Regulation" section.

Not all of our competitors have similarly been designated as systemically important nor are all of them subject to the same degree of regulation as a bank or financial holding company, and therefore some of our competitors may not be subject to the same additional capital requirements.

For additional information about our regulatory capital position and our regulatory capital adequacy, as well as current and future regulatory capital requirements, refer to "Capital" in "Financial Condition" in our Management's Discussion and Analysis, and Note 16 to the consolidated financial statements in this Form 10-K.

The Volcker Rule

We are subject to the Volcker Rule and implementing regulations. The Volcker Rule prohibits banking entities, including us and our affiliates, from engaging in certain prohibited proprietary trading activities, as defined in the Volcker Rule regulations, subject to exemptions for market-making related activities, risk-mitigating hedging, underwriting and certain other activities. The Volcker Rule also requires banking entities to either restructure or divest certain ownership interests in, and relationships with, covered funds (as such terms are defined in the Volcker Rule regulations).

The Volcker Rule regulations require banking entities to establish extensive programs designed to promote compliance with the restrictions of the Volcker Rule. We have established a compliance program that we believe complies with the Volcker Rule regulations as currently in effect. Our compliance program restricts our ability in the future to service certain types of funds, in particular covered funds for which State Street Global Advisors acts as an advisor and certain types of trustee relationships. Consequently, Volcker Rule compliance entails both the cost of a compliance program and loss of certain revenue and future opportunities.

Recovery and Resolution Planning

Under Section 165(d) of the Dodd-Frank Act, we are required to submit a resolution plan on a biennial basis jointly to the Federal Reserve and the FDIC (as used in this "Recovery and Resolution Planning" section, the Agencies). The purpose of our resolution plan is to describe our preferred resolution strategy and to demonstrate that we have the resources and capabilities to execute on that strategy in the event of major financial distress. Through resolution planning, we seek to maintain our role as a key infrastructure provider within the financial system, while minimizing risk to the financial system.

The final rule published on November 1, 2019 requires U.S. G-SIBs to file a full resolution plan and a targeted resolution plan on an alternating basis in the relevant submission years. We submitted our updated 2023 165(d) resolution plan by July 1, 2023. Under the 165(d) rule, results are due from the Agencies by July 1, 2024, unless the deadline is extended due to extenuating circumstances. Our next 165(d) resolution plan submission to the Agencies is due by July 1, 2025.

In the event of material financial distress, our preferred resolution strategy is the Single Point of Entry (SPOE) Strategy. The SPOE Strategy provides that prior to the bankruptcy of the Parent Company and pursuant to a support agreement among the Parent Company, SSIF (a direct subsidiary of the Parent Company), our Beneficiary Entities (as defined below) and certain of our other entities, SSIF is obligated, up to its available resources, to recapitalize and/or provide liquidity to State Street Bank and the other entities benefiting from such capital and/or liquidity support (collectively with State Street Bank, "Beneficiary Entities"), in amounts designed to prevent the Beneficiary Entities from themselves entering into resolution proceedings. Following the recapitalization of, or provision of liquidity to the Beneficiary Entities, the Parent Company would enter into a bankruptcy proceeding under the U.S. Bankruptcy Code. The Beneficiary Entities and our other subsidiaries would be transferred to a newly organized holding company held by a reorganization trust for the benefit of the Parent Company's claimants.

Under the support agreement, the Parent Company pre-funded SSIF by contributing certain of its assets (primarily its liquid assets, cash deposits, investments in intercompany debt, investments in marketable securities and other cash and non-cash equivalent investments) to SSIF at the time it entered into the support agreement and will continue to contribute such assets, to the extent available, on an basis. In consideration ongoing for these contributions, SSIF has agreed in the support agreement to provide capital and liquidity support to the Parent Company and all of the Beneficiary

Entities in accordance with the Parent Company's capital and liquidity policies. Under the support agreement, the Parent Company is only permitted to retain cash needed to meet its upcoming obligations and to fund expected expenses during a potential bankruptcy proceeding. SSIF has provided the Parent Company with a committed credit line and issued (and may issue) one or more promissory notes to the Parent Company (the "Parent Company Funding Notes") that together are intended to allow the Parent Company to continue to meet its obligations throughout the period prior to the occurrence of a "Recapitalization Event", which is defined as the earlier occurrence of: (1) one or more capital and liquidity thresholds being breached or (2) the authorization by the Parent Company's Board of Directors for the Parent Company to commence bankruptcy proceedings. The support agreement does not obligate SSIF to maintain any specific level of resources and SSIF may not have sufficient resources to implement the SPOE Strategy.

In the event a Recapitalization Event occurs, the obligations outstanding under the Parent Company Funding Notes would automatically convert into or be exchanged for capital contributed to SSIF. The obligations of the Parent Company and SSIF under the support agreement are secured through a security agreement that grants a lien on the assets that the Parent Company and SSIF would use to fulfill their obligations under the support agreement to the Beneficiary Entities. SSIF is a distinct legal entity separate from the Parent Company and the Parent Company's other affiliates.

In accordance with our policies, we are required to monitor, on an ongoing basis, the capital and liquidity needs of State Street Bank and our other Beneficiary Entities. To support this process, we have established a trigger framework that identifies key actions that would need to be taken or decisions that would need to be made if certain events tied to our financial condition occur. The trigger thresholds are set at levels intended to provide for the availability of sufficient capital and liquidity to enable an orderly resolution without extraordinary government support that results in us emerging from resolution as a stabilized institution with market confidence restored.

Upon the occurrence of a Recapitalization Event: (1) SSIF would not be authorized to provide any further liquidity to the Parent Company; (2) the Parent Company would be required to contribute to SSIF any remaining assets it is required to contribute to SSIF under the support agreement (which specifically exclude amounts designated to fund expected expenses during a potential bankruptcy proceeding); (3) SSIF would be required to provide capital and liquidity support to the Beneficiary Entities to support such entities' continued operation to the extent of its available resources and consistent with the support agreement; and (4) the Parent Company would be expected to commence Chapter 11 proceedings under the U.S. Bankruptcy Code. No person or entity, other than a party to the support agreement, should rely on any of our affiliates being or remaining a Beneficiary Entity or receiving capital or liquidity support pursuant to the support agreement, including in evaluating any of our entities from a creditor's perspective or determining whether to enter into a contractual relationship with any of our entities.

State Street Bank is also required to submit periodically to the FDIC a plan for resolution in the event of its failure, referred to as an IDI plan. We submitted our last IDI plan by December 1, 2023 in alignment with changes to the IDI plan requirements as set out in the June 25, 2021 policy statement issued by the FDIC. The FDIC issued a notice of proposed rulemaking for the IDI Rule in August 2023 that, among other changes, would require IDI Plans to be submitted on a biennial basis by Group A filers (IDIs with \$100 billion or more in total assets), which is the category applicable to State Street.

Additionally, we are required to submit a recovery plan periodically to the Federal Reserve. The plan includes strategies designed to respond to stress factors at an early stage and stabilize and maintain operational continuity and market confidence. Our recovery strategies are intended to be implemented before our resolution plan is triggered. We are also engaged in recovery planning requirements in certain international jurisdictions where we operate.

Orderly Liquidation Authority

Under the Dodd-Frank Act, certain financial companies, including bank holding companies such as the Parent Company, and certain covered subsidiaries, can be subjected to the orderly liquidation authority. For the FDIC to be appointed as our receiver, two-thirds of the FDIC Board and two-thirds of the Federal Reserve Board must recommend appointment, and the U.S. Treasury Secretary, in consultation with the U.S. President, must then make certain extraordinary financial distress and systemic risk determinations. Absent such actions, we, as a bank holding company, would remain subject to the U.S. Bankruptcy Code.

The orderly liquidation authority went into effect in 2010, and rulemaking is proceeding incrementally, with some regulations now finalized and others planned but not yet proposed. If the FDIC were appointed as the receiver of the Parent Company pursuant to the orderly liquidation authority, the FDIC would have considerable powers to resolve the Parent Company, including: (1) the power to remove officers and directors responsible for the Parent Company's failure and to appoint new directors and officers; (2) the power to assign assets and liabilities to a third party or bridge financial company without the need for creditor consent or prior court review; (3) the ability to differentiate among similarly situated creditors, subject to a minimum recovery right to receive at least what they would have received in bankruptcy liquidation; and (4) broad powers to administer the claims process to determine distributions from the assets of the receivership to creditors not transferred to a third party or bridge financial institution.

In 2013, the FDIC released its proposed SPOE strategy for resolution of a SIFI under the orderly liquidation authority. The FDIC's release outlines how it would likely use its powers under the orderly liquidation authority to resolve a SIFI by placing its top-tier U.S. holding company in receivership and keeping its operating subsidiaries open and out of insolvency proceedings by transferring the operating subsidiaries to a new bridge holding company, recapitalizing the operating subsidiaries and imposing losses on the shareholders and creditors of the holding company in receivership according to their statutory order of priority.

Derivatives

Title VII of the Dodd-Frank Act imposed a comprehensive regulatory structure on the OTC derivatives market, including requirements for clearing, exchange trading, capital, margin, reporting and record-keeping. Title VII also requires certain persons to register as a major swap participant, a swap dealer or a securities-based swap dealer. The CFTC, the SEC, and other U.S. regulators have largely implemented key provisions of Title VII, although certain final regulations have only been in place for limited periods of time and others have not been finalized. Through this rulemaking process, regulators collectively have adopted or these proposed, among other things, regulations relating to reporting and record-keeping obligations, margin and capital requirements, the scope of registration and the central clearing and exchange trading requirements for certain OTC derivatives. The CFTC has also issued rules to enhance the oversight of clearing and trading entities. The CFTC, along with other regulators, including the Federal Reserve, have also issued rules with respect to margin requirements for uncleared derivatives transactions.

State Street Bank has registered with the CFTC as a swap dealer. As a registered swap dealer, State Street Bank is subject to significant regulatory obligations regarding its swap activity and the supervision, examination and enforcement powers of the CFTC and other regulators. The CFTC has granted State Street Bank a limited-purpose swap dealer designation. Under this limited-purpose designation, interest rate swap activity conducted by State Street Bank's Global Treasury group is not subject to certain of the swap regulatory requirements otherwise applicable to swaps entered into by a registered swap dealer, subject to a number of conditions. For all other swap transactions, our swap activities remain subject to all applicable swap dealer regulations.

Subsidiaries

The Federal Reserve is the primary federal banking agency responsible for regulating us and our subsidiaries, including State Street Bank, with respect to both our U.S. and non-U.S. operations. Our banking subsidiaries are subject to supervision and examination by various regulatory authorities and have regulatory requirements that may differ from the Parent Company.

State Street Bank

State Street Bank is a member of the Federal Reserve System, its deposits are insured by the FDIC and it is subject to applicable federal and state banking laws and to supervision and examination by the Federal Reserve, the Massachusetts Commissioner of Banks, as well as the FDIC and the regulatory authorities of those states and countries in which State Street Bank operates a branch.

As with the Parent Company, State Street Bank is considered an advanced approaches banking organization subject to the Basel III framework in the United States and is also subject to the market risk capital rule jointly issued by U.S. Agencies to implement the changes to the market risk capital framework in the United States. As required by the Dodd-Frank Act, State Street Bank, as an advanced approaches banking organization, is subject to a "capital floor," also referred to as the Collins Amendment, in the assessment of its regulatory capital adequacy, including the capital conservation buffer and countercyclical capital buffer described above in this "Supervision and Regulation" section.

Under the Basel III rule, State Street Bank's regulatory capital calculations, including any additions or deductions from capital for regulatory purposes, are consistent with the calculations of the Parent Company. For additional information about the Basel III endgame proposal, including the proposed replacements of the advanced approaches and existing market risk capital framework, refer to "Basel III Rule" above in this "Supervision and Regulation" section.

Similar to our Parent Company, State Street Bank is subject to the Tier 1 leverage ratio and the supplementary leverage ratio. However, as State Street Bank is an IDI subsidiary of a U.S. G-SIB, it is required to maintain a minimum Tier 1 leverage ratio of 5% and a minimum SLR of 6% to be considered well capitalized. Furthermore, for the purposes of calculating the SLR, State Street Bank is similarly subject to a final rule adopted by the U.S. Agencies that excludes central bank deposits from a custodial banking organization's total leverage exposure. For the quarter ended December 31, 2023, State Street Bank excluded \$69.6 billion of average balances held on deposit at central banks from the denominator used in the calculation of our SLR based on this custodial banking exclusion.

Pursuant to the U.S. Agencies' LCR and NSFR final rules, as a subsidiary of a U.S. G-SIB, State Street Bank is similarly required to maintain an LCR and NSFR, respectively, equal to or greater than 100%.

We and our subsidiaries that are not subsidiaries of State Street Bank are affiliates of State Street Bank under federal banking laws, which impose restrictions on various types of transactions, including loans, extensions of credit, investments or asset purchases by or from State Street Bank, on the one hand, to us and those of our subsidiaries, on the other. Transactions of this kind between State Street Bank and its affiliates generally are limited with respect to each affiliate to 10% of State Street Bank's capital and surplus, as defined by the aforementioned banking laws, are limited in the aggregate for all affiliates to 20% of State Street Bank's capital and surplus, and in some cases are also subject to strict collateral requirements. Derivatives, securities and securities lending transactions borrowing between State Street Bank and its affiliates became subject to these restrictions pursuant to the Dodd-Frank Act. The Dodd-Frank Act also expanded the scope of transactions required to be collateralized. In addition, the Volcker Rule generally prohibits similar transactions between the Parent Company or any of its affiliates and covered funds for which we or any of our affiliates serve as the investment manager, investment adviser, commodity trading advisor or sponsor and other covered funds organized and offered pursuant to specific exemptions in the Volcker Rule regulations.

Federal law also that requires certain transactions by a bank with affiliates be on terms and under circumstances, including credit standards, that are substantially the same, or at least as favorable to the bank, as those prevailing at the time for comparable transactions involving other non-affiliated companies. Alternatively, in the absence of comparable transactions, the transactions must be on terms and under circumstances, including credit standards, that in good faith would be offered to, or would apply to, non-affiliated companies.

State Street Bank is also prohibited from engaging in certain tie-in arrangements in connection with any extension of credit or lease or sale of property or furnishing of services. Federal law provides for a depositor preference on amounts realized from the liquidation or other resolution of any depository institution insured by the FDIC.

Other Subsidiaries

Our other subsidiary trust companies are subject to supervision and examination by the OCC, the Federal Reserve or by the appropriate state banking regulatory authorities of the states in which they are organized and operate. Our continental European banking subsidiary, State Street Bank International GmbH is a significant entity in accordance with European banking regulations and accordingly is supervised directly by the European Central Bank. State Street Bank International GmbH operates in several countries including Germany, Luxembourg, Italy, France and Switzerland. In the United Kingdom, the London branch of State Street Bank is dually regulated by the Prudential Regulatory Authority and the Financial Conduct Authority, in Ireland our depositary and fund administration companies are regulated by the Central Bank of Ireland and in Canada our trust company is regulated by the Office of the Superintendent of Financial Institutions. Our other subsidiaries internationally engaged in our investment servicing activities are regulated by applicable authorities in the jurisdictions of their activities. Our subsidiaries involved in our investment management and securities and markets businesses are regulated by governments, securities exchanges, self-regulatory organizations, central banks and regulatory bodies in U.S. federal and state and non-U.S. jurisdictions, especially in those jurisdictions in which we maintain an office.

Many aspects of our investment management activities are subject to U.S. federal and state, as well as non-U.S., laws and regulations primarily intended to benefit the investment holder, rather than our shareholders. These laws and regulations generally grant supervisory agencies and bodies broad administrative powers, including the power to limit or restrict us from conductina our investment management activities in the event that we fail to comply with such laws and regulations, and examination authority. Our business related to investment management and trusteeship of collective trust funds and separate accounts offered to employee benefit plans is subject to the Employee Retirement Income Security Act (ERISA), and is regulated by the U.S. DOL.

The majority of our non-U.S. asset servicing operations are conducted pursuant to the Federal Reserve's Regulation K through State Street Bank's Edge Act subsidiary or through international branches of State Street Bank. An Edge Act corporation is a corporation organized under federal law that conducts foreign business activities. In general, banks may not make investments in their Edge Act corporations (and similar state law corporations) that exceed 20% of their capital and surplus, as defined in the relevant banking regulations, and the investment of any amount in excess of 10% of capital and surplus requires the prior approval of the Federal Reserve.

In addition to our non-U.S. operations conducted pursuant to Regulation K, we also make new investments abroad directly (through us or through our non-banking subsidiaries) pursuant to the Federal Reserve's Regulation Y, or through international bank branch expansion, neither of which is subject to the investment limitations applicable to Edge Act subsidiaries.

Additionally, Massachusetts has its own bank holding company statute, under which we, among other things, may be required to obtain prior approval by the Massachusetts Board of Bank Incorporation for an acquisition of more than 5% of any additional bank's voting shares, or for other forms of bank acquisitions.

Anti-Money Laundering and Financial Transparency

Certain of our subsidiaries are subject to the Bank Secrecy Act of 1970, as amended by the USA PATRIOT Act of 2001, and related regulations, which contain AML and financial transparency provisions and which require implementation of an AML compliance program, including processes for verifying client identification and monitoring client transactions and detecting and reporting suspicious activities. AML laws outside the United States contain similar requirements. State Street Corporation and its subsidiaries are also required to comply with sanctions laws and regulations administered and imposed by the United States government, including the U.S. Treasury Department's OFAC and the Department of State, as well as comparable sanctions programs imposed by foreign governments and multilateral bodies. We have implemented an enterprise-wide AML and sanctions compliance program, including policies, procedures and internal controls that are designed to promote compliance with applicable AML laws and regulations and sanctions. AML laws and regulations applicable to our operations may be more stringent than similar requirements applicable to our non-regulated competitors or financial institutions principally operating in other jurisdictions. Compliance with applicable AML and related requirements is a common area of review for financial regulators, and any failure by us to comply with these requirements could result in fines, penalties, lawsuits, regulatory sanctions, difficulties in obtaining governmental approvals, restrictions on our business activities or harm to our reputation.

Deposit Insurance

The Dodd-Frank Act made permanent the general \$250,000 deposit insurance limit for insured deposits. The FDIC's Deposit Insurance Fund (DIF) is funded by assessments on FDIC IDIs. The FDIC assesses DIF premiums based on an IDI's average

consolidated total assets, less the average tangible equity of the IDI during the assessment period. For larger institutions, such as State Street Bank, assessments are determined based on regulatory ratings and forward-looking financial measures to calculate the assessment rate, which is subject to adjustments by the FDIC, and the assessment base.

In July 2022, the FDIC adopted a final rule, applicable to all IDIs, to increase initial base deposit insurance assessment rate schedules uniformly by 2 basis points, effective as of the first quarterly assessment period of 2023. The FDIC also concurrently maintained the Designated Reserve Ratio (DRR) target for the DIF at 2% for 2023. The increase in assessment rate schedules is intended to increase the likelihood that the reserve ratio of the DIF reaches the statutory minimum of 1.35% by the statutory deadline of September 30, 2028.

Following the failures of certain banks and the resulting losses to the DIF 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 a consolidated banking organization. The final rule provides that 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 recognized the entire estimated amount of our portion of the special assessment, approximately \$387 million, as an accrued liability and related expense in the fourth quarter of 2023. The final rule becomes effective on April 1, 2024 and the first collection will be reflected on the invoice for the first quarterly assessment period of 2024, with the first payment due on June 28, 2024. For additional information about the FDIC special assessment, refer to "Closures of Silicon Valley Bank and Signature Bank and Related FDIC Matters" under "Other Matters" included in our Management's Discussion and Analysis in this Form 10-K.

The FDIC is required to determine whether and to what extent adjustments to the assessment base are appropriate for "custody banks" that satisfy specified institutional eligibility criteria. The FDIC has concluded that certain liquid assets could be excluded from the deposit insurance assessment base of custody banks. This, subject to change by the FDIC, has the effect of reducing the amount of DIF insurance premiums due from custody banks. State Street Bank qualifies as a custody bank for this purpose. The custody bank assessment adjustment may not exceed total transaction account deposits identified by the institution as being directly linked to a fiduciary or custody and safekeeping asset.

Prompt Corrective Action

The FDIC Improvement Act of 1991 requires the appropriate federal banking regulator to take "prompt corrective action" with respect to a depository institution if that institution does not meet certain capital adequacy standards, including minimum capital ratios. While these regulations apply only to banks, such as State Street Bank, the Federal Reserve is authorized to take appropriate action against a parent bank holding company, such as our Parent Company, based on the under-capitalized status of any banking subsidiary. In certain instances, we would be required to guarantee the performance of a capital restoration plan if one of our banking subsidiaries were undercapitalized.

Support of Subsidiary Banks

Under Federal Reserve regulations, a bank holding company such as our Parent Company is required to act as a source of financial and managerial strength to its banking subsidiaries. This requirement was added to the Federal Deposit Insurance Act by the Dodd-Frank Act. This means that we have a statutory obligation to commit resources to State Street Bank and any other banking subsidiary in circumstances in which we otherwise might not do so absent such a requirement. In the event of bankruptcy, any commitment by us to a federal bank regulatory agency to maintain the capital of a banking subsidiary will be assumed by the bankruptcy trustee and will be entitled to a priority payment.

Insolvency of an Insured U.S. Subsidiary Depository Institution

If the FDIC is appointed the conservator or receiver of an FDIC-insured U.S. subsidiary depository institution, such as State Street Bank, upon its insolvency or certain other events, the FDIC has the ability to transfer any of the depository institution's assets and liabilities to a new obligor without the approval of the depository institution's creditors, enforce the terms of the depository institution's contracts pursuant to their terms or repudiate or disaffirm contracts or leases to which the depository institution is a party. Additionally, the claims of holders of deposit liabilities and certain claims for administrative expenses against an IDI would be afforded priority over other general unsecured claims against such an institution, including claims of debt holders of the institution and, under current interpretation, depositors in non-U.S. branches and offices, in the liquidation or other resolution of such an institution by any receiver. As a result, such persons would be treated differently from and could receive, if anything, substantially less than the depositors in U.S. offices of the depository institution.

Cybersecurity and Data Privacy

The financial services industry faces increased global regulatory focus regarding cybersecurity and data privacy. Many aspects of our businesses are subject to cybersecurity and data privacy legal and regulatory requirements enacted by U.S. federal and state governments and other non-U.S. jurisdictions. These requirements impose, among other things, mandatory cybersecurity and data privacy 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 localization requirements and restrictions on cross-border transfers of personal information that may restrict our ability to conduct business in those jurisdictions or create additional financial, legal and regulatory burdens to do so. For example, in the E.U., we are subject to the GDPR, which requires, among other things, a comprehensive privacy, data protection and cybersecurity program to protect the personal and sensitive data of residents of the European Economic Area. Following the withdrawal of the U.K. from the EU, we are also subject to the U.K. General Data Protection Regulation (a version of the GDPR as implemented into U.K. law).

The U.S. Agencies finalized a rule in November 2021 requiring banking organizations to notify their primary federal regulators as soon as possible and no later than 36 hours after identifying a "computer-security incident" that has materially affected, or is reasonably likely to materially affect, the viability of their operations, their ability to deliver banking products and services or the stability of the financial sector. The final rule became effective April 1, 2022.

In March 2022, the Cyber Incident Reporting for Critical Infrastructure Act (CIRCIA) was signed into law and requires, among other things, the Cybersecurity and Infrastructure Security Agency (CISA) to develop and implement regulations for covered entities to report certain covered cyber incidents within 72 hours from the time the company reasonably believes the incident occurred. In addition, the SEC adopted new rules on July 26, 2023 that require registrants to publicly disclose on a Form 8-K material cybersecurity incidents within four business days of determining that such an incident is material.

Most recently, the EU adopted DORA in November 2022, which requires, among other things, financial institutions to follow certain rules regarding protection, detection, containment, recovery and repair capabilities with respect to information and communication technology-related incidents. Financial institutions will have until January 17, 2025 to comply with DORA before enforcement begins. In addition, numerous jurisdictions have passed laws, rules and regulations regarding cybersecurity and data privacy risk management, and many are considering new or updated requirements that could impact our businesses, particularly as the application, interpretation and enforcement of these laws, rules and regulations are often uncertain and evolving.

Further discussion of cybersecurity and data privacy risk management is provided in "Information Technology Risk Management" included in our Management's Discussion and Analysis in this Form 10-K.

ECONOMIC CONDITIONS AND GOVERNMENT POLICIES

Economic policies of the U.S. government and its agencies influence our operating environment. Monetary policy conducted by the Federal Reserve directly affects the level of interest rates, which may affect overall credit conditions of the economy. Monetary policy is applied by the Federal Reserve through open market operations in U.S. government securities, changes in reserve requirements for depository institutions, and changes in the discount rate and availability of borrowing from the Federal Reserve. Government regulation of banks and bank holding companies is intended primarily for the protection of depositors of the banks, rather than for the shareholders of the institutions and therefore may, in some cases, be adverse to the interests of those shareholders. We are similarly affected by the economic policies of non-U.S. government agencies, such as the ECB.

ITEM 1A. RISK FACTORS

Risk Factors

In the normal course of our business activities, we are exposed to a variety of risks. The following is a discussion of material risk factors applicable to us. Additional information about our risk management framework is included under "Risk Management" in Management's Discussion and Analysis in this Form 10-K. Additional risks beyond those described in our Management's Discussion and Analysis or in the following discussion may apply to our activities or operations as currently conducted, or as we may conduct them in the future, or in the markets in which we operate or may in the future operate.

Strategic Risks

We are subject to intense competition in all aspects of our business, which could negatively affect our ability to maintain or increase our profitability.

The markets in which we operate across all facets of our business are both highly competitive and global. These markets are changing as a result of financial and technological innovation and new and evolving laws and regulations applicable to financial services institutions. Market changes,

macroeconomic developments and other factors cannot always be anticipated, and may adversely affect the demand for, and profitability of, the products and services that we offer. In addition, new market entrants and competitors may address or influence changes in the markets more rapidly than we do, may have materially greater resources to invest in infrastructure and product development than we do, or may provide clients with a more attractive or costefficient offering of products and services, adversely affecting our business. Our efforts to develop and market new products, particularly in the "Fintech" sector including through State Street Alpha and State Street Digital, may position us in new markets with pre-existing competitors with strong market position. We have also experienced, and anticipate that we will continue to experience, significant pricing pressure in many of our core businesses, particularly our custodial and investment management services. This pricing pressure has and may continue to impact our revenue growth and operational margins and may limit the positive impact of new client demand and growth in AUC/A. Many of our businesses compete with other domestic and international banks and financial services companies, such as custody banks, investment advisors, broker/dealers, outsourcing companies, information providers, data analytics and processing companies. Further consolidation within the financial services industry could also pose challenges to us in the markets we serve, including potentially increased downward pricing pressure across our businesses.

Some of our competitors, including our competitors in core services, have substantially greater capital resources than we do, are not subject stringent capital or other regulatory to as requirements as we are, or may not be as constrained as we are by these requirements due to the relative size of our balance sheet. In some of our businesses, we are service providers to significant These competitors are in some competitors. instances significant clients, and the retention of these clients involves additional risks, such as the avoidance of actual or perceived conflicts of interest and the maintenance of high levels of service quality and intra-company confidentiality. Our relationships with other businesses. including competitors, necessarily involve the sharing of confidential information, and we cannot be certain. notwithstanding the existence of confidentiality obligations on the part of those other businesses, that our information will not be used to the competitive advantage of others. The ability of a competitor to offer comparable or improved products or services at a lower price would likely negatively affect our ability to maintain or increase our profitability. Many of our core services are subject to contracts that have relatively short terms or may be terminated by our

client after a short notice period. In addition, pricing pressures as a result of the activities of competitors, client pricing reviews, and rebids, as well as the introduction of new products, may result in a reduction in the prices we can charge for our products and services.

We are subject to variability in our assets under custody and/or administration and assets under management, and in our financial results, due to the significant size of our relationship with many of our institutional clients, and are also subject to significant pricing pressure due to trends in the market for custodial services and the considerable market influence exerted by those clients.

Our clients include institutional investors, such as mutual funds, collective investment funds, UCITS, hedge funds and other investment pools, corporate and public retirement plans, insurance companies, official institutions, foundations, endowments and investment managers. In both our asset servicing and asset management businesses, we endeavor to attract institutional investors controlling large and diverse pools of assets, as those clients typically have the opportunity to benefit from the full range of our expertise and service offerings. Due to the large pools of assets controlled by these clients, the loss or gain of one client, or even a portion of the assets controlled by one client, or a client's decision to insource certain services that we provide, could have a significant effect on our AUC/A or our AUM, as applicable, in the relevant period. Loss of all or a portion of the servicing of a client's assets can occur for a variety of reasons. For example, as previously disclosed in early 2021, due to a decision to diversify providers, one of our large asset servicing clients is moving a significant portion of its ETF assets currently with State Street to one or more other providers. The transition began in 2022. Prior to the commencement of the transition of assets, we estimated that the financial impact of this transition represented approximately 1.9% of our 2021 total fee revenue. Our AUM or AUC/A are also affected by decisions by institutional owners to favor or disfavor certain investment instruments or categories. Similarly, if one or more clients change the asset class in which a significant portion of assets are invested (e.g., by shifting investments from emerging markets to the U.S.), those changes could have a significant effect on our results of operations in the relevant period, as our fee rates often change based on the type of asset classes we are servicing or managing. As our fee revenue is significantly impacted by our levels of AUC/A and AUM, changes in levels of different asset classes could have a corresponding significant effect on our results of operations in the relevant period. Large institutional clients also, by their nature, are often able to exert considerable market influence, and this, combined with strong competitive forces in the markets for our

services, has resulted in, and may continue to result in, significant pressure to reduce the fees we charge for our services in both our asset servicing and asset management lines of business. Our strategy of focusing our efforts on the segments of the market for investor services represented by very large asset managers and asset owners causes us to be particularly impacted by this industry trend. Many of these large clients are also under competitive and regulatory pressures that are driving them to manage the expenses that they and their investment products incur more aggressively, which in turn exacerbates their pressures on our fees. As a result, the servicing fees we generate from any particular client, or any specific client mandate over time, may be less than the servicing fees we expect as a result of that client or mandate at the time we win that business.

Development and completion of new products and services, including State Street Alpha and those related to digital assets and artificial intelligence, may impose costs on us, involve dependencies on third parties and may expose us to increased operational, model and other risks.

Our financial performance depends, in part, on our ability to develop and market new and innovative services and to adopt or develop new technologies that differentiate our products or provide cost efficiencies, while avoiding increased related expenses. This dependency is exacerbated in the current "Fintech" environment, where financial institutions are investing significantly in evaluating new technologies, such as distributed ledger technology (e.g., blockchain and artificial intelligence), and developing potentially industrychanging products, services and standards. The introduction of new products and services can require significant time and resources, including regulatory approvals and the development and implementation of technical data management, control and model validation requirements and effective security and resiliency elements. New products and services, such as State Street Alpha and those related to digital assets and artificial intelligence, often also involve dependencies on third parties to, among other things, innovative technologies, access develop new distribution channels or form collaborative product and service offerings, and can require complex strategic alliances and joint venture relationships. Substantial risks and uncertainties are associated with the introduction of new products and services, strategic alliances and joint ventures, including rapid technological change in the industry, our ability to access and use technical, data and other information from our clients, significant and ongoing investments required to bring new products and services to market in a timely manner at competitive prices, sharing of benefits in those relationships, conflicts with existing business partners and clients, understanding third party rights, delineating ownership rights, protection

of intellectual property and other confidential information, the competition for employees with the necessary expertise and experience, and sales and other materials that fully and accurately describe the product or service and its underlying risks and are compliant with applicable regulations. New products or services may fail to operate or perform as expected and may not be suitable for the intended client or may not produce anticipated efficiencies, savings or benefits for either the client or us. Our failure to manage these risks and uncertainties also exposes us to enhanced risk of operational lapses and third party claims, which may result in the recognition of financial statement liabilities. Regulatory and internal control requirements, capital requirements, competitive alternatives, vendor relationships and shifting market preferences may also determine if such initiatives can be brought to market in a manner that is timely and attractive to our clients. Failure to successfully manage all of the above risks in the development and implementation of new products or services, including continued development of State Street Alpha and those related to digital assets and artificial intelligence, could have a material adverse effect on our business and reputation, consolidated results of operations or financial condition.

Acquisitions, strategic alliances, joint ventures and divestitures pose risks for our business.

We acquire complementary businesses and technologies, enter into strategic alliances and joint ventures and divest portions of our business. We undertake transactions of varying sizes to, among other reasons, gain advantages of scale, expand our geographic footprint, access new clients, distribution channels, technologies or services, enhance our operating model, expand or enhance our product offerings, develop closer or more collaborative relationships with our business partners, efficiently deploy capital or leverage cost savings or other business or financial opportunities. We may not achieve the expected benefits of these transactions, which could result in increased costs, lowered revenues. ineffective deployment of capital. regulatory concerns, exit costs or diminished competitive position or reputation.

Transactions of this nature also involve a number of risks and financial, accounting, tax, regulatory, strategic, managerial, operational, cultural and employment challenges, which could adversely affect our consolidated results of operations and financial condition. For example, the businesses that we acquire or our strategic alliances or joint ventures may under-perform relative to the price paid or the resources committed by us; we may not achieve anticipated revenue growth, cost savings or operational improvements or efficiencies; or we may otherwise be adversely affected by acquisition-related

charges. The intellectual property of an acquired business may be an important component of the value that we agree to pay for it. However, such acquisitions are subject to the risks that the acquired business may not own the intellectual property that we believe we are acquiring, that the intellectual property is dependent on licenses from third parties, that the acquired business infringes on the intellectual property rights of others, that the technology does not have the acceptance in the marketplace that we anticipated or that the technology requires significant investment to remain competitive. Similarly, such transactions present risks to our ability to retain the acquired talent, which may be essential to achieve our objectives in the acquisition. The integration of an business' information acquired technology infrastructure into ours has in the past and may in the future also expose us to additional security and resiliency risks. Further, past acquisitions have resulted in the recognition of goodwill and other significant intangible assets in our consolidated statement of condition. For example, we recorded goodwill and intangible assets of approximately \$2.46 billion associated with our acquisition of CRD in 2018. These assets are not eligible for inclusion in regulatory capital under applicable requirements. In addition, we may be required to record impairment in our consolidated statement of income in future periods if we determine that the value of these assets has declined.

Through our acquisitions or joint ventures, we may also assume unknown or undisclosed business, operational, tax, regulatory and other liabilities, fail to properly assess known contingent liabilities or assume businesses with internal control deficiencies. While in most of our transactions we seek to mitigate these risks through, among other things, due diligence, indemnification provisions or insurance, these or other risk-mitigating provisions we put in place may not be sufficient to address these liabilities and contingencies and involve credit and execution risks associated with successfully seeking recourse from a third party, such as the seller or an insurance provider. Other major financial services firms have paid significant penalties to resolve government investigations into matters conducted in significant part by acquired entities.

Various regulatory approvals or consents, formal or informal, are generally required prior to closing of these transactions, which may include approvals, non-objections or regulatory exceptions from the Federal Reserve and other domestic and non-U.S. regulatory authorities. These regulatory authorities may impose conditions on the completion of the acquisition or require changes to its terms that materially affect the terms of the transaction or our ability to capture some of the opportunities presented by the transaction, or may not approve, or may take substantial time to review, the transaction. Any such conditions, or any associated regulatory delays, could limit the benefits of the transaction. U.S. anti-trust and banking agencies continue to express concerns about the growth of large banking institutions, and competition authorities in many jurisdictions have increased the scrutiny and standards they apply in their review of transactions. Acquisitions or joint ventures we announce may not be completed if we do not receive the required regulatory approvals, if regulatory approvals are significantly delayed or if other closing conditions are not satisfied.

As an example, after consideration of both regulatory feedback and potential transaction modifications to address that feedback. we determined in November 2022 to no longer pursue our acquisition of the Brown Brothers Harriman's Investor Services business announced in September 2021. Any failure to complete a transaction, including that of Brown Brothers Harriman's Investor Services business acquisition. presents reputational. counterparty and competitive risks that could affect our business, results of operations and financial condition, potentially materially, and may also challenge our ability to enter into future transactions on terms acceptable to us.

The integration and the retention and development of the benefits of our acquisitions result in risks to our business and other uncertainties.

In recent years, we have undertaken acquisitions, including our 2021 acquisition of Mercatus and our 2018 acquisition of CRD. The integration of acquisitions presents risks that differ from the risks associated with our ongoing operations. Integration activities are complicated and time consuming and can involve significant unforeseen costs. We may not be able to effectively assimilate services, technologies, key personnel or businesses of acquired companies into our business or service offerings as anticipated, and we may not achieve related revenue growth or cost savings. We also face the risk of being unable to retain, or crosssell our products or services to, the clients of acquired companies or joint ventures and the risk of being unable to cross-sell acquired products or services to our existing clients. In particular, some clients, including significant clients, of an acquired business may have the right to transition their business to other providers on short notice for convenience, fiduciary or other reasons and may take the opportunity of the acquisition or market, commercial, relationship, service satisfaction or other developments following the acquisition to terminate, reduce or renegotiate the fees or other terms of our relationship. Any such client losses, reductions or renegotiations likely will reduce the expected benefits of the acquisition, including revenues, cross-selling opportunities and market

share, cause impairment to goodwill and other intangibles or result in reputational harm, which effects could be material, and we may not have recourse against the seller of the business or the client. The risk of client loss is even greater where the client is a competitor of ours or has key strategic commercial relationships with our competitors. Acquisitions of Investment Servicing businesses entail information technology systems conversions, which involve operational risks, as well as fiduciary and other risks associated with client retention. Acquisitions of Asset Management businesses similarly involve fiduciary and similar risks associated with client retention, distribution channels and additional servicing opportunities, as well as potential cultural conflicts. Acquisitions of technology firms can involve extensive information technology integration, with associated risk of defects, security breaches and resiliency lapses and product enhancement and development activities, the costs of which can be difficult to estimate, as well as heightened cultural compliance concerns in integrating and an unregulated firm into a bank regulatory environment. Joint ventures involve all of these risks, as well as risks associated with shared control and decisionmaking (even in majority-owned situations), minority rights and exit rights, which can delay, challenge or foreclose execution on material opportunities or initiatives, create regulatory risks and limit divestment opportunities.

With any acquisition, the integration of the operations and resources of the businesses could result in the loss of key employees, the disruption of our and the acquired company's ongoing businesses or inconsistencies in standards, controls, procedures or policies that could adversely affect our ability to maintain relationships with clients, business partners or employees, maintain regulatory compliance or achieve the anticipated benefits of the acquisition. Integration efforts may also divert management attention and resources.

Competition for qualified members of our workforce is intense, and we may not be able to attract and retain the personnel we need to support our business.

Our success depends, in large part, on our ability to attract and retain qualified personnel. Competition for labor in most activities in which we engage can be intense, including for both individuals identified as key talent and for other personnel. We may not be able to hire people or retain them, particularly in light of challenges associated with compensation restrictions applicable, or which may become applicable, to banks and some asset managers and that are not applicable to other financial services firms in all jurisdictions or to technology or other firms with which we compete for personnel, generally. This can be particularly constraining when competing for skill sets which are in high demand, such as technology and information security. The unexpected loss of services of personnel in business units, control functions, information technology, operations or other areas could have a material adverse impact on our business and operations because of the loss of skills, knowledge of our markets, operations and clients, years of industry experience and, in some cases, the difficulty of promptly finding qualified replacement These adverse impacts may be personnel. exacerbated by increased costs and expenses driven the competitive labor market in several bv jurisdictions in which we operate, particularly with regard to the ability to meet compensation and hybrid working expectations. In addition, the loss of personnel, either individually or as a group, could adversely affect our clients' perception of our ability to continue to manage certain types of investment management or servicing mandates to provide other services to them or to maintain a culture of innovation and proficiency.

Financial Market Risks

Political, geopolitical and economic conditions and developments could adversely affect us, particularly if we face increased uncertainty and unpredictability in managing our businesses.

Global financial markets can suffer from substantial volatility, illiquidity, or disruption. particularly as a result of political or geopolitical events, high inflation, slowing economic growth, concerns related to the U.S. federal debt ceiling and monetary policy uncertainty across key central banks. If such volatility, illiquidity or disruption were to result in an adverse economic environment in the United States or in international markets or result in a lack of confidence in the financial stability of major developed or emerging markets, such developments could have an adverse effect on our business, as well as the businesses of our clients and our significant counterparties, and could also increase the difficulty and unpredictability of aligning our business strategies, our infrastructure and our operating costs in light of uncertain market and economic conditions.

Market disruptions can adversely affect our consolidated results of operations if the value of our AUC/A or AUM decline, while the costs of providing the related services remain constant or increase. They may also result in investor preference trends towards asset classes and markets deemed more secure, such as cash or non-emerging markets, with respect to which our fee rates are often lower. These factors could reduce the profitability of our assetbased fee revenue and could also adversely affect our transaction-based revenue, such as revenues from securities finance and foreign exchange activities, and the volume of transactions that we execute for or with our clients. Further, the degree of volatility in foreign exchange rates can affect our foreign exchange trading revenue. In general,

increased currency volatility tends to increase our market risk but also increases our opportunity to generate foreign exchange revenue. Conversely, periods of lower currency volatility tend to decrease our market risk but also decrease our foreign exchange revenue.

In addition, as our business grows globally and a significant percentage of our revenue is earned (and of our expenses paid) in currencies other than U.S. dollars, our exposure to foreign currency volatility could affect our levels of consolidated revenue, our consolidated expenses and our consolidated results of operations, as well as the value of our investment in our non-U.S. operations and our non-U.S. investment portfolio holdings. The extent to which changes in the strength of the U.S. dollar relative to other currencies affect our consolidated results of operations, including the degree of any offset between increases or decreases to both revenue and expenses, will depend upon the nature and scope of our operations and activities in the relevant jurisdictions during the relevant periods, which may vary from period to period.

As our product offerings expand, in part as we seek to take advantage of perceived opportunities arising under various regulatory reforms and resulting market changes, the degree of our exposure to various market and credit risks will evolve, potentially resulting in greater revenue volatility.

We have significant global operations, and clients that can be adversely impacted by disruptions in key global economies, including local, regional and geopolitical developments affecting those economies.

Economic conditions across the world face continued uncertainty due to, among other things, elevated geopolitical risks in multiple regions, including Ukraine, Israel and the Middle East, among others, an uncertain monetary policy environment, and slowing growth and heightened volatility in key emerging markets. New or continued economic deterioration may increase concerns about sovereign debt sustainability, interdependencies among financial institutions and sovereigns, and political and other risks. Continued uncertainty in the external environment has led to increased concern around the near- to medium-term outlook for economic progress in the regions in which we operate, including Europe, the Middle East and Asia.

Given the scope of our global operations, economic or market uncertainty, volatility, illiquidity or disruption resulting from these and related factors could have a material adverse impact on our consolidated results of operations or financial condition, with a greater relative impact as compared to our peers. Our investment securities portfolio, consolidated financial condition and consolidated results of operations could be adversely affected by changes in the financial markets, governmental action or monetary policy. For example, among other risks, increases in prevailing interest rates or other market conditions have led, and were they to occur in the future could further lead, to reduced levels of client deposits and resulting decreases in our NII or to portfolio management decisions resulting in reductions in our capital or liquidity ratios.

Our investment securities portfolio represented approximately 34% of our total assets as of December 31, 2023. The gross interest income associated with our investment portfolio represented approximately 16% of our total gross revenue for the year ended December 31, 2023 and has represented as much as 31% of our total gross revenue in the fiscal years since 2007. As such, our consolidated financial condition and results of operations are materially exposed to the risks associated with our investment portfolio, including changes in interest rates, credit spreads, credit performance (including risk of default), credit ratings, our access to liquidity, foreign exchange markets and mark- to-market valuations, and our ability to profitably manage changes in repayment rates of principal with respect to our portfolio securities. While recent increases in interest rates are beneficial to NII, uncertain economic and monetary policy environments continue to drive risks for ongoing volatility. Managing reinvestment for both higher and lower rate outcomes will continue to be a challenge. The extent to which the Federal Reserve engages in quantitative tightening activities, the market effects and the associated challenges in managing our investment portfolio, consolidated financial condition and consolidated results of operations, including our capital ratios and share repurchase program, may differ from or be exacerbated by the effects of changes in interest rates and also may be volatile and difficult to predict, presenting even further challenges. In addition, certain regulatory liquidity standards, such as the LCR, require that we maintain minimum levels of HQLA in our investment portfolio, which generally generate lower rates of return than other investment assets. This has resulted in increased levels of HQLA as a percentage of our investment portfolio and an associated negative impact on our NII and our NIM. As a result, we may not be able to attain our prior historical levels of NII and NIM. For additional information regarding these liquidity requirements, refer to the "Liquidity Coverage Ratio and Net Stable Funding Ratio" section of "Supervision and Regulation" in Business in this Form 10-K. We may enter into derivative transactions to hedge or manage our exposure to interest rate risk, as well as other risks, such as foreign exchange risk and credit risk. Derivative instruments that we hold for these or other purposes may not achieve their intended results and

could result in unexpected losses or stresses on our liquidity or capital resources.

Our investment securities portfolio represents a greater proportion of our consolidated statement of condition and our loan portfolio represents a smaller proportion (approximately 12% of our total assets as of December 31, 2023), in comparison to many other major financial institutions. In some respects, the accounting and regulatory treatment of our investment securities portfolio may be less favorable to us than a more traditional held-for-investment lending portfolio. For example, under the Basel III rule, after-tax changes in the fair value of AFS investment securities are recognized in AOCI and included in Tier 1 capital. Since loans held for investment are not subject to a fair value accounting framework, changes in the fair value of loans (other than expected credit losses) are not similarly included in the determination of Tier 1 capital under the Basel III rule. Due to this differing treatment, we may experience increased variability in our Tier 1 capital relative to other major financial institutions for which loan-and-lease portfolios represent а larger proportion of their consolidated total assets than ours. Additionally, accounting rules may constrain our ability to sell HTM securities, for example to generate liquidity in times of stress or if we are unable to monetize through repurchase agreements or use of the Federal Reserve's discount window or other federal facilities at which we can pledge securities classified as HTM. Any decision to sell investment securities classified as HTM would likely require us to recognize all HTM securities at fair value, with any difference between amortized cost and fair value recognized in either AOCI (if transferred to AFS classification) or through earnings. Securities classified as AFS that have experienced a reduction in fair value below their amortized cost, reflect our determination, as of the relevant period end, that we did not have the intent to sell, nor was it more likely than not that we will be required to sell, any of those securities. If that determination changes in the future, we could be required to recognize a loss in earnings for the entire difference between fair value and amortized cost of those securities. Potential regulatory changes could also result in a decrease in our ability to include HQLA classified as HTM in our calculation of LCR, which could materially impact the calculation of that ratio.

Additional risks associated with our investment portfolio include:

 Asset class concentration. Our investment portfolio continues to have significant concentrations in several classes of securities, including agency residential MBS, commercial MBS and other ABS, and securities with concentrated exposure to consumers. These classes and types of securities experienced significant liquidity, valuation and credit quality deterioration during the financial crisis that began in mid-2007. We also hold non-U.S. government securities, non-U.S. MBS and ABS with exposures to European countries, whose sovereign-debt markets have experienced increased stress at times since 2011 and may continue to experience stress in the future. For further information, refer to the risk factor titled "We have significant global operations and clients that can be adversely impacted by disruptions in key global economies, including local, regional and geopolitical developments affecting those economies". Further, we hold a portfolio of U.S. state and municipal bonds, the value of which may be affected by the budget deficits that a number of states and municipalities currently face, resulting in risks associated with this portfolio.

- Effects of market conditions. If market deteriorate, conditions our investment portfolio could experience a decline in market value, whether due to a decline in liquidity or an increase in the yield required by investors to hold such securities, regardless of our credit view of our portfolio holdings. In addition, in general, deterioration in credit quality, or changes in management's expectations regarding repayment timing or in management's investment intent to hold securities to maturity, in each case with respect to our portfolio holdings, could result in recognition of an allowance for expected credit losses or an impairment. Similarly, if a material portion of our investment portfolio were to experience credit deterioration, our capital ratios as calculated pursuant to the Basel III rule could be adversely affected. This risk is greater with portfolios of investment securities that contain credit risk with holdings of U.S. than Treasury securities. Both AFS and HTM securities in our investment portfolio carry liquidity risk if there is lower demand for either the sale or sale under repurchase agreement of these securities.
- Effects of interest rates. Our investment portfolio is further subject to changes in both U.S. and non-U.S. (primarily in Europe) interest rates, and could be negatively affected by changes in those rates, whether or not expected. This is particularly true in the case of a quicker-than-anticipated increase in interest rates, which would decrease market values in the near-term, or monetary policy that results in persistently low or negative

rates of interest on certain investments. The latter has been the case, for example, with respect to past ECB monetary policy, including negative interest rates in some jurisdictions, with associated negative effects on our investment portfolio reinvestment, NII and NIM. The effect on our NII has been exacerbated by the effects in recent fiscal years of the strong U.S. dollar relative to other currencies, particularly the Euro. If European interest rates remain low or decrease and the U.S. dollar strengthens relative to the Euro, the negative effects on our NII likely will continue or increase. The overall level of NII can also be impacted by the size of our deposit base, as further increases in interest rates could lead to reduced deposit levels and also lower overall NII. Further, a reduction in deposit levels could increase the requirements under the regulatory liquidity standards requiring us to invest a greater proportion of our investment portfolio holdings in HQLA that have lower vields than other investable assets. See also, "Our business activities expose us to interest rate risk" in this section.

Our business activities expose us to interest rate risk.

In our business activities, we assume interest rate risk by investing short-term deposits received from our clients in our investment portfolio of longerand intermediate-term assets. Our NII and NIM, and ability to attract deposits from our clients, are affected by among other things, the levels of interest rates in global markets, changes in the relationship between short- and long-term interest rates, the direction and speed of interest rate changes and the asset and liability spreads relative to the currency and geographic mix of our interest-earning assets and interest-bearing liabilities. These factors are influenced, among other things, by a variety of economic and market forces and expectations, including monetary policy and other activities of central banks, such as the Federal Reserve and ECB, that we do not control. Our ability to anticipate changes in these factors or to hedge the related onand off-balance sheet exposures, and the cost of any such hedging activity, can significantly influence the success of our asset-and-liability management activities and the resulting level of our NII and NIM. The impact of changes in interest rates and related factors will depend on the relative duration and fixedor floating-rate nature of our assets and liabilities. Sustained lower interest rates, a flat or inverted yield curve and narrow credit spreads generally have a constraining effect on our NII. In addition, our ability to reduce deposit rates in response to declines in prevailing interest rates and other market and related

factors is limited by client relationship considerations. The impact of interest rates on our investment portfolio and consolidated financial results, including AOCI, can also affect our ability to maintain our capital ratios within our target ranges as well as the amount and timing of our future share repurchases. For example, in the first half of 2022 unrealized losses on AFS securities within AOCI, driven by the significant increase in interest rates across the yield curve, contributed to a decrease in CET1 capital. For additional information about the effects on interest rates on our business, refer to the Market Risk Management section. "Asset-and-Liability Management Activities" Management's in our Discussion and Analysis in this Form 10-K.

We significant credit assume risk to counterparties, many of which are major financial institutions. These financial institutions and other may counterparties also have substantial financial dependencies with other financial institutions and sovereign entities. These credit exposures and concentrations could expose us to financial loss.

The financial markets are characterized by extensive interdependencies among numerous parties, including banks, central banks, broker/ dealers, insurance companies and other financial institutions. These financial institutions also include collective investment funds, such as mutual funds, UCITS and hedge funds that share these interdependencies. Many financial institutions. including collective investment funds, also hold, or are exposed to, loans, sovereign debt, fixed-income securities, derivatives, counterparty and other forms of credit risk in amounts that are material to their financial condition. As a result of our own business practices and these interdependencies, we and many of our clients have concentrated counterparty exposure to other financial institutions and collective investment funds, particularly large and complex institutions, sovereign issuers, mutual funds, UCITS and hedge funds. Although we have procedures for monitoring both individual and aggregate counterparty risk, significant individual and aggregate counterparty exposure is inherent in our business, as our focus is on servicing large institutional investors.

In the normal course of our business, we assume concentrated credit risk at the individual obligor, counterparty or group level. Such concentrations may be material. Our material counterparty exposures change daily, and the counterparties or groups of related counterparties to which our risk exposure is concentrated are also variable during any reported period; our largest exposures tend to be to other financial institutions.

Concentration of counterparty exposure presents significant risks to us and to our clients

because the failure or perceived weakness of our counterparties (or in some cases of our clients' counterparties) has the potential to expose us to risk of financial loss. Changes in market perception of the financial strength of particular financial institutions or sovereign issuers can occur rapidly, are often based on a variety of factors and are difficult to predict.

This was observed during the financial crisis that began in 2007-2008, when economic, market. political and other factors contributed to the perception of many financial institutions and sovereign issuers as being less credit worthy. This led to credit downgrades of numerous large U.S. and non-U.S. financial institutions and several sovereign issuers (which exposure stressed the perceived creditworthiness of financial institutions, many of which invest in, accept collateral in the form of, or value other transactions based on the debt or other securities issued by sovereigns) and substantially reduced value and liquidity in the market for their credit instruments. These or other factors could again contribute to similar consequences or other market risks associated with reduced levels of liquidity. Though more contained than the 2007-2008 financial crisis, Silicon Valley Bank and Signature Bank failed in early 2023. As a result, we may be exposed to increased counterparty risks, either resulting from our role as principal or because of commitments we make in our capacity as agent for some of our clients.

Additional areas where we experience exposure to credit risk include:

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- Short-term credit: The degree of client demand for short-term credit tends to increase during periods of market turbulence, which may expose us to further counterpartyrelated risks. For example, investors in collective investment vehicles for which we act as a custodian may experience significant redemption activity due to adverse market or economic news. Our relationship with our clients and the nature of the settlement process for some types of payments may result in the extension of short-term credit in provide such circumstances. We also committed lines of credit to support such activity. For some types of clients, we provide credit to allow them to leverage their portfolios, which may expose us to potential loss if the client experiences investment losses or other credit difficulties.
- Industry and country risks: In addition to our exposure to financial institutions, we are from time to time exposed to concentrated credit risk at an industry or country level. This concentration risk also applies to groups of unrelated counterparties that may have similar investment strategies involving one or more particular industries, regions, or other

characteristics. These unrelated counterparties may concurrently experience adverse effects to their performance, liquidity or reputation due to events or other factors affecting such investment strategies. Though potentially not material individually (relative to any one such counterparty), our credit exposures to such a group of counterparties could expose us to a single market or political event or a correlated set of events that, in the aggregate, could have a material adverse impact on our business.

Subcustodian risks: With the exception of the United States, Canada, Germany and the United Kingdom, we maintain subcustodian relationships in all jurisdictions in which our clients invest, including emerging and other underdeveloped markets, and markets subject to sanctions. Our use of unaffiliated subcustodians exposes us to operational, reputational and regulatory risk, as we are dependent upon the subcustodians in performing several of our services to clients in those markets. Operational risk includes risks of the legal and regulatory systems and market practices of the jurisdictions in which the subcustodians operate. Our operating model exposes us to risk of unaffiliated subcustodians to a degree greater than some of our competitors who have banking operations in more jurisdictions than we do. The risks of maintaining custody services in such markets are amplified due to evolving regulatory and sanctions requirements with respect to our financial exposures in the event those subcustodians, or we, are unable to return, transfer or reinvest clients' assets. In some regulatory regimes, such as the E.U.'s UCITS V directive, we are subject to requirements that we be responsible for resulting losses suffered by our clients, and we may agree to similar or more stringent standards with clients that are not subject to such regulations. In addition, to the extent we maintain currencies on our consolidated balance sheet (where the client deposit liability is with State Street and State Street, as principal, maintains cash on deposit with a subcustodian or clearing agency) or are subject to regulatory requirements to return assets placed in custody, we are also subject to the risk of credit exposure to such subcustodians and clearing agencies. Depending upon the currency and jurisdiction of the client, a significant portion of our deposit exposure in non-U.S. currencies is recognized on our consolidated balance sheet. In some jurisdictions, such as Russia,

sanctions programs government or intervention inhibit our clients' and our ability to access or transfer cash or securities held for clients through subcustodians and clearing agencies. If such client deposit liabilities are on our consolidated balance sheet, we maintain a corresponding amount of cash on deposit with the subcustodian or clearing agency, which increases our credit exposure to that entity and can accumulate over time based upon distributions on, or other activities related to, our clients' assets. If the subcustodian or clearing agency were to become insolvent in circumstances not involving expropriation of assets or other circumstances that excuse performance under force majeure or other provisions, the risk of loss on such cash on deposit would be ours rather than the clients. As of December 31, 2023, we held cash on deposit with our subcustodian and clearing agencies in Russia, which amount is expected to increase substantially over time as long as the sanctions and other restrictions remain in effect, and which currently is subject to restrictions on our ability to access such deposits. Our subcustodians are also directly affiliated with or are subsidiaries of large, global financial institutions with whom we have other credit exposures. This credit exposure to these financial institutions or subcustodians can limit the financial relationship we may have with these counterparties and has in the past made, and may in the future make, compliance with specific U.S. regulatory single counterparty credit limits (SCCL) more challenging. For additional information, see Note 1 to the consolidated financial statements in this Form 10-K.

Settlement risks: We are exposed to settlement risks, particularly in our payments and foreign exchange activities. Those activities may lead to extension of credit and consequent losses in the event of a counterparty breach or an operational error, including the failure to provide credit. Due to our membership in several industry clearing or settlement exchanges, we may be required to guarantee obligations and liabilities, or provide financial support, in the event that other members do not honor their obligations default. Moreover, not all of our or counterparty exposure is secured, and even when our exposure is secured, the realizable value of the collateral may have declined by the time we exercise our rights against that collateral. This risk may be particularly acute

if we are required to sell the collateral into an illiquid or temporarily-impaired market or with respect to clients protected by sovereign immunity. We are exposed to risk of shortterm credit or overdraft of our clients in connection with the process to facilitate settlement of trades and related foreign exchange activities. particularly when contractual settlement has been agreed with our clients. The occurrence of overdrafts at peak volatility could create significant credit exposure to our clients depending upon the value of such clients' collateral at the time. Our settlement-related activities and obligations are also subject to regulatory risk, including the risk of regulators globally accelerating the timeline to settlement, such as the SEC's recent rule to shorten the standard settlement cycle for securities transactions in the United States from trade date plus two business days (T+2) to trade date plus one business day (T+1) in May 2024. This rule presents the risk of noncompliance, as well as careful coordination with and dependencies on other industry participants and additional risks associated technology development with and implementation, change management and operational errors, any of which could be material in light of the magnitude and volume of our settlement-related activities and obligations. Although we have budgeted for anticipated expenses associated with implementing the rule, due to the nature of these and other risks and considerations, there can be no assurance actual costs will not exceed our expectations.

Securities lending and repurchase agreement indemnification: On behalf of clients enrolled in our securities lending program, we lend securities to banks, broker/dealers and other institutions. In the event of a failure of the borrower to return such securities, we typically agree to indemnify our clients for the amount by which the fair market value of those securities exceeds the proceeds of the disposition of the collateral posted by the borrower in connection with such transaction. We also lend and borrow securities as principal, and in connection with those transactions receive a security interest in securities held by the borrowers in their securities portfolios and advance cash or securities as collateral to securities lenders. Borrowers are generally required to provide collateral equal to a contractually agreed percentage equal to or in excess of the fair market value of the loaned securities. As the

fair market value of the loaned securities or collateral changes, additional collateral is provided by the borrower or a portion of collateral is returned to the borrower. In addition, our agency securities lending clients often purchase securities or other financial instruments from financial counterparties, including broker/dealers, under repurchase arrangements, frequently as a method of reinvesting the cash collateral they receive from lending their securities. Under these arrangements, the counterparty is obligated to repurchase these securities or financial instruments from the client at the same price (plus an agreed rate of return) at some point in the future. The value of the collateral is intended to exceed the counterparty's payment obligation, and collateral is adjusted daily to account for shortfall under, or excess over, the agreed-upon collateralization level. As with the securities lending program, we agree to indemnify our clients from any loss that would arise on a default by the under counterparty these repurchase arrangements if the proceeds from the disposition of the securities or other financial assets held as collateral are less than the amount of the repayment obligation by the client's counterparty. In such instances of counterparty default, for both securities lending and repurchase agreements, we, rather than our client, are exposed to the risks associated with collateral value.

- Repurchase and resale transactions: We enter into repurchase and resale transactions in eligible securities with sponsored clients and with other FICC members and, pursuant to FICC Government Securities Division rules, submit, novate and net the transactions when specific netting criteria are met. We may sponsor clients to clear their eligible repurchase or resale transactions with FICC, backed by our guarantee to FICC of the prompt and full payment and performance of our sponsored member clients' respective obligations. Although we obtain a security interest from our sponsored clients in the collateral that they receive, we are exposed to the associated risks, including insufficiency of the value of collateral.
- Stable value arrangements: We enter into stable value wrap derivative contracts with unaffiliated stable value funds that allow a stable value fund to provide book value coverage to its participants. During the 2008 financial crisis, the book value of obligations under many of these contracts exceeded the market value of the underlying portfolio

holdings. Concerns regarding the portfolio of investments protected by such contracts, or regarding the investment manager overseeing such an investment option, may result in redemption demands from stable value products covered by benefit-responsive contracts at a time when the portfolio's market value is less than its book value, potentially exposing us to risk of loss.

- Private equity subscription finance credit facilities: We provide credit facilities to private equity funds. The portfolio consists of capital call lines of credit, the repayment of which is dependent on the receipt of capital calls from the underlying limited partner investors in the funds managed by these firms.
- U.S. municipal obligations remarketing credit facilities: We provide credit facilities in connection with the remarketing of U.S. municipal obligations, potentially exposing us to credit exposure to the municipalities issuing such bonds and contingent liquidity risk.
- Leveraged loans: We invest in leveraged loans, both in the United States and in Europe. We invest in these loans to noninvestment grade borrowers through participation in loan syndications in the noninvestment grade lending market. We rate these loans as "speculative" under our internal risk-rating framework, and these loans have significant exposure to credit losses relative to higher-rated loans. We are therefore at a higher risk of default with respect to these investments relative to other of our investments activities. In addition, unlike other financial institutions that may have an active role in managing individual loan compliance, our investment in these loans is generally as a passive investor with limited control. Over time, our allowance for credit losses related to these loans has increased, and may in the future further increase, through additional provisions for credit losses.
- Commercial We real estate: finance commercial and multi-family properties, which serve as collateral for our loans. Although collateralized, these loans may become under-secured if the value of the collateral was over-estimated or declines. Loan payments are dependent on the successful operation and management of the underlying collateral property to generate sufficient cash flow to repay the loan in a timely fashion. A material decline in real estate markets or economic conditions could negatively impact value or property performance, which could

adversely impact timely loan repayment, which may result in increased provision for credit losses on loans, and actual losses, either of which would have an adverse impact on our net income. We observed these effects in some commercial real estate markets during 2023, resulting in а commercial real estate-related provision for credit losses on loans of \$41 million for that period. Were conditions, or our evaluation of conditions, in those or other markets to worsen in 2024 or subsequent years, we could experience similar or more significant effects during those periods.

Unavailability of netting: We are generally not able to net exposures across counterparties that are affiliated entities and may not be able in all circumstances to net exposures to the same legal entity across multiple products. As a consequence, we may incur a loss in relation to one entity or product even though our exposure to an entity's affiliates or across product types is over-collateralized. In some cases, for example in our securities finance and foreign exchange activities, we are able to enter into netting agreements that allow us to net offsetting exposures and payment obligations against one another. In the event we become unable, due to operational constraints, actions by regulators, changes in accounting principles, law or regulation (or related interpretations) or other factors, to net some or all of our offsetting exposures and payment obligations under those agreements, we would be required to gross up our assets and liabilities on our statement of condition and our calculation of RWA, accordingly. This would result in a potentially adverse impact on our regulatory ratios, including LCR, and present increased credit, liquidity, asset-and-liability management and operational risks, some of which could be material.

Under currently prevailing regulatory restrictions on credit exposure, we are required to limit our exposures to specific issuers or counterparties or of counterparties, groups including financial institutions and sovereign issuers. These credit exposure restrictions have and may further adversely affect certain of our businesses, may require that we expand our credit exposure to a broader range of issuers and counterparties, including issuers and counterparties that represent increased credit risk, may reduce or foreclose our ability to enter into advantageous transactions or ventures with particular counterparties and may require that we modify our operating models or the policies and practices we use to manage our consolidated statement of condition. The effects of these considerations may increase

when evaluated under a stressed environment in stress testing, including CCAR. In addition, we are an adherent to the International Swaps and Derivatives Association 2015 Universal Resolution Stay Protocol and as such are subject to restrictions against the exercise of rights and remedies against fellow adherents, including other major financial institutions, in the event they or an affiliate of theirs enters into resolution. Although our overall business is subject to these factors, several of our activities are particularly sensitive to them including our currency trading business and our securities finance business. For a discussion of regulatory requirements applicable to our counterparty exposures, see - "Enhanced Prudential Standards" under "Supervision and Regulation" in Business in this Form 10-K.

Given the limited number of strong counterparties in the current market, we are not able to mitigate all of our and our clients' counterparty credit risk.

Fee revenue represents a significant majority of our consolidated revenue and is subject to decline, among other things, in the event of a reduction in, or changes to, the level or type of investment activity by our clients.

We rely primarily on fee-based services to derive our revenue. This contrasts with commercial banks that may rely more heavily on interest-based sources of revenue, such as loans. During 2023, total fee revenue represented approximately 79% of our total revenue. Fee revenue generated by our Investment Servicing and Investment Management businesses is augmented by foreign exchange trading services, securities finance, software and processing fees and other fee revenue. The level of these fees is influenced by several factors, including the mix and volume of our AUC/A and our AUM, the value and type of securities positions held (with respect to AUC/ A) and the volume of our clients' portfolio transactions, and the types of products and services used by our clients. Our fee revenue would be negatively affected, potentially materially, by a decline in the market value of client portfolios resulting from a broad market correction, especially in equity markets.

In addition, our clients include institutional investors, such as mutual funds, collective investment funds, UCITS, hedge funds and other investment pools, corporate and public retirement plans, insurance companies, foundations, endowments and investment managers. Economic, market or other factors that reduce the level or rates of savings in or with those institutions, either through reductions in financial asset valuations or through changes in investor preferences, could materially reduce our fee revenue and have a material adverse effect on our consolidated results of operations. If we are unable to effectively manage our capital and liquidity, including by continuously attracting deposits and other short-term funding, our consolidated financial condition, including our regulatory capital ratios, our consolidated results of operations and our business prospects, could be adversely affected.

Liquidity management, including on an intra-day basis, is critical to the management of our consolidated statement of condition and to our ability to service our client base. We generally use our liquidity to:

- meet clients' demands for return of their deposits;
- extend credit to our clients in connection with our investor services businesses; and
- fund the pool of long- and intermediate-term assets that are included in the investment securities and loan portfolio carried in our consolidated statement of condition.

Because the demand for credit by our clients, particularly settlement related extensions of credit, is difficult to predict and control, and may be at its peak at times of disruption in the securities markets, and because the average maturity of our investment securities and loan portfolios is longer than the contractual maturity of our client deposit base, we need to continuously attract, and are dependent on access to, various sources of short-term funding. Since the 2008 financial crisis, the level of client deposits held by us has tended to increase during times of market disruption; however, since such deposits are considered to be transitory, we have historically deposited so-called excess deposits with U.S. and non-U.S. central banks and in other highly liquid instruments. These levels of excess client deposits, when they manifest, have increased our NII but have adversely affected our NIM. There can be no assurance that client behavior in a market disruption will be similar in the future or that our level of deposit funding will not decrease.

In managing our liquidity, our primary source of short-term funding is client deposits, which are predominantly transaction-based deposits by institutional investors. Our ability to continue to attract these deposits, and other short-term funding sources such as certificates of deposit, is subject to variability based on a number of factors, including volume and volatility in global financial markets, the volume of client settlement related activities, the interest rates that we are prepared to pay for these deposits, the loss or gain of one or more clients, client interest in non-interest-bearing reducing deposits, the perception of safety of these deposits or short-term obligations relative to alternative short-term investments available to our clients, including the capital markets, and the classification of certain

deposits for regulatory purposes and related discussions we may have from time to time with clients regarding better balancing our clients' cash management needs with our economic and regulatory objectives.

The Parent Company is a non-operating holding company and generally maintains only limited cash and other liquid resources at any time primarily to meet anticipated near-term obligations. To effectively manage our liquidity, we routinely transfer assets among affiliated entities, subsidiaries and branches. Internal or external factors, such as regulatory requirements and standards, including resolution planning and restrictions on dividend distributions, influence our liquidity management and may limit our ability to effectively transfer liquidity internally which could, among other things, restrict our ability to fund operations, dividends or stock repurchases or pay interest on debt securities or require us to seek external and potentially more costly capital and impact our liquidity position.

In addition, while not obligations of ours, the investment products that we manage for third parties may be exposed to liquidity risks. These products may be funded on a short-term basis or the clients participating in these products may have a right to the return of cash or assets on limited notice. These business activities include, among others, securities finance collateral pools, money market and other short-term investment funds and liquidity facilities utilized in connection with municipal bond programs. If clients demand a return of their cash or assets, particularly on limited notice, and these investment pools do not have the liquidity to support those demands, we could be forced to sell investment securities held by these asset pools at unfavorable prices, damaging our reputation as a service provider and potentially exposing us to claims related to our management of the pools.

The availability and cost of credit in short-term markets are highly dependent on the markets' perception of our liquidity and creditworthiness. Our efforts to monitor and manage our liquidity risk, including on an intra-day basis, may not be successful or sufficient to deal with dramatic or unanticipated changes in the global securities markets or other event-driven reductions in liquidity. As a result of such events, among other things, our cost of funds may increase, thereby reducing our NII, or we may need to dispose of a portion of our investment securities portfolio, which, depending on market conditions, could result in a loss from such sales of investment securities being recorded in our consolidated statement of income. Our calculations of credit, market and operational risk exposures, total RWA and capital ratios for regulatory purposes depend on data inputs, formulae, models, correlations and assumptions that are subject to change over time, which changes, in addition to our consolidated financial results, could materially impact our risk exposures, our total RWA and our capital ratios from period to period.

To calculate our credit, market and operational risk exposures, our total RWA and our capital ratios for regulatory purposes, the current Basel III rule involves the use of current and historical data, including our own loss data and similar information from other industry participants, market volatility measures, interest rates and spreads, asset valuations, credit exposures and the creditworthiness of our counterparties. These calculations also involve the use of quantitative formulae, statistical models, historical correlations and significant assumptions. We refer to the data, formulae, models, correlations and assumptions, as well as our related internal processes, as our "advanced systems." While our advanced systems are generally quantitative in nature, significant components involve the exercise of judgment based on, among other factors, our and the financial services industry's evolving experience. Any of these judgments or other elements of our advanced systems may not, individually or collectively, precisely represent or calculate the scenarios, circumstances, outputs or other results for which they are designed or intended. Collectively, they represent only our estimate of associated risk.

In addition, our advanced systems are subject to update and periodic revalidation in response to changes in our business activities and our historical experiences, forces and events experienced by the market broadly or by individual financial institutions, changes in regulations and regulatory interpretations and other factors, and are also subject to continuing regulatory review and approval. For example, a significant operational loss experienced by another financial institution, even if we do not experience a related loss, could result in a material change in the output of our advanced systems and a corresponding material change in our risk exposures, our total RWA and our capital ratios compared to prior periods. An operational loss that we experience could also result in a material change in our capital requirements for operational risk under the advanced approaches, depending on the severity of the loss event, its characterization among the seven Basel-defined UOM, and the stability of the distributional approach for a particular UOM. This change in our capital requirements could be without direct correlation to the effects of the loss event or the timing of such effects on our results of operations. Due to the influence of changes in our advanced systems, whether resulting

from changes in data inputs, regulation or regulatory supervision or interpretation, specific to us or more general market, or individual financial institutionspecific, activities or experiences, or other updates or factors, we expect that our advanced systems and our credit, market and operational risk exposures, our total RWA and our capital ratios calculated under the Basel III rule will change, and may be volatile, over time, and that those latter changes or volatility could be material as calculated and measured from period to period.

We may need to raise additional capital or debt in the future, which may not be available to us or may only be available on unfavorable terms.

We may need to raise additional capital or debt in order to maintain our credit ratings, in response to regulatory changes, including capital rules, or for other purposes, including financing acquisitions and joint ventures and optimizing capital management.

However, our ability to access the capital markets, if needed, on a timely basis or at all will depend on a number of factors, such as the state of the financial markets and securities law requirements and standards. In the event of rising interest rates, disruptions in financial markets, negative perceptions of our business or our financial strength, or other factors that would increase our cost of borrowing, we cannot be sure of our ability to raise additional capital or debt, if needed, on terms acceptable to us. Any diminished ability to raise additional capital or debt, if needed, could adversely affect our business and our ability to implement our business plan, capital plan and strategic goals, including the financing of acquisitions and joint ventures, our efforts to maintain regulatory compliance and optimize our capital management activities.

Any downgrades in our credit ratings, or an actual or perceived reduction in our financial strength, could adversely affect our borrowing costs, capital costs and liquidity position and cause reputational harm.

Major independent rating agencies publish credit ratings for our debt obligations based on their evaluation of a number of factors, some of which relate to our performance and other corporate developments, including financings, acquisitions and joint ventures, and some of which relate to general industry conditions. For example, in November 2023, Moody's Investors Service issued a notice advising that its outlooks for State Street Bank's long-term issuer and deposit ratings, and senior unsecured ratings, is negative. We anticipate that the rating agencies will continue to review our ratings regularly based on our consolidated results of operations and developments in our businesses, including regulatory considerations such as resolution planning. One or more of the major independent credit rating agencies

have in the past downgraded, and may in the future downgrade, our credit ratings, or have negatively revised their outlook for our credit ratings. The current market and regulatory environment and our exposure to financial institutions and other counterparties, including sovereign entities, increase the risk that we may not maintain our current ratings, and we cannot provide assurance that we will continue to maintain our current credit ratings. Downgrades in our credit ratings may adversely affect our borrowing costs, our capital costs and our ability to raise capital and, in turn, our liquidity. A failure to maintain an acceptable credit rating may also preclude us from being competitive in various products.

Additionally, our counterparties, as well as our clients, rely on our financial strength and stability and evaluate the risks of doing business with us. If we experience diminished financial strength or stability, actual or perceived, due to the effects of market or regulatory developments, announced or rumored business developments, consolidated results of operations, a decline in our stock price or a downgrade to our credit rating, our counterparties may be less willing to enter into transactions, secured or unsecured, with us, our clients may reduce or place limits on the level of service we provide to them or seek to transfer the business, in whole or in part, to other service providers or our prospective clients may select other service providers. Any, or all of these may have adverse effects on our business and reputation.

The risk that we may be perceived as less creditworthy than other market participants is higher as a result of recent market developments, which include an environment in which the consolidation, and in some instances failure, of financial institutions, including major global financial institutions, has resulted in a smaller number of much larger counterparties and competitors. If our counterparties perceive us to be a less viable counterparty, our ability to enter into financial transactions on terms acceptable to us or our clients, on our or our clients' behalf, will be materially compromised. If our clients reduce their deposits with us or select other service providers for all or a portion of the services we provide to them, our revenues will decrease accordingly.

Compliance and Regulatory Risks

Our business and capital-related activities, including our ability to return capital to shareholders and repurchase our capital stock, may be adversely affected by our implementation of regulatory capital and liquidity standards that we must meet or as a result of regulatory capital stress testing.

Basel III and Dodd-Frank Act

We are required to calculate our risk-based capital ratios under both the Basel III advanced approaches and the Basel III standardized approach, and we are subject to the more stringent of the riskbased capital ratios calculated under the advanced approaches and those calculated under the standardized approach in the assessment of our capital adequacy.

In implementing various aspects of these capital regulations, we are making interpretations of the regulatory intent. The Federal Reserve may determine that we are not in compliance with the capital rules and may require us to take actions to come into compliance that could adversely affect our business operations, our regulatory capital structure, our capital ratios or our financial performance, or otherwise restrict our growth plans or strategies. In addition, banking regulators could change the Basel III rule or their interpretations as they apply to us, including changes to these standards or interpretations made in regulations implementing provisions of the Dodd-Frank Act, which could adversely affect us and our ability to comply with the Basel III rule.

For example, on July 27, 2023, the U.S. Agencies issued a proposed rule to implement the Basel III endgame agreement for large banks. The proposed rule would introduce the expanded riskbased approach, reflecting new RWA methodologies that generally align with changes to the global Basel Accord adopted by the BCBS. The proposal would eliminate the current Basel III rule's advanced approaches and effectively replace it with the expanded risk-based approach, which more heavily relies on standardized methodologies. As compared with the standardized approach, the proposed expanded approach includes more granular risk weights for credit risk and introduces a new market risk framework. In addition, unlike the existing standardized approach, the proposed expanded riskbased approach includes operational risk and credit valuation adjustment RWA components. Based on our current understanding of the Basel III endgame proposed rule, we estimate that, if the expanded riskbased approach had been applied on a fully phasedin basis as of December 31, 2023, and in the absence of taking any actions to mitigate its impact, our expanded risk-based approach RWA as of that date would have been approximately 15% higher than our actual standardized approach RWA as of that date.

Any estimate of how the expanded risk-based approach may impact us is 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 interpretations (including changes in interpretations) of, and potential modifications by the U.S. Agencies to, the proposal.

For additional information on these requirements, refer to the "Regulatory Capital Adequacy and Liquidity Standards" section under "Supervision and Regulation" in Business in this Form 10-K.

Along with the Basel III rule, banking regulators also introduced additional requirements, such as the SLR, LCR and NSFR, each of which presents compliance risks.

For example, these regulatory requirements could have a material effect on our business activities, including the management and composition of our investment securities portfolio and our ability to extend credit through committed facilities, loans to our clients or our principal securities lending activities as the structure of our balance sheet changes. In addition, further capital and liquidity requirements are being implemented or are under consideration by U.S. and international banking regulators. Any of these rules, or any additional regulatory initiatives introduced under the current administration, could have a material effect on our capital and liquidity planning and related activities, including the management and composition of our investment securities portfolio and our ability to extend committed contingent credit facilities to our clients. The full effects of these rules, and of other regulatory initiatives related to capital or liquidity, on us and State Street Bank are subject to further regulatory guidance, action or rule-making.

Systemic Importance

As a G-SIB, we are generally subject to the most stringent provisions under the Basel III rule. For example, we are subject to the Federal Reserve's rules on the implementation of capital surcharges for U.S. G-SIBs, and on TLAC, LTD and clean holding company requirements for U.S. G-SIBs which we refer to as the "TLAC rule". For additional information on these requirements. including proposed amendments thereof, refer to the "Regulatory Capital Adequacy and Liquidity Standards" section under "Supervision and Regulation" in Business in this Form 10-K.

Not all of our competitors have similarly been designated as systemically important nor are all of them subject to the same degree of regulation as a bank or financial holding company, and therefore some of our competitors are not subject to the same additional capital requirements.

Supervisory Stress Testing and Capital Planning

We are required by the Federal Reserve to conduct periodic stress testing of our business operations and to develop an annual capital plan and are subject to supervisory stress testing, all as part of the Federal Reserve's stress testing and capital planning processes. The stress testing and capital planning processes, the severity and other characteristics of which may evolve from year-to-year, are used by the Federal Reserve to evaluate our management of capital and the adequacy of our regulatory capital and to determine the SCB that we must maintain above our minimum regulatory capital requirements in order for us to make capital distributions and discretionary bonuses without limitation. The results of the supervisory stress testing process are difficult to predict due, among other things, to the Federal Reserve's use of proprietary stress models that differ from our internal models. The results of the Federal Reserve's supervisory stress tests may result in an increase in our SCB requirement. The amounts of the planned capital actions in our capital plan in any year, including stock repurchases and dividends, may be substantially reduced from the amounts included in prior capital plans. These reductions may reflect changes in one or more different factors, including our business prospects and related capital needs, our capital position, proposed acquisitions or other uses of capital, the models used in our capital planning process, the supervisory models used by the Federal Reserve to stress our balance sheet, the Federal Reserve's hypothetical economic scenarios for the supervisory stress testing process, the Federal Reserve's stress testing instructions and the Federal Reserve's supervisory expectations for the capital planning process. Any of these potential events could require us, as applicable, to revise our stress-testing or capital-management approaches, resubmit our capital plan or postpone, cancel or alter our planned capital actions. In addition, changes in our business strategy, merger or acquisition activity or uses of capital could result in a change in our capital plan and its associated capital actions, and may require us to resubmit our capital plan to the Federal Reserve, which could prompt the Federal Reserve to recalculate our SCB requirement. We are also subject to asset quality reviews and stress testing by the ECB and in the future we may be subject to similar reviews and testing by other regulators.

Our implementation of capital and liquidity requirements may not be approved or may be objected to by the Federal Reserve, and the Federal Reserve may impose capital requirements in excess of our expectations or require us to maintain levels of liquidity that are higher than we may expect and which may adversely affect our consolidated revenues. In the event that our implementation of capital and liquidity requirements under regulatory initiatives or our current capital structure are determined not to conform with current and future capital requirements, our ability to deploy capital in the operation of our business or our ability to distribute capital to shareholders or to repurchase our capital stock may be constrained, and our business may be adversely affected. In addition, we may choose to forgo business opportunities, due to their impact on our capital plan or stress tests, including our SCB requirement. Likewise, in the event that regulators in other jurisdictions in which we have banking subsidiaries determine that our capital or liquidity levels do not conform with current and future regulatory requirements, our ability to deploy capital, our levels of liquidity or our business operations in those jurisdictions may be adversely affected.

For additional information about the above matters, refer to "Regulatory Capital Adequacy and Liquidity Standards" section under "Supervision and Regulation" in Business and "Capital" section under "Financial Condition" in our Management's Discussion and Analysis in this Form 10-K.

We face extensive and changing government regulation and supervision globally in jurisdictions in which we operate, which may increase our costs and expose us to risks related to compliance.

Most of our businesses are subject to extensive regulation and supervision by multiple regulatory and supervisory bodies, and many of the clients to which we provide services are themselves subject to a broad range of regulatory requirements. These regulations may affect the scope of, and the manner and terms of delivery of, our services. For example, potential changes in the regulation of money market funds have the potential to alter the marketplace for and increase the complexity and costs of providing services to, those funds. As a financial institution with substantial international operations, we are subject to extensive regulation and supervisory oversight, both inside and outside of the United States. This regulation and supervisory oversight affects, among other things, the scope of our activities and client services, our capital and organizational structure, our ability to fund the operations of our subsidiaries, our lending practices, our dividend policy, our common share repurchase actions, the manner in which we market our services, our acquisition activities and our interactions with foreign regulatory agencies and officials.

In particular, we are registered with the Federal Reserve as a bank holding company pursuant to the Bank Holding Company Act of 1956. The Bank Holding Company Act generally limits the activities in which we and our non-banking subsidiaries may engage to managing or controlling banks and to activities considered to be closely related to banking. As a bank holding company that has elected to be treated as a financial holding company under the Bank Holding Company Act, we and some of our nonbanking subsidiaries may also engage in a broader range of activities considered to be "financial in nature." Financial holding company status may be denied if we and our banking subsidiaries do not remain well capitalized and well managed or fail to with Community Reinvestment comply Act obligations.

We are unable to predict what, if any, changes to the regulatory environment may be enacted by Congress, or the current and next presidential administration and what the impact of any such changes will be on our results of operations or financial condition, including increased expenses or changes in the demand for our services or our ability to engage in transactions to expand our business, or on the U.S.-domestic or global economies or financial markets.

Moreover, the current presidential administration has made certain changes in the leadership and senior staffs of the federal banking agencies and may make additional changes in the future. Such changes are likely to impact the rulemaking, supervision, examination and enforcement priorities and policies of the agencies. In addition, changes in key personnel at the agencies that regulate such banking organizations, including the federal banking agencies, may result in differing interpretations of existing rules and guidelines and potentially more stringent enforcement and more severe penalties than previously. The potential impact of any changes in policies, personnel, priorities agency and interpretations on the financial services sector, including us, cannot be predicted at this time. Furthermore, fiduciary, anti-competitive, voting power, governance, and other concerns with ESG investment strategies continue to be the subject of legislative and regulatory debate globally, particularly at the federal and state level in the United States, the outcomes of which could impact both our asset management business and the clients that we service, as well as, potentially, our investment servicing activities more broadly.

We expect that our business will remain subject to extensive regulation and supervision. Several other aspects of the regulatory environment in which we operate, and related risks, are discussed below. Additional information is provided under "Supervision and Regulation" in Business in this Form 10-K.

Resolution Planning

We are required to periodically submit a plan for rapid and orderly resolution in the event of material financial distress or failure commonly referred to as a resolution plan or a living will to the Federal Reserve and the FDIC under Section 165(d) of the Dodd-Frank Act. Through resolution planning, we seek, in the event of insolvency, to maintain State Street Bank's role as a key infrastructure provider within the financial system, while minimizing risk to the financial system and maximizing value for the benefit of our stakeholders. Significant management attention and resources are devoted in an effort to meet regulatory expectations with respect to resolution planning.

In the event of material financial distress or failure, our preferred resolution strategy is the SPOE Strategy. Our resolution plan, including our implementation of the SPOE Strategy with a secured support agreement, may result in significant risks, including that: (1) the SPOE Strategy and the obligations under the related secured support agreement may result in the recapitalization of and/or provision of liquidity to State Street Bank and our other material entities and the commencement of bankruptcy proceedings by the Parent Company at an earlier stage of financial stress than might otherwise occur without such mechanisms in place; (2) as an expected effect of the SPOE Strategy, together with applicable TLAC regulatory requirements, our losses will be imposed on Parent Company shareholders and the holders of long-term debt and other forms of TLAC securities currently outstanding or issued in the future by the Parent Company, as well as on any other Parent Company creditors, before any of our losses are imposed on the holders of the debt securities of State Street Bank or certain of the Parent Company's other operating subsidiaries or any of their depositors or creditors and before U.S. taxpayers are put at risk; (3) there can be assurance that there would be sufficient no recapitalization resources available to ensure that State Street Bank and our other material entities are adequately capitalized following the triggering of the requirements to provide capital and/or liquidity under the secured support agreement; and (4) there can be no assurance that credit rating agencies, in response to our resolution plan or the secured support agreement, will not downgrade, place on negative watch or change their outlook on our debt credit ratings, generally or on specific debt securities. Additional information about the SPOE Strategy, including related risks, is provided under "Recovery and Resolution Planning" in Business in this Form 10-K.

Systemic Importance

Our qualification in the United States as a SIFI, and our designation by the Financial Stability Board as a G-SIB, to which certain regulatory capital surcharges may apply, subjects us to incrementally higher capital and prudential requirements, increased scrutiny of our activities and potential additional regulatory requirements or heightened regulatory expectations as compared to those applicable to some of the financial institutions with which we compete as a custodian or asset manager. This qualification and designation also has significantly increased, and may continue to increase, our expenses associated with regulatory compliance, including personnel and systems, as well as implementation and related costs to enhance our programs.

Global and Non-U.S. Regulatory Requirements

The breadth of our business activities, together with the scope of our global operations and varying business practices in relevant jurisdictions, increase the complexity and costs of meeting our regulatory compliance obligations, including in areas that are receiving significant regulatory scrutiny. We are, therefore, subject to related risks of non-compliance, including fines. penalties, lawsuits, regulatory sanctions, difficulties in obtaining governmental approvals, limitations on our business activities or reputational harm, any of which may be significant. For example, the global nature of our client base requires us to comply with complex laws and regulations of multiple jurisdictions relating to economic sanctions and money laundering. In addition, we are required to comply not only with the U.S. Foreign Corrupt Practices Act, but also with the applicable anti-corruption laws of other jurisdictions in which we operate. Beyond the risks of noncompliance, these requirements potentially expose us to increased counterparty credit risk and exposures to our clients created due to complications associated with compliance, including country risk, market risk, restrictions on asset transfers and inability to access assets. Further, our global operating model requires that we comply with information security, resiliency and outsourcing oversight requirements, including with respect to affiliated entities, of multiple jurisdictions and enable our clients to comply with information security, resiliency and outsourcing oversight requirements imposed upon them. Regulatory scrutiny of compliance with these and other laws and regulations is increasing and may, in some respects, impede the implementation of our global operating model that is central to both delivery of client service requirements and cost efficiency. We sometimes face inconsistent laws and regulations across the various jurisdictions in which we operate. The evolving regulatory landscape may interfere with our ability to conduct our operations, hamper our pursuit of a common global operating model or impede our ability to compete effectively with other financial institutions operating in those jurisdictions which may be subject to different regulatory requirements than apply to us. In particular, non-U.S. regulations and initiatives that may be inconsistent or conflict with current or proposed regulations in the

U.S. could create increased compliance and other costs that would adversely affect our business, operations or profitability. Geopolitical events also have the potential to increase the complexity and cost of regulatory compliance.

In addition to U.S. regulatory initiatives, we are further affected by non-U.S. regulatory initiatives, including the implementation of the Basel prudential framework, the E.U. Digital Operational Resilience Act, Corporate Sustainability Reporting Directive and Sustainable Finance Disclosures Regulation, as well as proposals for amending the AIFM Directive and under the Capital Markets Union Action Plan. Recent, proposed or potential regulations in the U.S. and E.U. with respect to the supervision of digital assets and of climate and environmental risks, short-term wholesale funding, such as repurchase agreements or securities lending, or other non-bank finance activities, could also adversely affect not only our own operations but also the operations of the clients to which we provide services. Concerns regarding the liquidity and valuation of prime money market funds and similar products, as well as potential related regulation, may adversely impact the cash management products we offer. In addition, anti-competitive, voting power, governance and other concerns with passive investment strategies continue to be the subject of legislative and regulatory debate which could significantly impact both our asset management business and the clients that we service.

Consequences of Regulatory Environment and Compliance Risks

Domestic and international regulatory reform could limit our ability to pursue certain business opportunities, increase our regulatory capital requirements, alter the risk profile of certain of our core activities and impose additional costs on us, otherwise adversely affect our business, our consolidated results of operations or financial condition and have other negative consequences, including, a reduction of our credit ratings. Different countries may respond to the market and economic environment in different and potentially conflicting manners, which could increase the cost of compliance for us.

The evolving regulatory environment, including changes to existing regulations and the introduction of new regulations, may also contribute to decisions we may make to suspend, reduce or withdraw from existing businesses, activities, markets or initiatives. In addition to potential lost revenue associated with any such suspensions, reductions or withdrawals, any such suspensions, reductions or withdrawals may result in significant restructuring or related costs or exposures or may result in inefficiencies or increased costs due to associated changes in our operating model.

If we do not comply with governmental regulations, we may be subject to fines, penalties, lawsuits, delays, or difficulties in obtaining regulatory approvals or restrictions on our business activities or harm to our reputation, which may significantly and adversely affect our business operations and, in turn, consolidated results of operations. our The willingness of regulatory authorities to impose meaningful sanctions, and the level of fines and penalties imposed in connection with regulatory violations, has increased substantially since the 2008 financial crisis. Regulatory agencies may, at times, limit our ability to disclose their findings, related actions or remedial measures. Similarly, many of our clients are subject to significant regulatory requirements and retain our services in order for us to assist them in complying with those legal requirements. Changes in these regulations can significantly affect the services that we are asked to provide, as well as our costs.

Adverse publicity and damage to our reputation arising from the failure or perceived failure to comply with legal, regulatory or contractual requirements could affect our ability to attract and retain clients. If we cause clients to fail to comply with any regulatory requirements, we may be liable to them for losses and expenses that they incur. In recent years, regulatory oversight and enforcement have increased substantially, imposing additional costs and increasing the potential risks associated with our operations. If this regulatory trend continues, it could continue to adversely affect our operations and, in turn, our consolidated results of operations and financial condition.

For additional information, see the risk factor "Our businesses may be adversely affected by government enforcement and litigation."

Our businesses may be adversely affected by government enforcement and litigation.

The businesses in which we operate are highlyregulated and subject to extensive external scrutiny that may be directed generally to participants in the businesses or markets in which we are involved or may be specifically directed at us, including as a result of whistleblower and qui tam claims. In the course of our business, we are frequently subject to governmental various regulatory. and law enforcement inquiries, investigative demands and subpoenas, and from time to time, our clients, or the government on its own behalf or on behalf of our clients or others, make claims and take legal action relating to, among other things, our performance of our fiduciary, contractual or regulatory responsibilities. Often, the announcement of any such matters, or of any settlement of a claim or action, whether it involves us or others in our industry, may spur the initiation of similar claims by other clients or governmental parties. Regulatory authorities have, and are likely to continue to, initiate cross industry reviews when a material issue is identified at a financial institution. Such inquiries involve costs and management time and may lead to proceedings relating to our own activities.

Regardless of the outcome of any governmental enforcement or litigation matter, responding to such matters is time-consuming and expensive and can divert the attention of senior management. Governmental enforcement and litigation matters can involve claims for disgorgement, demands for substantial monetary damages, the imposition of civil or criminal penalties, and the imposition of remedial sanctions or other required changes in our business practices, any of which could result in increased expenses, loss of client demand for our products or services, or harm to our reputation. The exposure associated with any proceedings that may be threatened, commenced or filed against us could have a material adverse effect on our consolidated results of operations for the period in which we establish a reserve with respect to such potential liability or upon our reputation. In government settlements since the 2008 financial crisis, the fines imposed by authorities have increased substantially and may exceed in some cases the profit earned or harm caused by the regulatory or other breach. For example, in 2021, we paid a \$115 million penalty to the office of the United Sates Attorney for the District of Massachusetts to resolve potential criminal claims arising from the invoicing matter. In addition, in connection with the resolution of a transition management matter, we agreed to pay a fine of £22.9 million (approximately \$37.8 million) to the U.K. FCA in 2014 and fines of \$32.3 million to each of the DOJ and the SEC in 2017. As a further example, we paid an aggregate of \$575 million in 2016 to resolve a series of investigations and governmental and private claims alleging that our indirect foreign exchange rates prior to 2008 were not adequately disclosed or were otherwise improper. These matters have also resulted in regulatory focus on the manner in which we charge clients and related disclosures. This focus may lead to increased and prolonged governmental inquiries and client, qui tam and whistleblower claims associated with the amount and disclosure of compensation we receive for our products and services.

Moreover, U.S. and certain international governmental authorities have increasingly brought criminal actions against financial institutions, and criminal prosecutors have increasingly sought and obtained criminal guilty pleas, deferred prosecution agreements or other criminal sanctions from financial institutions. For example, in 2017 we entered into a deferred prosecution agreement with the U.S. Department of Justice in connection with the resolution of a transition management matter and in May 2021, we entered into a deferred prosecution agreement with the office of the United States Attorney for the District of Massachusetts in connection with the invoicing matter and such agreement could increase the likelihood that governmental authorities will seek criminal sanctions against us in pending proceedings or future litigation legal proceedings. Government authorities may also pursue criminal claims against current or former employees, and these matters can, among other things, involve continuing reputational harm to us. For example, four of our former employees were indicted by U.S. prosecutors on charges of criminal conspiracy in connection with their involvement in the transition management matter. Two of these individuals pled guilty, and a third was convicted in 2018.

In many cases, we are required or may choose to report inappropriate or non-compliant conduct to the authorities, and our failure or delay to do so may represent an independent regulatory violation or be treated as an indication of non-cooperation with governmental authorities. Even when we promptly report a matter, we may nonetheless experience regulatory fines, liabilities to clients, harm to our reputation or other adverse effects. Moreover, our settlement or other resolution of any matter with any one or more regulators or other applicable party may not forestall other regulators or parties in the same or other jurisdictions from pursuing a claim or other action against us with respect to the same or a similar matter.

For more information about current contingencies relating to legal proceedings, see Note 13 to the consolidated financial statements in this Form 10-K. The resolution of certain pending or potential legal or regulatory matters could have a material adverse effect on our consolidated results of operations for the period in which the relevant matter is resolved or an accrual is determined to be required, on our consolidated financial condition or on our reputation.

In view of the inherent difficulty of predicting the outcome of legal and regulatory matters, we cannot provide assurance as to the outcome of any pending or potential matter or, if determined adversely against us, the costs associated with any such matter, particularly where the claimant seeks very large or indeterminate damages or where the matter presents novel legal theories, involves a large number of parties, involves the discretion of governmental authorities in seeking sanctions or negotiated resolution or is at a preliminary stage. We may be unable to accurately estimate our exposure to the risks of legal and regulatory contingencies when we record reserves for probable and estimable loss contingencies. As a result, any reserves we establish may not be sufficient to cover our actual financial exposure. Similarly, our estimates of the aggregate range of reasonably possible loss for legal and regulatory contingencies are based upon thenavailable information and are subject to significant judgment and a variety of assumptions and known and unknown uncertainties. The matters underlying the estimated range will change from time to time, and actual results may vary significantly from the estimate at any time.

Our businesses may be adversely affected by increased and conflicting political and regulatory scrutiny of asset management stewardship and corporate sustainability or ESG practices.

Our Investment Management line of business provides investment management strategies and products that may incorporate the consideration of sustainability or ESG factors into the investment process. For clients and fund investors who want an investment solution that purposefully takes into consideration sustainability or ESG factors, we offer investment funds and strategies that consider sustainability or ESG factors as a material component of the investment strategy or index methodology. Where clients have delegated to us authority to vote securities on their behalf at shareholder meetings of the public companies held in their investment portfolios, we may also take into consideration sustainability or ESG issues that we believe are relevant to the long-term performance of the companies in which our clients invest. As part of our asset stewardship program, we regularly engage with representatives of companies held in client portfolios, and these engagements may involve discussion of risks and opportunities relating to sustainability or ESG issues affecting these companies. We have also become members of various organizations focused on climate change and other sustainability or ESG issues.

Our sustainability- or ESG-related investment management practices have recently become the subject of significant scrutiny by regulatory agencies and government officials. Certain U.S. officials have suggested that sustainability- or ESG-related investing practices may result in violations of law including antitrust laws - and breaches of fiduciary duty. Views on sustainability or ESG practices, particularly those related to climate issues, have also become political issues, which can amplify the reputational risks associated with such allegations. Overall expectations of our stakeholders, including regulators and clients, outside the United States, particularly in Europe, concerning sustainability or ESG issues can be markedly different from expectations in the United States. Given we conduct our asset stewardship activities on a global basis, conflicting U.S. and non-U.S. global expectations complicate our ability to mitigate the risks. We have

received information requests from various government entities in connection with their investigations of sustainability or ESG investing practices. We are, therefore, subject to related risks of non-compliance with relevant legal requirements, including fines, penalties. lawsuits, regulatory sanctions, difficulties in obtaining governmental approvals, limitations on our business activities or reputational harm, any of which may be significant. We also face potential risks presented by recently adopted SEC rules, which would impose new disclosure requirements and naming conventions for sustainability- or ESG-related funds and other sustainability- or ESG-related disclosure obligations on public companies more generally. Regulations in other jurisdictions could have similar effects or present conflicting or inconsistent regulatory obligations across jurisdictions. We also face potential risks associated with the enactment of various state laws aimed at sustainability- or ESGrelated investing practices and proxy voting. Governmental enforcement action could also spark civil litigation claims by clients and fund shareholders asserting violations of law, fiduciary duties and contractual obligations. Regardless of the outcome of any governmental enforcement or litigation matter, responding to such matters is time-consuming and expensive and can divert the attention of senior management. In Europe, we are subject to potential fines and other regulatory consequences if regulators conclude we are not managing or reducing climate risk consistent with their expectations, not only in our own operations, but also through the vendors we use and, potentially, the clients we service.

State law and/or political pressure may also prevent governmental clients from using service providers, such as us, either as asset manager or investment servicer, if the legislators or governmental officials in such jurisdictions believe our sustainabilityor ESG-related practices are not consistent with requirements under state law or the views of such legislators or officials.

Adverse publicity and damage to our reputation arising from the failure or perceived failure to comply with legal, regulatory or contractual requirements could affect our ability to attract and retain clients. Moreover, aside from any governmental enforcement or litigation activity, public criticism levelled at sustainability or ESG investing practices could result in reduced investor demand for sustainability- or ESG-related products, which could in turn negatively effect our assets under management and resulting fee revenues.

As a general matter, large index fund providers, such as State Street Global Advisors, have been and are expected to continue to be subject to legislative and regulatory proposals or investigations from both sides of the political spectrum due to a perception that they exert inappropriate influence over publicly traded companies.

For additional information, see the risk factor "Our businesses may be adversely affected by government enforcement and litigation."

Any theft. loss. damage to or other misappropriation or inadvertent disclosure of, or inappropriate access to, the confidential information we possess could have an adverse impact on our business and could subject us to regulatory actions, litigation and other adverse effects.

Our businesses and relationships with clients are dependent on our ability to maintain the confidentiality of our and our clients' trade secrets and other confidential information (including client transactional and holdings data and personal data about our clients, our clients' clients and our employees). Unauthorized access, or failure of our controls with respect to granting access to our systems, or failure of our other data loss prevention controls, may in the future occur, resulting in theft, loss, damage to or other misappropriation of such information. Our personnel or our vendors have in the past and may in the future, inadvertently or deliberately, disclose client or other confidential information. In addition, our systems or systems of our vendors have in the past or may in the future be inadvertently or deliberately exploited resulting in disclosure of client or other confidential information. Any theft, loss, damage to other misappropriation or inadvertent disclosure of confidential information could have a material adverse impact on our competitive position, our relationships with our clients and our reputation and could subject us to regulatory inquiries, enforcement and fines, civil litigation and possible financial liability or costs. To the extent any of these events involve personal information, the risks of enhanced regulatory scrutiny and the potential financial liabilities are exacerbated, particularly under data protection regulations such as the GDPR.

Changes in accounting standards may adversely affect our consolidated financial statements.

New accounting standards, or changes to existing accounting standards, resulting both from initiatives of the FASB as well as changes in the interpretation of existing accounting standards potentially could affect our consolidated results of operations, cash flows and financial condition. These changes can materially affect how we record and report our consolidated results of operations, cash flows. financial condition and other financial information. In some cases, we could elect, or be required, to apply a new or revised standard retroactively, resulting in the revised treatment of certain transactions or activities, and, in some cases, the revision of our consolidated financial statements

for prior periods. For additional information regarding changes in accounting standards, refer to the "Recent Accounting Developments" section of Note 1 to the consolidated financial statements in this Form 10-K.

Changes in tax laws, rules or regulations, challenges to our tax positions with respect to historical transactions, and changes in the composition of our pre-tax earnings may increase our effective tax rate and thus adversely affect our consolidated financial statements.

Our businesses can be directly or indirectly affected by new tax legislation, the expiration of existing tax laws or the interpretation of existing tax laws worldwide. The U.S. federal and state including governments. Massachusetts, and jurisdictions around the world continue to review and enact proposals to amend tax laws, rules and regulations, including those related to corporate and global minimum taxes, applicable to our businesses that could have a negative impact on our capital or after-tax earnings. In the normal course of our business, we are subject to review by U.S. and non-U.S. tax authorities. A review by any such authority could result in an increase in our recorded tax liability. In addition to the aforementioned risks, our effective tax rate is dependent on the nature and geographic composition of our pre-tax earnings and could be negatively affected by changes in these factors.

We could face liabilities for withholding and other non-income taxes as a result of tax authority examinations.

In addition to income tax, we are at present, and in the future will be, under audit or other examination, and litigation or other dispute resolution proceedings, with U.S. and non-U.S. tax authorities regarding nonincome-based tax matters. Our interpretations or application of tax laws and regulations, including with respect to withholding, transfer, wage, sales, use, stamp, value added, service and other non-income taxes, could differ from that of the relevant governmental taxing authority, or we may experience timing or other compliance deficiencies in connection with our efforts to comply with applicable tax laws and regulations, which could result in the requirement to pay additional taxes, penalties and/or interest, which could be material. Our tax exposure may also be impacted by tax positions taken by our clients and counterparties.

Our businesses may be negatively affected by adverse publicity or other reputational harm.

Our relationship with many of our clients is predicated on our reputation as a fiduciary and a service provider that adheres to the highest standards of ethics, service quality and regulatory compliance, as well as a leading provider of the products and services we offer. Adverse publicity, regulatory actions or fines, litigation, operational failures, loss of client

opportunities or market share or the failure to meet client expectations or fiduciary or other obligations could materially and adversely affect our reputation, our ability to attract and retain clients or key employees or our sources of funding for the same or other businesses. For example, over the past decade we have experienced adverse publicity with respect to our indirect foreign exchange trading, and this adverse publicity has contributed to a shift of client volume to other foreign exchange execution methods. Similarly, governmental actions and reputational issues in our transition management business in the U.K. have adversely affected our transition management revenue and, with criminal convictions or guilty pleas of three of our former employees in 2018 and the deferred prosecution agreement we entered into in early 2017 and the related SEC settlement, these effects have the potential to continue. The client invoicing matter we announced in late 2015, and the related deferred prosecution agreement entered into in May 2021, have had similar effects. For additional information about these matters, see the risk factor "Our businesses may be adversely affected by government enforcement and litigation."

Preserving and enhancing our reputation also depends on maintaining systems, procedures and controls that address known risks, regulatory standards and client expectations, as well as our ability to timely identify, understand and mitigate additional risks that arise due to changes in our businesses and the marketplaces in which we operate, the regulatory environment and client business practices.

Operational and Technology Risks

Our business may be negatively affected by our failure to update and maintain our technology infrastructure.

In order to maintain and grow our business, we must make strategic decisions about our current and future business plans and effectively execute upon those plans. Strategic initiatives that we are currently developing or executing against include cost initiatives, enhancements and efficiencies to our operational processes, improvements to existing and new service offerings and enhancements to existing and development of new information technology and other systems. Implementing strategic programs and creating cost efficiencies involves certain strategic, technological, operational and regulatory risks. Many features of our present initiatives include investment in systems integration and new technologies and also the development of new, and the evolution of existing, methods and tools to accelerate the pace of innovation, the introduction of new services and enhancements to the resiliency of our systems and operations. These initiatives also may fail to meet increasing regulatory and client expectations, may take longer than anticipated to implement and may result in increases in operating losses, inadvertent data disclosures or other operating errors. Further, savings achieved as a result of operational, systems or other business process or organizational initiatives may not persist for the anticipated periods. We may not have sufficient resources to complete all of the systems development or projects that might enhance our product capabilities, resiliency of our operations or cost initiatives and, consequently, management makes judgments as to the priority to give to competing initiatives. In implementing these programs, we have material dependencies on third parties with contractual limits on their responsibilities to us. The transition to new operating processes and technology infrastructure may also cause disruptions in our relationships with clients and employees or loss of institutional understanding and may present other unanticipated technical or operational hurdles. In addition, the relocation to or expansion of servicing activities and other operations in different geographic regions or vendors may entail client, regulatory and other third party data use, storage and security challenges, as well as other regulatory compliance, business continuity and other considerations. As a result, we may not achieve some or all of the anticipated cost savings, process improvement, compliance or other benefits and may experience unanticipated challenges from clients, regulators or other parties or reputational harm. Further, some new products and services may quickly be superseded in the marketplace, after significant investment by us, by more effective innovative technologies or solutions to which we may not have access. In addition, some systems development initiatives may not have access to significant resources or management attention and, consequently, may be delayed or unsuccessful. Many of our systems require enhancements to meet the requirements of evolving regulation and marketplace demands, to enhance security and resiliency and decommission obsolete technologies, to permit us to optimize our use of capital or to reduce the risk of operating error. In addition, the implementation of State Street Alpha, State Street Digital and products and services involving artificial intelligence requires substantial systems development and expense. We may not have the resources to pursue all of these objectives simultaneously.

Our risk management framework, models and processes may not be effective in identifying or mitigating risk and reducing the potential for related losses, and a failure or circumvention of our controls and procedures, or errors or delays in our operational and transaction processing, or those of third parties, could have an adverse effect on our business, financial condition, operating results and reputation.

We have in the past failed and may in the future fail to identify and manage risks related to a variety of aspects of our business, including cybersecurity, information technology risk, operational risk and resiliency, interest rate risk, foreign exchange risk, fiduciary risk, legal and compliance risk, liquidity risk and credit risk. We have adopted various risk frameworks, controls, procedures, policies and systems to monitor and manage risk. We cannot provide assurance that those frameworks, controls, procedures, policies and systems are or will be adequate to identify and mitigate internal and external risks, including risks related to third-party service providers, in our various businesses and corporate functions. The risk of individuals, either employees or contractors, engaging in conduct harmful or misleading to clients or to us, such as consciously circumventing established control mechanisms, for example to exceed trading or investment management limitations, commit fraud or improperly sell products or services to clients, is particularly challenging to manage through a risk framework, controls or other measures. In addition, we are subject to increasing resiliency risk and client and regulatory expectations, requiring continuous reinvestment, enhancement and improvement in and of our information technology and operational infrastructure, controls and personnel which may not be effectively or timely deployed or integrated. Moreover, the financial and reputational impact of control or conduct failures can be significant. Persistent or repeated issues with respect to controls, information technology and operational resiliency or individual conduct have raised and may in the future raise concerns among regulators regarding our culture, governance and control environment. There can be no assurance that our efforts to address such risks will be effective. While we seek to effectively manage operational risk and adverse impacts to our business, financial condition, operating results and reputation, the degree of protection that we are able to achieve varies, and our potential exposure may be greater than the revenue we anticipate that we will earn from servicing our clients.

In addition, our businesses and the markets in which we operate are continuously evolving. We will need to make additional investments to develop an appropriate operational infrastructure and to enhance our compliance and risk management frameworks and capabilities to support our businesses through their evolution, which may increase the operating expenses of such businesses. Moreover, we may fail to identify or fully understand the implications of changes in our businesses or the financial markets and fail to adequately or timely enhance our risk framework to address those changes. To the extent that our risk framework is ineffective, either because it fails to keep pace with changes in the financial markets, regulatory or industry requirements, technology and cybersecurity developments, our businesses, our counterparties, clients or service providers or for other reasons, we could incur losses, suffer reputational damage or find ourselves out of compliance with applicable regulatory or contractual mandates or expectations, and subject to regulatory inquiry or action against us.

Operational risk is inherent in all of our business activities. As a leading provider of services to institutional investors, we provide a broad array of services that expose us to operational risk and potential loss resulting from inadequate or failed internal processes. employee supervision or monitoring mechanisms, service-provider processes or other systems or controls, which could materially affect our future consolidated results of operations. In addition, these services generate a broad array of complex and specialized servicing, confidentiality and fiduciary requirements, many of which involve the opportunity for human, systems or process errors. We face the risk that the policies, procedures and controls we have established to, among other things, manage operational, technology and information security risks, will fail or be inadequate, in whole or in part, to mitigate risk and may become outdated. Additionally, several of our processes for specific clients, often large clients with a high volume and large magnitude of transactions and activities, are bespoke and require additional attention, oversight and controls which involve an enhanced risk of episodic or continued failure as well as additional costs. Given the volume and magnitude of transactions we process on a daily basis, operational losses represent a potentially significant financial risk for our business. Operational errors that result in us remitting funds to a failing or bankrupt entity may be irreversible, and may subject us to losses. In addition to the financial losses associated with operational errors, these errors present the risk of client dissatisfaction and loss and reputational risk.

We may also be subject to disruptions from external events that are wholly or partially beyond our control, which could cause delays or disruptions to operational functions, including information processing and financial market settlement functions. In addition, our clients, vendors and counterparties could suffer from such events. Should these events affect us, or the clients, vendors or counterparties with which we conduct business, our consolidated results of operations could be negatively affected.

When we record balance sheet accruals for probable and estimable loss contingencies related to operational losses, we may be unable to accurately estimate our potential exposure, and any accruals we establish to cover operational losses may not be sufficient to cover our actual financial exposure, which could have a material adverse effect on our consolidated results of operations.

Outsourcing of work to global hub locations may expose us to increased operational risk and reputational harm and may not result in expected cost savings.

We manage our operations and expenses across a global model, which may include migrating certain business processes and business support functions to emerging market-based geographic hub locations, such as India, Poland and China, and by outsourcing to vendors and joint ventures in various jurisdictions. This effort exposes us to the risk that we may not effectively transition the relevant processes and activities, and that we may not maintain service quality, control and effective management or business resiliency within these operations during and after transitions. These migrations also involve risks that our outsourcing vendors or joint ventures may not comply with their servicing and other contractual obligations to us, including with respect to indemnification and information security, and to the risk that we may not satisfy applicable regulatory responsibilities regarding the management and oversight of outsourcing providers, joint ventures and other third parties. Our geographic footprint also exposes us to the relevant macroeconomic, political, legal and similar risks generally involved in doing business in the jurisdictions in which we establish lower-cost locations or joint ventures or in which our their outsourcing vendors locate operations. particularly locations where in we have а concentration of our operational activities, such as India, Poland and China. The increased elements of risk that arise from certain operating processes being conducted in some jurisdictions could lead to an increase in reputational risk. Given changes in client perception of geopolitical risk, clients may question or object to some or many of our services for them being conducted in particular jurisdictions. During periods of transition of operations, either directly or via changes in ownership, greater operational risk and client concerns exist with respect to maintaining a high level of service delivery and business continuity. The extent and pace at which we are able to move functions to lower-cost locations, joint ventures and outsourcing providers may also be affected by political, regulatory and client acceptance issues, including with respect to data use, storage and security. Such relocation or outsourcing of functions also entails costs, such as technology, real estate and restructuring expenses, which may offset or exceed the expected financial benefits of the relocation or outsourcing. In addition, the financial benefits of lower-cost locations and of outsourcing may diminish over time or could be offset in the event that the United States or other jurisdictions impose tax, trade barrier or other

measures which seek to discourage the use of lower cost jurisdictions.

Any failures of or damage to, attack on or unauthorized access to our information technology systems or facilities or disruptions to continuous operations, including our the systems, facilities or operations of third parties with which we do business, such as resulting from cyber-attacks, could result in significant costs and reputational damage and impact our ability to conduct our business activities.

Our businesses depend on information technology infrastructure, both internal and external, to, among other things, record and process a large volume of increasingly complex transactions and other data, in many currencies, on a daily basis, across numerous and diverse markets and jurisdictions and to maintain that data securely. In recent years, several financial services firms have suffered successful cyber-attacks launched both domestically and from abroad, resulting in the disruption of services to clients, loss or misappropriation of sensitive or private data and reputational harm. We also have been the target of certain cyber-attacks, and although we have not to our knowledge suffered a material breach or suspension of our systems, it is possible that we could suffer such a breach or suspension in the future or that we may be unaware of a prior attack. Cyberthreats are sophisticated and continually evolving. We may not implement effective systems and other measures to effectively identify, detect, prevent, mitigate, recover from or remediate all potential cyber-threats or improve and adapt such systems and measures as such threats evolve and advance.

A failure to protect the technology infrastructure, systems and information of us, our clients and others against cybersecurity threats, could result in the theft, loss, unauthorized access to, disclosure, misuse or alteration of information, system failures or outages or loss of access to information. The expectations of our clients and regulators with respect to the resiliency of our systems and the adequacy of our control environment with respect to such systems has and is expected to increase as the risk of cyber-attacks, which is presently elevated due to the current geopolitical environment and global human capital footprint at State Street, and the consequences of those attacks become more pronounced. We may not be successful in meeting those expectations or in our efforts to identify, detect, prevent, mitigate and respond to such cyber-attacks or for our systems to recover in a manner that does not disrupt our ability to provide services to our clients. The failure to maintain an adequate technology infrastructure and applications with effective cybersecurity controls could impact operations, adversely affect our financial results, result in loss of business, damage our reputation or impact our ability to comply with regulatory obligations, leading to regulatory fines and sanctions. We may be required to expend significant additional resources to investigate or remediate vulnerabilities or other exposures arising from cybersecurity threats.

Our networks, technology systems, facilities and information have suffered and in the future may suffer disruptions or otherwise fail to operate properly or become disabled, overloaded or damaged as a result of a number of factors, including events that are wholly or partially beyond our control, which can adversely affect our ability to process transactions, provide services, maintain systems availability, maintain information security, comply with internal controls or regulations or otherwise appropriately conduct our business activities. For example, in addition to cyber-attacks, there could be sudden increases in transaction or data volumes, electrical or telecommunications outages, natural disasters, or employee or contractor error or malfeasance. Third parties may also attempt to place individuals within State Street or fraudulently induce employees, vendors, clients or other users of our systems to disclose sensitive information in order to gain access to our systems or data or that of our clients or other parties. Any such disruptions or failures may require us, among other things, to reconstruct lost data (which may not be possible), reimburse our clients' costs associated with such disruption or failure, result in loss of client business or damage our information technology infrastructure or those of our clients or other parties. While we have not in the past suffered material harm or adverse effects from such disruptions or failures, we may not successfully prevent, respond to or recover from such disruptions or failures in the future, and any such disruption or failure could adversely impact our ability to conduct our businesses, damage our reputation and cause losses, potentially materially.

The third parties with which we do business, which facilitate our business activities, to whom we outsource operations or other activities, from whom we receive products or services or with whom we otherwise engage or interact, including financial intermediaries and technology infrastructure and service providers, are also susceptible to the foregoing risks (including the third parties with which they are similarly interconnected or on which they otherwise rely), and our or their business operations and activities have been and may in the future be adversely affected, perhaps materially, by failures, terminations, errors or malfeasance by, or attacks or constraints on, one or more financial, technology, infrastructure or government institutions or intermediaries with whom we or they are interconnected or conduct business.

In particular, we, like other financial services firms, will continue to face increasing cyber-threats, including computer viruses, malicious code. distributed denial of service attacks, phishing attacks, ransomware, hacker attacks, limited availability of services, unauthorized access, information security breaches or employee or contractor error or malfeasance that could result in the unauthorized release, gathering, monitoring, misuse, loss or destruction of our, our clients' or other parties' confidential, personal, proprietary or other information or otherwise disrupt, compromise or damage our or our clients' or other parties' business assets, operations and activities. These and similar types of threats are occurring globally with greater frequency and intensity, and we may not anticipate or implement effective preventative measures against, or identify and detect one or more, such threats, particularly because the techniques used change frequently or may not be recognized until after they are launched. Our status as a G-SIB likely increases the risk that we are the target of such cyber-attacks. In addition, some of our service offerings, such as data warehousing, may also increase the risk that we are, and the consequences of being, targeted. We may be required to expend significant additional resources to investigate or remediate vulnerabilities or other exposures arising from cybersecurity threats. We therefore could experience significant related costs and legal and financial exposures, including lost or constrained ability to provide our services or maintain systems availability for clients, regulatory inquiries, enforcements, actions and fines, litigation, damage to our reputation or property and enhanced competition.

Due to our dependence on technology and the important role it plays in our business operations, we are attempting to improve and update our information technology infrastructure, among other things: (1) as some of our systems are approaching the end of their useful life, are redundant or do not share data without reconciliation; (2) to be more efficient, meet increasing client and regulatory security, resiliency and other expectations and support opportunities of growth; and (3) to enhance resiliency and maintain business continuity. Updating these systems involves material costs and often involves implementation, integration and security risks, including risks that we may not adequately anticipate the market or technological trends, regulatory expectations or client needs or experience unexpected challenges that could cause financial, reputational and operational harm. Failing to properly respond to and invest in changes and advancements in technology can limit our ability to attract and retain clients, prevent us from offering similar products and services as those offered by our competitors, impair our ability to maintain continuous operations, inhibit our ability to meet regulatory requirements and subject us to regulatory inquiries, the result of which could be significant costs or limitations on our business activities.

Long-term contracts expose us to increased operational risk, pricing and performance risk.

We frequently enter into long-term client servicing contracts in our Investment Servicing business, including with respect to our State Street Alpha services. These include outsourcing and other core services contracts and can involve information technology development. These arrangements generally set forth our fee schedule for the term of the contract and, absent a change in service requirements, do not permit us to re-price the contract for changes in our costs or for market pricing. The long-term contracts for these relationships require, in some cases, considerable up-front investment by us, including technology and conversion costs, and carry the risk that pricing for the products and services we provide might not prove adequate to generate expected operating margins over the term of the contracts.

The profitability of these contracts is largely a function of our ability to accurately calculate pricing for our services, efficiently assume our contractual responsibilities in a timely manner, control our costs and maintain the relationship with the client for an adequate period of time to recover our up-front investment. Our estimate of the profitability of these arrangements can be adversely affected by declines in or inaccurate projections of the assets under the clients' management, whether due to general declines in the securities markets or client-specific issues. In addition, the profitability of these arrangements may be based on our ability to crosssell additional services to these clients, and we may be unable to do so. In addition, such contracts may permit early termination or reduction in services in the event that certain service levels are not met, which termination or service reduction may result in loss of upfront investment in onboarding the client.

Performance risk exists in each contract, given our dependence on successful conversion and implementation onto our own operating platforms of the service activities provided. Our failure to meet specified service levels or implementation timelines may also adversely affect our revenue from such arrangements, or permit early termination of the contracts by the client. If the demand for these types of services were to decline, we could see our revenue decline.

We may not be able to protect our intellectual property, and we are subject to claims of thirdparty intellectual property rights.

Our potential inability to protect our intellectual property and proprietary technology effectively may allow competitors to duplicate our technology and products and may adversely affect our ability to compete with them. To the extent that we do not protect our intellectual property effectively through patents, maintaining trade secrets or other means in all of the jurisdictions in which we operate or market our products and services, other parties, including former employees, with knowledge of our intellectual property may seek to exploit our intellectual property for their own or others' advantage. In addition, we may infringe on claims of third-party patents, and we may face intellectual property challenges from other parties, including clients or service providers with whom we may engage in the development or implementation of other products, services or solutions or to whose information we may have access for limited permitted purposes but with whom we also compete. The risk of such infringement is enhanced in the current competitive "Fintech" environment, particularly with respect to our development of new products and services containing significant technology elements and dependencies, any of which could become the subject of an infringement claim. We may not be successful in defending against any such challenges or in obtaining licenses to avoid or resolve any intellectual property disputes. Third-party intellectual rights, valid or not, may also impede our deployment of the full scope of our products and service capabilities in all jurisdictions in which we operate or market our products and services.

The quantitative models we use to manage our business may contain errors that result in inadequate risk assessments. inaccurate valuations business and or poor risk management decisions, and lapses in disclosure controls and procedures or internal control over financial reporting could occur, any of which could result in material harm.

We use quantitative models to help manage many different aspects of our businesses. As inputs to our overall assessment of capital adequacy, outputs of models are used to measure the amount of credit risk, market risk and operational risk we face. We also use models for interest rate risk management and liquidity planning. During the preparation of our consolidated financial statements, we sometimes use models to measure the value of asset and liability positions for which reliable market prices are not available. We also use models to support many different types of business decisions including trading activities, investment, credit asset-and-liability underwriting, hedging, management and whether to change business strategy. We also use artificial intelligence and machine learning models to automate or enhance certain business processes. Weaknesses in the underlying model including input data, assumptions, parameters, or implementation, as well as

inappropriate model use, could result in unanticipated and adverse consequences, including material loss and material non-compliance with regulatory requirements or expectations. Because of our widespread usage of models, potential weaknesses in our Model Risk Management practices pose an ongoing risk to us.

We also use quantitative models in our risk measurement and may fail to accurately quantify the magnitude of the risks we face. Our measurement methodologies rely on many assumptions and historical analyses and correlations. These assumptions may be incorrect, and the historical correlations on which we rely may not continue to be relevant. Consequently, the measurements that we make for regulatory purposes may not adequately capture or express the true risk profiles of our businesses. Moreover, as businesses and markets evolve, our measurements may not accurately reflect this evolution. While our risk measures may indicate sufficient capitalization, they may underestimate the level of capital necessary to conduct our businesses.

Additionally, our disclosure controls and procedures may not be effective in every circumstance, and, similarly, it is possible we may identify a material weakness or significant deficiency in internal control over financial reporting. Any such lapses or deficiencies may materially and adversely affect our business and consolidated results of operations or consolidated financial condition, restrict our ability to access the capital markets, require us to expend significant resources to correct the lapses or deficiencies, expose us to regulatory or legal proceedings, subject us to fines, penalties or judgments or harm our reputation.

Our reputation and business prospects may be damaged if investors in the collective investment pools we sponsor or manage incur substantial losses in these investment pools or are restricted in redeeming their interests in these investment pools.

We manage assets on behalf of clients in several forms, including in collective investment pools, money market funds, securities finance collateral pools, cash collateral and other cash products and short-term investment funds. Our management of collective investment pools exposes us to reputational risk and operational losses. If investors incur substantial investment losses in these pools, receive redemptions as in-kind distributions rather than in cash, or experience significant underperformance relative to the market or our competitors' products, our reputation could be significantly harmed, which harm could significantly and adversely affect the prospects of our associated business units. Because we often implement investment and operational decisions and actions over multiple

investment pools to achieve scale, we face the risk that losses, even small losses, may have a significant effect in the aggregate.

Within our Investment Management business, we manage investment pools, such as mutual funds exchange traded funds and collective investment funds, that generally offer investors the ability to redeem their investments on relatively short notice, in many cases daily. This feature requires that we manage those pools in a manner that takes into account both maximizing the long-term return on the investment pool and retaining sufficient liquidity to meet reasonably anticipated liquidity requirements of investors in such investment pools and regulatory requirements. The importance of maintaining liquidity varies by product type, but it is a particularly important feature in certain money market funds and other products designed to maintain a constant net asset value of \$1.00. In the past, we have imposed restrictions on cash redemptions from the agency lending collateral pools, as the per-unit market value of those funds' assets had declined below the constant \$1.00 the funds employ to effect purchase and redemption transactions. Both the decline of the funds' net asset value below \$1.00 and the imposition of restrictions on redemptions had a significant client, reputational and regulatory impact on us, and the recurrence of such or similar circumstances in the future could adversely impact our consolidated results of operations and financial condition. We have also in the past continued to process purchase and redemption of units of investment products designed to maintain a constant net asset value at \$1.00 although the fair market value of the fund's assets were less than \$1.00. If in the future we were to continue to process purchases and redemptions from such products at \$1.00 when the fair market value of our collateral pools' assets is less than \$1.00, we could be exposed to significant liability and our reputation could be harmed.

If higher than normal demands for liquidity from investors were to occur, managing the liquidity requirements of our collective investment pools could become more difficult. If such liquidity problems were to recur, our relationships with our clients and reputation with investors more generally may be adversely affected, and, we could, in certain circumstances, be required to consolidate the investment pools into our consolidated statement of condition, levels of redemption activity could increase, and our consolidated results of operations and business prospects could be adversely affected. In addition, if a money market fund that we manage were to have unexpected liquidity demands from investors in the fund that exceeded available liquidity, the fund could be required to sell assets to meet those redemption requirements, and selling the assets held by the fund at fair market value, if at all, may then be difficult.

Because of the size of the investment pools that we manage, we may not have the financial ability or regulatory authority to support the liquidity or other demands of the investors in such investment pools. Any decision by us to provide financial support to an investment pool to support our reputation in circumstances where we are not statutorily or contractually obligated to do so could result in the recognition of significant losses, could adversely affect the regulatory view of our capital levels or plans and could, in some cases, require us to consolidate the investment pools into our consolidated statement of condition. Any failure of the pools to meet redemption requests, or under-performance of our pools relative to similar products offered by our competitors, could harm our business and our reputation.

We may incur losses arising from our investments in sponsored investment funds, which could be material to our consolidated results of operations in the periods incurred.

In the normal course of business, we manage various types of sponsored investment funds through State Street Global Advisors. The services we provide to these sponsored investment funds generate management fee revenue, as well as servicing fees from our other businesses. From time to time, we may invest in the funds, which we refer to as seed capital, in order for the funds to establish a performance history for newly launched strategies. These funds may meet the definition of variable interest entities, as defined by U.S. GAAP, and if we are deemed to be the primary beneficiary of these funds, we may be required to consolidate these funds in our consolidated financial statements under U.S. GAAP. The funds follow specialized investment company accounting rules which prescribe fair value for the underlying investment securities held by the funds.

In the aggregate, we expect any financial losses that we realize over time from these seed investments to be limited to the actual amount invested in the consolidated fund. However, in the event of a fund wind-down, gross gains and losses of the fund may be recognized for financial accounting purposes in different periods during the time the fund is consolidated but not wholly owned. Although we expect the actual economic loss to be limited to the amount invested, our losses in any period for financial accounting purposes could exceed the value of our economic interests in the fund and could exceed the value of our initial seed capital investment.

In instances where we are not deemed to be the primary beneficiary of the sponsored investment fund, we do not include the funds in our consolidated financial statements. Our risk of loss associated with investment in these unconsolidated funds primarily represents our seed capital investment, which could become realized as a result of poor investment performance. However, the amount of loss we may recognize during any period would be limited to the carrying amount of our investment.

Our efforts to improve our billing processes and practices are ongoing and may result in the identification of additional billing errors.

In 2015, we determined we had incorrectly invoiced some of our Investment Servicing clients for certain expenses. At that time, we began the process of remediating these errors, improving our billing processes and controls in the asset servicing business and other businesses, and testing these improved billing processes and controls. We are continuing to standardize, enhance, and, where necessary, replace and enhance controls and invest in new billing infrastructure. The objective of this billing transformation program is to obtain greater billing accuracy and timeliness. Because of the scale of our business, identifying and remediating all weaknesses and inefficiencies in our billing processes cannot be implemented concurrently. Accordingly, the costs to remediate billing errors which may be discovered in that process, would likely be incurred over a period that we are now unable accurately to determine. As we work through this process, we have discovered and may continue to discover areas where we believe our billing processes need improvement, where we believe we have made billing errors with respect to particular customers and categories of fees and expenses, and where we believe billing arrangements between ourselves and particular customers should be clarified. Such discoveries may lead to increased expense and decreased revenues, the need to remediate prior billing errors. government investigations, or litigation that may materially impact our business, financial results and reputation.

Climate change may increase the frequency and severity of major weather events and the ongoing transition to a low carbon economy may drive regulatory and business model change that could adversely affect our business operations and resiliency, our clients, our counterparties or other financial market participants and could adversely affect our consolidated results of operations and financial condition.

Our businesses and the activities of our clients, our counterparties and financial market participants on which we and they rely could be adversely affected by major weather events, changing climate patterns or other disruptions caused by climate change affecting the regions, countries and locations in which we or they have operations or other

interests. Potential events or disruptions of this nature include significant rainfall, flooding, increased frequency or intensity of wildfires, prolonged drought, rising sea levels and rising heat index. These events or disruptions, alone or in combination, also have the potential to strain or deplete infrastructure and response capabilities with respect to other weather events, such as hurricanes and other storms. The occurrence of any one or more of these events may affect negatively our or our clients', our counterparties' financial or markets participants' (including providers of financial market infrastructure's) facilities, operations or personnel or may otherwise disrupt our or their business activities and resiliency capabilities, including our or their provision of products and services or the value of our or their portfolio investments, perhaps materially. These consequences, including a reduction in asset values affecting the levels of our AUC/A or AUM and repricing of credit risk of our counterparties or reflected in our portfolio assets, could materially adversely affect our results of operations or financial condition.

In addition, impacts associated with a climate transition, including climate change-related legislative and regulatory initiatives and expectations, retrofitting of assets, purchasing carbon credits or paying carbon taxes, may result in operational changes and additional expenditures that could adversely affect us. For example, on October 24, 2023, the U.S. Agencies jointly issued guidance on climate-related financial risk management for large institutions, which applies to us. Our reputation and business prospects may also be damaged if we do not, or are perceived not to, effectively prepare for the potential business and operational opportunities and risks associated with climate change, including through the development and marketing of effective and competitive new products and services designed to address our clients' climate risk-related needs. These risks include negative market perception. diminished sales effectiveness and regulatory and litigation consequences associated with "greenwashing" claims or driven by association with clients, industries or products that may be inconsistent with our stated positions on climate change issues.

Disclosure requirements and expectations related to sustainability or ESG are increasing and evolving. Our inability to meet these requirements and expectations or to provide related information to clients facing similar requirements could cause regulatory or reputational harm and affect our ability to attract and retain clients.

Requirements and expectations related to disclosures around sustainability or ESG topics continue to increase globally. These requirements are distinct of typical financial reporting constructs, given their focus on the disclosure of future sustainabilityor ESG-related goals and targets, the strategy and governance designed to achieve those targets, and reporting of relevant metrics delineating progress towards those targets. Additionally, sustainability- or ESG-related disclosure requirements may use different definitions of materiality than those used for financial statement disclosures, including a focus on so-called "double materiality", which can evaluate a sustainability or ESG matter as material, regardless of its direct affect on State Street, based on the broader societal impact of the matter.

Given evolving requirements and the associated standards, methodologies, processes, and controls related to sustainability- and ESG-related disclosures which may impact State Street or its clients, diverging requirements across jurisdictions, and distinct definitions and standards for materiality which could result in conflicting disclosures across frameworks, we may make incorrect or incomplete or fail to make required disclosures which may result in regulatory or reputational consequences or which may directly or indirectly impact our ability to attract and retain clients.

We may incur losses or face negative impacts on our business and operations as a result of unforeseen events including terrorist attacks, natural disasters, climate change, pandemics, global conflicts, an abrupt banking crisis and other geopolitical events which may have a negative impact on our business and operations.

Acts of terrorism, natural disasters or the emergence of a new pandemic could significantly affect our business. We have instituted disaster recovery and continuity plans to address risks from terrorism, natural disasters and pandemics; however, anticipating or addressing all potential contingencies is not possible for events of this nature. Acts of terrorism, either targeted or broad in scope, or natural disasters could damage our physical facilities, harm our employees and disrupt our operations. A pandemic, or concern about a possible pandemic, could lead to operational difficulties and impair our ability to manage our business. Acts of terrorism, natural disasters and pandemics could also negatively affect our clients, counterparties and service providers, as well as result in disruptions in general economic activity and the financial markets.

ITEM 1B. UNRESOLVED STAFF COMMENTS

None.

ITEM 1C. CYBERSECURITY

The information required by this Item is provided under "Information Technology Risk Management" included in Item 7, Management's Discussion and Analysis in this Form 10-K, and is incorporated herein by reference.

ITEM 2. PROPERTIES

As of December 31, 2023 and 2022, we occupied a total of approximately 5.4 million and 5.2 million square feet, respectively, of office space, data centers and related facilities worldwide, of which approximately 4.6 million and 4.5 million square feet, respectively, were leased. Our headquarters is located at One Congress Street, Boston, Massachusetts. Various divisions of our two lines of business as well as support functions occupy approximately 517 thousand square feet leased in this building, which is a non cancellable lease that expires in August 2038. An additional approximate 1.3 million square feet is occupied in Eastern Massachusetts of which approximately 620 thousand square feet is owned. Outside the U.S. and Canada, we also occupy other principal leased space to support our operations in Europe, the Middle East and Africa (EMEA), including Germany, Ireland, Luxembourg, Poland, and the United Kingdom, and in Asia-Pacific, including China and India. The following table provides information regarding our principal office space, data centers and related facilities by region as of December 31, 2023:

		Number of locations		Approximate Square Footage (in millions)				
	Owned	Leased	Total	Owned	Leased	Total		
Americas	1	36	37	0.7	2.0	2.7		
Europe/Middle East/Africa	1	33	34	0.1	1.1	1.2		
Asia/Pacific	_	43	43		1.5	1.5		
Total	2	112	114	0.8	4.6	5.4		

We believe that our owned and leased facilities globally are suitable and adequate for our business needs. We do not delineate our facilities by line of business as they are occupied by both. Additional information about our occupancy costs, including commitments under non cancellable leases, is provided in Note 20 to the consolidated financial statements included under Item 8 of this Form 10-K.

ITEM 3. LEGAL PROCEEDINGS

The information required by this Item is provided under "Legal and Regulatory Matters" in Note 13 to the consolidated financial statements in this Form 10-K, and is incorporated herein by reference.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The following table presents certain information with respect to each of our executive officers as of February 15, 2024.

Age	Position
67	Chairman, Chief Executive Officer and President
59	Vice Chairman and Chief Financial Officer
53	Executive Vice President and Chief Commercial Officer
59	Executive Vice President, Global Controller and Chief Accounting Officer
60	Executive Vice President and Head of State Street Global Markets
57	Executive Vice President and Head of Global Delivery
58	Executive Vice President, Chief Information Officer and Head of Enterprise Resiliency
58	Executive Vice President and Chief Human Resources and Citizenship Officer
60	Executive Vice President and Chief Risk Officer
61	Chief Executive Officer and President, State Street Global Advisors
56	Executive Vice President and Chief Product Officer
58	Executive Vice President and Head of State Street Alpha
56	Executive Vice President, General Counsel and Secretary
49	Executive Vice President and Chief Operating Officer
	Executive Vice President and Chief
	67 59 53 59 60 57 58 58 60 61 56 58

All executive officers are appointed by the Board of Directors and hold office at the discretion of the Board. No family relationships exist among any of our directors and executive officers.

Mr. O'Hanley joined State Street in April 2015 and since January 1, 2020 has served as the Chairman of the Board and Chief Executive Officer, reassuming the additional role of President effective January 1, 2024. Prior to this role Mr. O'Hanley served as President and Chief Executive Officer from January 2019 to December 2020, as President and Chief Operating Officer from November 2017 to December 2018 and as Vice Chairman from January 1, 2017 to November 2017. He served as the Chief Executive Officer and President of State Street Global Advisors, the investment management arm of State Street Corporation, from April 2015 to November 2017. Prior to joining State Street, Mr. O'Hanley was president of Asset Management & Corporate Services for Fidelity Investments, a financial and mutual fund services corporation, from 2010 to February 2014. From 1997 to 2010, Mr. O'Hanley served in various positions at Bank of New York Mellon, a global banking and financial services corporation, serving as president and chief executive officer of BNY Asset Management in Boston from 2007 to 2010.

Mr. Aboaf joined State Street in December 2016 as Executive Vice President and has served as Executive Vice President and Chief Financial Officer since February 2017. In May 2022, Mr. Aboaf was appointed to the role of Vice Chairman, with expanded responsibility for State Street's Global Markets and Global Credit Finance businesses. Prior to joining State Street, Mr. Aboaf served as chief financial officer of Citizens Financial Group, a financial services and retail banking firm, from April 2015 to December 2016, with responsibility for all finance functions and corporate development. From 2003 to March 2015, he served in several senior management positions for Citigroup, a global investment banking and financial services corporation, including as global treasurer and as the chief financial officer of the institutional client group, which included the custody business.

Mr. Ambrosius joined State Street in June 2001 and has served as Executive Vice President and Chief Commercial Officer since October 2022. Prior to that role, he served as Executive Vice President and Head of the European Business from June 2019 to July 2023 and as Senior Vice President and Head of Global Securities Services Europe from June 2016 to June 2019. Mr. Ambrosius has also held several other senior leadership positions within State Street during his over 20 years with State Street. Prior to State Street, Mr. Ambrosius held Vice President positions at Deutsche Bank, a global financial services company.

Mr. Appleyard joined State Street in May 2018 as Executive Vice President, Global Controller and Chief Accounting Officer. Prior to joining State Street, Mr. Appleyard served as managing director in group finance for Credit Suisse, a provider of financial services, from May 2013 to April 2018 and held several senior management positions with Credit Suisse after joining in September 2008. Prior to Credit Suisse, Mr. Appleyard held senior positions at HSBC and JPMorgan.

Mr. Bisegna joined State Street in July 1987 and has served as Executive Vice President and Head of State Street Global Markets since September 2021. Prior to this role, he served as Executive Vice President and Global Head of Multi-Asset Class Trading and Research from December 2018 to September 2021. Mr. Bisegna has also held several other senior positions during his over 35 years with State Street. Prior to joining State Street, he was with Chase Manhattan Bank, New York, a global financial services firm, in their treasury operations.

Ms. Fogarty joined State Street in March 2021 as Executive Vice President and Deputy Head of Global Delivery. She assumed the role of Head of Global Delivery in March 2022. Prior to joining State Street, she served as the Head of Accounting for BNY Mellon, a global banking and financial services corporation, from February 2018 to February 2021. Prior to this role, Ms. Fogarty served as Global Head of Fund Accounting and Administration at BNY Mellon, from March 2015 to February 2018. Ms. Fogarty served in several other leadership roles with BNY Mellon from January 2005 to February 2015. She also served as Head of Hedge Fund Administration at AIB Capital Markets, a sister joint venture to the AIB/BNY Trust Company, providing Custody and Trustee Services, from January 1995 to December 2002.

Mr. Franz joined State Street in January 2020 as Executive Vice President and Chief Information Officer. Prior to this role, Mr. Franz served as Chief Productivity Officer and Chief Information Officer at Diageo PLC, a British multinational alcoholic beverages company, with responsibility for enterprise operations, technology and business service functions. Prior to joining Diageo in 2008, he was Chief Information Officer at PepsiCo International, and before that in leadership roles at General Electric (GE), including GE Capital, and AT&T.

Ms. Horgan joined State Street in April 2009 and has served as Executive Vice President and Chief Human Resources and Citizenship Officer since March 2017. Prior to this role, she served as Chief Operating Officer for State Street's Global Human Resources division from 2011 to March 2017 and since 2012 has served as an Executive Vice President. Prior to 2011, Ms. Horgan served as the Senior Vice President of Human Resources for State Street Global Advisors. Before joining State Street, Ms. Horgan was the Executive Vice President of human resources for Old Mutual Asset Management, а global, diversified multi-boutique asset management company, from 2006 to 2009.

Mr. Hu joined State Street in November 2021 as Executive Vice President and has served as Executive Vice President and Chief Risk Officer since January 2022. Prior to joining State Street, Mr. Hu was Chief Risk Officer of Citigroup, a global banking and financial investment services corporation, from January 2013 to December 2020, and Chief Risk Officer of Citi Asia-Pacific, from August 2008 to December 2012. Prior to that, Mr. Hu held several senior leadership roles at Morgan Stanley in the Global Equity, Global Capital Markets and Investment Banking divisions.

Ms. Hung joined State Street in December 2022 as Chief Executive Officer and President of State Street Global Advisors. Prior to joining State Street, Ms. Hung served as chief executive officer of New York Life Investment Management (NYLIM), a global investment management business that provides a broad range of fixed income, alternatives, equity and ESG capabilities, from April 2015 to October 2022. Prior to NYLIM, Ms. Hung held a number of leadership positions at Bridgewater Associates and Morgan Stanley.

Ms. Milrod joined State Street in December 2018 and has served as Executive Vice President and Chief Product Officer since December 2022. Prior to that role, she served as Executive Vice President and Lead Executive for a large proposed investment services acquisition from October 2021 to December 2022, as Executive Vice President, Head of Global Clients Division and Head of Global Asset Managers Segment from January 2021 to October 2021 and as Executive Vice President and Head of the Global Clients Division from December 2018 to October 2021. Prior to joining State Street, Ms. Milrod served as Senior Advisor at Mckinsey & Company, a global management consulting firm, from 2016 to 2018. Prior to joining McKinsey & Company, she served in multiple leadership positions at The Depository Trust & Clearing Corporation, a post-trade market infrastructure for the global financial services industry, from 2012 to 2016. Ms. Milrod also held several leadership roles at Deutsche Bank, a global financial services company, from 1999 to 2012.

Mr. Plansky joined State Street in January 2017 as head of State Street Global Exchange and since December 2020 has served as Executive Vice President and Head of State Street Alpha. Prior to that role, Mr. Plansky served as Chief Executive Officer of CRD from October 2018 to December 2020. Before joining State Street, Mr. Plansky led the U.S. Strategy business and U.S. Global Platforms PricewaterhouseCoopers, business for an international professional services firm, from April 2014 to November 2016. Prior to the acquisition of Booz & Co. by PricewaterhouseCoopers, he was a senior partner at Booz & Co. leading the technology practice and serving as a senior advisor to global financial institutions.

Mr. Shelton joined State Street in December 2023 as Executive Vice President and has served as Executive Vice President, General Counsel and Secretary since January 2024. Prior to this role, he served as General Counsel for Corporate International **Business** and Corporate and International Americas of Barclays Bank PLC (Barclays), a global financial services company, from July 2016 to November 2023 and before that he served as Barclays' Global and Regional General Counsel for the Americas from March 2015 to June 2016. Prior to joining Barclays Bank PLC, Mr. Shelton served as Partner in the Financial Institutions Group of Gibson, Dunn & Crutcher LLP, an international law firm, from February 2014 to February 2015. Before joining Gibson, Dunn & Crutcher, he served as Global Head of Investigations of UBS, a global financial services company, from 2011 to January 2014 and as Americas General Counsel from 2009 to 2011. Mr. Shelton, also held several other senior positions during his nearly 11-year tenure with UBS. Prior to joining UBS in 2003, Shelton served as Partner at Wilmer Cutler Pickering LLP, an international law firm, from 1997 to 2003.

Mr. Tahiri joined State Street in September 2020 as Executive Vice President and Head of Asia Pacific and has served as Executive Vice President and Chief Operating Officer since January 2024. Prior to that, Mr. Tahiri served in an expanded role as Executive Vice President and Head of Asia Pacific, the Middle East, and Africa from April 2023 to December 2023. Before joining State Street, Mr. Tahiri served as Head of Asia Pacific for BNP Paribas Securities Services, a multi-asset servicing specialist (BNP Paribas), where he was also a member of the Executive Committee from February 2019 to August 2020. Prior to this role, he served as Head of Institutional Investors & Digital Transformation, Asia Pacific, of BNP Paribus, from October 2017 to January 2019 and as CEO BNP Paribas Securities Singapore & Head of Southeast Asia from September 2013 to Jun 2018. He also held several other leadership positions during his tenure with BNP Paribas Securities that started in February 2002.

Ms. Timby joined State Street in January 2020 and since January 2024 has served as Executive Vice President and Chief Administrative Officer. Prior to this role, Ms. Timby served as Executive Vice President and Global Technology Services Chief Information Officer and International & Global Technology Risk Manager from May 2022 to December 2023 and as International Chief Information Officer from January 2020 to May 2022. Prior to joining State Street, she served as Managing Director: Group Operations European Bank for Reconstruction and Development for the European Bank for Reconstruction and Development, a financial services company, from January 2019 to January 2020. Before this role, Ms. Timby served as Managing Director: Head of Investments & Corporate Bank Know Your Customer Operations, with Barclays, from March 2017 to December 2018. She also held several other senior positions during her 30-year tenure with Barclays.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

MARKET FOR REGISTRANT'S COMMON EQUITY

Our common stock is listed on the New York Stock Exchange under the ticker symbol STT. There were 2,014 shareholders of record as of January 31, 2024.

On January 19, 2024, we announced a new common share repurchase program, approved by our Board and superseding all prior programs, authorizing the purchase of up to \$5.0 billion of our common stock beginning in the first quarter of 2024. This new program has no set expiration date and is not expected to be executed in full during 2024.

In January 2023, our Board approved a common share repurchase program authorizing the purchase of up to \$4.5 billion of our common stock through December 31, 2023 (the 2023 Program). We repurchased \$3.8 billion of our common stock during 2023 under the 2023 Program.

The following table presents the activity under our common share repurchase program for each of the months in the quarter ended December 31, 2023.

(Dollars in millions except per share amounts; shares in thousands)	Total Number of shares purchased	A	verage price per share	Total number of shares purchased as part of publicly announced program	that	oximate dollar value of shares may yet be purchased under blicly announced program ⁽¹⁾
Period:						
October 1 - October 31, 2023	—	\$	—	—	\$	1,200
November 1 - November 30, 2023	3,789		68.64	3,789		940
December 1 - December 31, 2023	3,159		75.93	3,159		700
Total	6,948	\$	71.96	6,948	\$	700

⁽¹⁾ The 2023 Program expired on December 31, 2023 with approximately \$700 million remaining under the authorization.

Stock purchases under our common stock repurchase programs may be made using various types of transactions, including open-market purchases, accelerated share repurchases or other transactions off the market, and may be made under Rule 10b5-1 trading programs. The timing and amount of any stock purchases and the type of transaction may not be ratable over the duration of the program, may vary from reporting period to reporting period and will depend on several factors, including our capital position and our financial performance, investment opportunities, market conditions, regulatory considerations including the nature and timing of implementation of revisions to the Basel III framework, and the amount of common stock issued as part of employee compensation programs. Our common stock purchase program does not have specific price targets and may be suspended at any time. We may employ third-party broker/dealers to acquire shares on the open market in connection with our common stock purchase programs.

Additional information about our common stock, including Board authorization with respect to purchases by us of our common stock, is provided under "Capital" in "Financial Condition" in our Management's Discussion and Analysis and in Note 15 to the consolidated financial statements in this Form 10-K.

RELATED STOCKHOLDER MATTERS

As a bank holding company, our Parent Company is a legal entity separate and distinct from its principal banking subsidiary, State Street Bank, and its non-banking subsidiaries. The right of the Parent Company to participate as a shareholder in any distribution of assets of State Street Bank upon its liquidation, reorganization or otherwise is subject to the prior claims by creditors of State Street Bank, including obligations for federal funds purchased, securities sold under repurchase agreements and deposit liabilities.

Payment of dividends by State Street Bank is subject to the provisions of the Massachusetts banking law, which provide that State Street Bank's Board of Directors may declare, from State Street Bank's "net profits," as defined below, cash dividends annually, semi-annually or quarterly (but not more frequently) and can declare non-cash dividends at any time. Under Massachusetts banking law, for purposes of determining the amount of cash dividends that are payable by State Street Bank, "net profits" is defined as an amount equal to the remainder of all earnings from current operations plus actual recoveries on loans and investments and other assets, after deducting from the total thereof all current operating expenses, actual losses, accrued dividends on preferred stock, if any, and all federal and state taxes.

No dividends may be declared, credited or paid so long as there is any impairment of State Street Bank's capital stock. The approval of the Massachusetts Commissioner of Banks is required if the total of all dividends declared by State Street Bank in any calendar year would exceed the total of its net profits for that year combined with its retained net profits for the preceding two years, less any required transfer to surplus or to a fund for the retirement of any preferred stock.

Under Federal Reserve regulations, the approval of the Federal Reserve would be required for the payment of dividends by State Street Bank if the total amount of all dividends declared by State Street Bank in any calendar year, including any proposed dividend, would exceed the total of its net income for such calendar year as reported in State Street Bank's *Consolidated Reports of Condition and Income for a Bank with Domestic and Foreign Offices Only - FFIEC 031*, commonly referred to as the "Call Report," as submitted through the Federal Financial Institutions Examination Council and provided to the Federal Reserve, plus its "retained net income" for the preceding two calendar years. For these purposes, "retained net income," as of any date of determination, is defined as an amount equal to State Street Bank's net income (as reported in its Call Reports for the calendar year in which retained net income is being determined) less any dividends declared during such year. In determining the amount of dividends that are payable, the total of State Street Bank's net income for the current year and its retained net income for the preceding two calendar years is reduced by any net losses incurred in the current or preceding two-year period and by any required transfers to surplus or to a fund for the retirement of preferred stock.

Prior Federal Reserve approval also must be obtained if a proposed dividend would exceed State Street Bank's "undivided profits" (retained earnings) as reported in its Call Reports. State Street Bank may include in its undivided profits amounts contained in its surplus account, if the amounts reflect transfers of undivided profits made in prior periods and if the Federal Reserve's approval for the transfer back to undivided profits has been obtained.

Under the PCA provisions adopted pursuant to the FDIC Improvement Act of 1991, State Street Bank may not pay a dividend when it is deemed, under the PCA framework, to be under-capitalized, or when the payment of the dividend would cause State Street Bank to be under-capitalized. If State Street Bank is under-capitalized for purposes of the PCA framework, it must cease paying dividends for so long as it is deemed to be under-capitalized. Once earnings have begun to improve and an adequate capital position has been restored, dividend payments may resume in accordance with federal and state statutory limitations and guidelines.

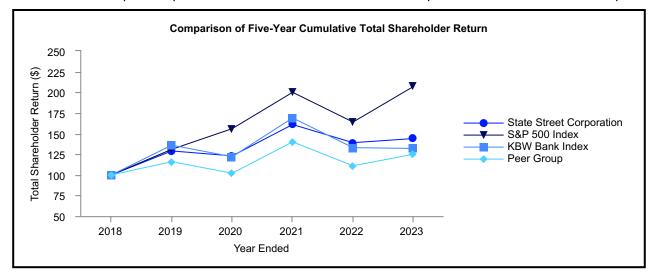
For a discussion of the role of the Federal Reserve and its regulations in connection with the Parent Company's capital planning and dividend practices, see "Capital Planning, Stress Tests and Dividends" in "Supervision and Regulation" in "Item 1. Business". Information about dividends declared by our Parent Company and dividends from our subsidiary banks is provided under "Capital" in "Financial Condition" in our Management's Discussion and Analysis, and in Note 15 to the consolidated financial statements in this Form 10-K, and is incorporated herein by reference. Future dividend payments of State Street Bank and our non-banking subsidiaries cannot be determined at this time. In addition, refer to "Capital Planning, Stress Tests and Dividends" in "Supervision and Regulation" in Business in this Form 10-K and the risk factor "Our business and capital-related activities, including our ability to return capital to shareholders and repurchase our capital stock, may be adversely affected by our implementation of regulatory capital and liquidity standards that we must meet or as a result of regulatory capital stress testing" in Risk Factors in this Form 10-K.

Information about our equity compensation plans is provided in Item 12, Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters, and in Note 18 to the consolidated financial statements in this Form 10-K, and is incorporated herein by reference.

SHAREHOLDER RETURN PERFORMANCE PRESENTATION

The graph below presents the cumulative total shareholder return on our common stock as compared to the cumulative total return of the S&P 500 Index, the KBW Bank Index and a Peer Group over a five-year period. The cumulative total shareholder return assumes the investment of \$100 in our common stock and in each index on December 31, 2018 and reinvestment of common stock dividends.

- The KBW Bank Index is a modified cap-weighted index consisting of 24 exchange-listed stocks, representing national money center banks and leading regional institutions, and is our primary comparator group index.
- The Peer Group is composed of The Bank of New York Mellon Corporation and Northern Trust Corporation.



	2018	2019	2020	2021	2022	2023
State Street Corporation	\$ 100	\$ 129	\$ 123	\$ 161	\$ 139	\$ 144
S&P 500 Index	100	131	156	200	164	207
KBW Bank Index	100	136	122	169	133	132
Peer group	100	116	102	140	111	125

The following table compares the cumulative total shareholder return on our common stock to the cumulative total return of the S&P 500 Index, the KBW Bank Index and a Peer Group over a one-year, three-year and five-year period.

	1 year	3 years	5 years
State Street Corporation	4 %	17 %	44 %
S&P 500 Index	26	33	107
KBW Bank Index	(1)	8	32
Peer group	12	22	25

ITEM 6. [RESERVED]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

GENERAL

This Management's Discussion and Analysis should be read in conjunction with our consolidated financial statements and accompanying notes in this Form 10-K. Certain previously reported amounts presented in this Form 10-K have been reclassified to conform to current-period presentation.

As of December 31, 2023, we had consolidated total assets of \$297.26 billion, consolidated total deposits of \$220.97 billion, consolidated total shareholders' equity of \$23.80 billion and approximately 46,000 employees. Through our two lines of business, Investment Servicing and Investment Management, we operate in more than 100 geographic markets worldwide, including the United States, Canada, Latin America, Europe, the Middle East and Asia.

For the description of our lines of business, refer to "Lines of Business" in Item 1 in this Form 10-K. For financial and other information about our lines of business, refer to "Line of Business Information" in this Management's Discussion and Analysis and Note 24 to the consolidated financial statements in this Form 10-K.

We prepare our consolidated financial statements in conformity with U.S. GAAP. The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions in its application of certain accounting policies that materially affect the reported amounts of assets, liabilities, equity, revenue and expenses.

Information about the significant accounting policies that require us to make judgments, estimates and assumptions that are difficult, subjective or complex about matters that are uncertain and may change in subsequent periods is included under "Significant Accounting Estimates" in this Management's Discussion and Analysis and in Note 1 to the consolidated financial statements in this Form 10-K.

Certain financial information provided in this Form 10-K, including this Management's Discussion and Analysis, is presented using both a U.S. GAAP, or reported basis, and a non-GAAP basis, including certain non-GAAP measures used in the calculation of identified regulatory ratios. We measure and compare certain financial information on a non-GAAP basis, including information that management uses in evaluating our business and activities. Non-GAAP financial information should be considered in addition to, and not as a substitute for or as superior to, financial information prepared in conformity with U.S. GAAP. Any non-GAAP financial information presented in this Form 10-K, including this Management's Discussion and Analysis, is reconciled to its most directly comparable currently applicable regulatory ratio or U.S. GAAP-basis measure. As part of our non-GAAP-basis measures, we present a fully taxable-equivalent NII that reports non-taxable revenue, such as interest income associated with tax-exempt investment securities, on a fully taxable-equivalent basis, which we believe facilitates an investor's understanding and analysis of our underlying financial performance and trends.

In this Management's Discussion and Analysis, where we describe the effects of changes in foreign currency translation, those effects are determined by applying applicable weighted average FX rates from the relevant 2022 period to the relevant 2023 period results.

This Management's Discussion and Analysis contains statements that are considered "forwardlooking statements" within the meaning of U.S. securities laws. These forward-looking statements involve certain risks and uncertainties which could cause actual results to differ materially. Additional information about forward-looking statements and related risks and uncertainties is provided in "Forward-Looking Statements", "Risk Factors Summary" and "Risk Factors" in this Form 10-K.

Information regarding additional disclosures and materials available on our website is provided under "Additional Information" in Item 1 in this Form 10-K.

OVERVIEW OF FINANCIAL RESULTS

TABLE 1: OVERVIEW OF FINANCIAL RESULTS
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	Years Ended December 31,						
(Dollars in millions, except per share amounts)	2023	2022	2021				
Total fee revenue	\$ 9,480	\$9,606	\$10,012				
Net interest income	2,759	2,544	1,905				
Total other income	(294)	(2)	110				
Total revenue	11,945	12,148	12,027				
Provision for credit losses	46	20	(33)				
Total expenses	9,583	8,801	8,889				
Income before income tax expense	2,316	3,327	3,171				
Income tax expense	372	553	478				
Net income	\$ 1,944	\$2,774	\$2,693				
Adjustments to net income:							
Dividends on preferred stock ⁽¹⁾	\$ (122)	\$ (112)	\$ (119)				
Earnings allocated to participating securities ⁽²⁾	(1)	(2)	(2)				
Net income available to common shareholders	\$1,821	\$2,660	\$2,572				
Earnings per common share:							
Basic	\$ 5.65	\$ 7.28	\$ 7.30				
Diluted	5.58	7.19	7.19				
Average common shares outstanding (in thousands):							
Basic	322,337	365,214	352,565				
Diluted	326,568	370,109	357,962				
Cash dividends declared per common share	\$ 2.64	\$ 2.40	\$ 2.18				
Return on average common equity	8.2 %	11.1 %	10.7 %				
Pre-tax margin	19.4	27.4	26.4				
Return on average assets	0.7	1.0	0.9				
Common dividend payout	47.3	33.4	30.3				
Average common equity to average total assets	8.1	8.3	8.0				

⁽¹⁾ Additional information about our preferred stock dividends is provided in Note 15 to the consolidated financial statements in this Form 10-K.

The following section provides information related to significant events, as well as highlights of our consolidated financial results for the year ended December 31, 2023 presented in Table 1: Overview of Financial Results. More detailed information about our consolidated financial results, including the comparison of our financial results for the year ended December 31, 2023 to those of the year ended December 31, 2022, is provided under "Consolidated Results of Operations", "Line of Business Information" and "Capital" sections which follow "Financial Results and Highlights", as well as in our consolidated financial statements in this Form 10-K.

The comparison of our financial results for the year ended December 31, 2022 to those of the years ended December 31, 2021 is included in the Management's Discussion and Analysis in our Annual Report on Form 10-K for the year ended December 31, 2022 filed with the SEC on February 16, 2023.

Financial Results and Highlights

2023 financial performance

- EPS of \$5.58, decreased 22% compared to 2022, primarily reflecting the impact of the following notable items which, in aggregate, decreased EPS by \$2.08 in 2023:
 - Loss on sale of investment securities of \$294 million;
 - FDIC special assessment of \$387 million;
 - Net repositioning charges of approximately \$203 million; and
 - Other net expenses of approximately \$30 million.
- Total revenue decreased 2% compared to 2022. The effects of the 2023 loss on sale of investment securities notable item and lower fee revenue were partially offset by higher NII.
- Total expenses increased 9% compared to 2022, primarily reflecting the impact of 2023 notable items, higher salaries and continued business investments, partially offset by productivity savings.
- Return on equity of 8.2% decreased from 11.1% in 2022, primarily due to the impact of the 2023 notable items. Pre-tax margin of 19.4% decreased from 27.4% in 2022, primarily due to the impact of 2023 notable items.
- Operating leverage was (10.6)% points, largely due to the impact of the 2023 notable items. Operating leverage represents the difference between the percentage change in total revenue and the percentage change in total expenses, in each case relative to the prior year period.
- Fee operating leverage was (10.2)% points, largely due to the impact of the 2023 notable items. Fee operating leverage represents the difference between the percentage change in total fee revenue and the percentage change in total expenses, in each case relative to the prior year period.
- Returned approximately \$4.6 billion to our shareholders in the form of common share repurchases and common stock dividends compared to approximately \$2.4 billion in 2022.
- Completed consolidation of one of our operations joint ventures in India, aimed at lowering operating costs and enhancing client service, and announced plans for consolidation of a second operations joint

⁽²⁾ Represents the portion of net income available to common equity allocated to participating securities, composed of unvested and fully vested SERP (Supplemental executive retirement plans) shares and fully vested deferred director stock awards, which are equity-based awards that contain non-forfeitable rights to dividends, and are considered to participate with the common stock in undistributed earnings.

venture in India. The joint venture in 2023 consolidation increased our headcount by approximately 10% as of December 31, 2023 compared to December 31, 2022. Associated headcount cost was previously reflected in compensation and employee benefits expenses.

Revenue

- Total fee revenue decreased 1% compared to 2022, reflecting lower servicing fees, management fees, and FX trading services revenue, partially offset by higher other fee revenue and software and processing fees.
- Servicing fee revenue decreased 3% compared to 2022, primarily driven by lower client activity and adjustments, normal pricing headwinds, lower average fixed income markets and a previously disclosed client transition, partially offset by higher average equity market levels and net new business.
- Management fee revenue decreased 3% compared to 2022, as the previously disclosed shift of certain management fees into NII, client insourcing and the impacts of a strategic ETF product suite repricing initiative were partially offset by higher average equity market levels.
- Foreign exchange trading services revenue decreased 8% compared to 2022, primarily reflecting lower direct FX spreads, a decline in market volatility and lower client FX volumes.
- Securities finance revenue increased 2% compared to 2022, as higher prime services revenue and higher agency spreads were partially offset by lower agency balances.
- Software and processing fees revenue increased 3% compared to 2022, primarily due to higher front office software and data revenue associated with CRD.
- Other fee revenue increased \$181 million compared to 2022, primarily due to a previously disclosed tax credit investment accounting change and the positive impact of market-related adjustments, partially offset by lower fair value adjustments on equity investments and the impact of the Argentine peso devaluation.
- NII increased 8% compared to 2022, primarily due to the impact of higher interest rates, partially offset by lower average deposit balances and deposit mix shift towards interest-bearing deposits.
- Other income reflects a loss on sale of AFS securities recorded in the third quarter of

2023 of approximately \$294 million, related to the investment portfolio repositioning, which benefited NII in the fourth quarter of 2023 and which we expect to benefit NII in future periods.

Provision for Credit Losses

 In 2023, we recorded a \$46 million provision for credit losses, compared to \$20 million in 2022, primarily reflecting an increase in loan loss reserves associated with commercial real estate.

Expenses

 Total expenses increased 9% compared to 2022, primarily reflecting the impact of 2023 notable items, higher salaries and continued business investments, partially offset by productivity savings.

Notable Items

- The impact of notable items in 2023 includes:
 - Loss on the sale of investment securities of approximately \$294 million relating to the investment portfolio repositioning.
 - FDIC special assessment of \$387 million recorded in other expenses, related to FDIC's recovery of estimated losses to the Deposit Insurance Fund associated with the closures of Silicon Valley Bank and Signature Bank.
 - Net repositioning charges of approximately \$203 million, including \$182 million of compensation and employee benefits expenses related to workforce rationalization and \$21 million of occupancy costs related to real estate footprint optimization.
 - Other net expenses of approximately \$30 million, including \$41 million in information systems and communications and \$4 million in other expenses, primarily related to operating model changes, partially offset by a \$15 million accrual release in acquisition and restructuring costs.
- The impact of notable items in 2022 includes:
 - Revenue-related recovery of \$23 million from settlement proceeds associated with the 2018 FX benchmark litigation resolution, which is reflected in foreign exchange trading services revenue;

- Repositioning charges of approximately \$78 million, consisting of \$50 million of compensation and benefits expenses primarily related to streamlining the Investment Services organization, \$20 million of occupancy charges related to real estate footprint optimization and \$8 million of BBH-related repositioning charges; and
- Acquisition and restructuring costs of approximately \$65 million related to the BBH Investor Services acquisition transaction that we are no longer pursuing.

AUC/A and AUM

- AUC/A of \$41.81 trillion as of December 31, 2023 increased 14% compared to December 31, 2022, primarily due to higher period-end market levels and net new business. In 2023, newly announced asset servicing mandates totaled approximately \$904 billion. We onboarded approximately \$1.74 trillion of AUC/A during 2023. Servicing assets remaining to be installed in future periods totaled approximately \$2.30 trillion as of December 31, 2023.
- AUM of \$4.13 trillion as of December 31, 2023 increased 19% compared to December 31, 2022, primarily due to higher period-end market levels.

Capital

- In 2023, we returned approximately \$4.6 billion to our shareholders in the form of common share repurchases and common stock dividends compared to approximately \$2.4 billion in 2022.
 - We declared aggregate common stock dividends of \$2.64 per share, totaling \$837 million compared to \$2.40 per share, totaling \$871 million in 2022.
 - We increased the quarterly common stock dividend declared per common share by 10% in the third quarter of 2023.
 - We acquired an acqregate of 49.2 million shares of common stock at an average per share cost of \$77.22 and an aggregate cost approximately of \$3.8 billion. In 2022, we acquired an aggregate of 19.5 million shares of common stock, at an average per share cost of \$76.81 and an aggregate cost of approximately \$1.5 billion. These purchases were all conducted under the share repurchase programs approved by our Board of Directors.

- In January 2024, our Board approved a share repurchase program and superseding all prior programs, authorizing the purchase of up to \$5.0 billion of our common stock beginning in the first quarter of 2024. This new program has no set expiration date and is not expected to be executed in full during 2024.
- Our standardized CET1 capital ratio decreased to 11.6% as of December 31, 13.6% 2023. compared to as of December 31, 2022, primarily driven by the continuation of common share repurchases and other capital distributions, partially offset by retained earnings and an improvement in AOCI. Our Tier 1 leverage ratio decreased to 5.5% as of December 31, 2023 compared to 6.0% as of December 31, 2022, primarily driven by the continuation of common share repurchases. partially offset by lower consolidated average assets. Given the current global economic environment, and our plans for share repurchases, we currently expect our CET1 capital and Tier 1 leverage ratios to remain within or above our target 10-11% 5.25-5.75%, ranges of and respectively.

Debt Issuances and Redemptions

- On January 26, 2023, we issued \$500 million aggregate principal amount of 4.857% fixedto-floating rate senior notes due 2026 and \$750 million aggregate principal amount of 4.821% fixed-to-floating rate senior notes due 2034.
- On May 18, 2023, we issued \$1 billion aggregate principal amount of 5.104% fixedto-floating rate senior notes due 2026 and \$1 billion aggregate principal amount of 5.159% fixed-to-floating rate senior notes due 2034.
- On August 3, 2023, we issued \$1.2 billion aggregate principal amount of 5.272% fixed rate senior notes due 2026 and \$300 million aggregate principal amount of floating rate senior notes due 2026.
- On November 21, 2023, we issued \$1 billion aggregate principal amount of 5.684% fixedto-floating rate senior notes due 2029 and \$500 million aggregate principal amount of 6.123% fixed-to-floating rate senior subordinated notes due 2034.
- On December 3, 2023, we redeemed \$500 million aggregate principal amount of 3.776% fixed-to-floating rate senior notes due 2024.

CONSOLIDATED RESULTS OF OPERATIONS

This section discusses our consolidated results of operations for 2023 compared to 2022 and should be read in conjunction with the consolidated financial statements and accompanying notes to the consolidated financial statements in this Form 10-K.

Total Revenue

TABLE 2: TOTAL REVENUE

	Years Ended December 31,							% Change 2022	
(Dollars in millions)		2023		2022	2021		% Change 2023 vs. 2022	vs. 2021	
Fee revenue:									
Back office services	\$	4,561	\$	4,714	\$	5,117	(3)%	(8)%	
Middle office services		361		373		414	(3)	(10)	
Servicing fees ⁽¹⁾		4,922		5,087		5,531	(3)	(8)	
Management fees		1,876		1,939		2,053	(3)	(6)	
Foreign exchange trading services		1,265		1,376		1,211	(8)	14	
Securities finance		426		416		416	2	_	
Front office software and data		580		550		484	5	14	
Lending related and other fees		231		239		254	(3)	(6)	
Software and processing fees ⁽¹⁾		811		789		738	3	7	
Other fee revenue ⁽¹⁾		180		(1)		63	nm	nm	
Total fee revenue		9,480		9,606	1	0,012	(1)	(4)	
Net interest income:									
Interest income		9,180		4,088		1,908	nm	nm	
Interest expense		6,421		1,544		3	nm	nm	
Net interest income		2,759		2,544		1,905	8	34	
Other income:									
Gains (losses) related to investment securities, net		(294)		(2)		57	nm	nm	
Other income		_		_		53	nm	nm	
Total other income		(294)		(2)		110	nm	nm	
Total revenue	\$	11,945	\$	12,148	\$1	2,027	(2)	1	

⁽¹⁾ In the first quarter of 2022, we reclassified certain fee revenue in our Consolidated Statement of Operations, primarily moving revenues that are not directly associated with software and processing fees to a new Other fee revenue line item. In addition, we provided a disaggregation of servicing fees into Back office services and Middle office services and of software and processing fees into Front office software and Lending related and other fees. Prior periods have been revised to reflect these changes.

^{nm} Not meaningful

Fee Revenue

Table 2: Total Revenue, provides the breakout of fee revenue for the years ended December 31, 2023, 2022 and 2021. Servicing and management fees collectively made up approximately 72%, 73% and 76% of the total fee revenue in 2023, 2022 and 2021, respectively.

Servicing Fee Revenue

Servicing fees, as presented in Table 2: Total Revenue, decreased 3% in 2023 compared to 2022, primarily due to lower client activity and adjustments, normal pricing headwinds, lower average fixed income markets and a previously disclosed client transition, partially offset by higher average equity market levels and net new business.

Servicing fees generated outside the U.S. were approximately 46% of total servicing fees in both 2023 and 2022.

Servicing fee revenue comprises revenue from a range of services provided to our clients, including certain Alpha servicing mandates, consisting of core custody services, accounting, reporting and administration, which we refer to collectively as back office services and middle office services. The nature and mix of services provided and the asset classes for which the services are performed affect our servicing fees. The basis for fees will differ across regions and clients. Generally, our servicing fee revenues are affected by several factors, including changes in market valuations, client activity and asset flows, net new business and the manner in which we price our services. For servicing fees for which we have not yet issued an invoice to our clients as of period end, we include an estimate of the impact of changes in market valuations, client activity and flows, net new business and changes in pricing in our revenues.

Changes in Market Valuations

Our servicing fee revenue is impacted by both our levels and the geographic and product mix of our AUC/A. Increases or decreases in market valuations have a corresponding impact on the level of our AUC/A and servicing fee revenues, though the degree of impact will vary depending on asset types and classes and geography of assets held within our clients' portfolios. For certain asset classes where the valuation process is more complex, including alternative investments, or where our valuation is dependent on third party information, AUC/A is reported on a time lag, typically one-month. For those asset classes, the impact of market levels on our reported AUC/A, and therefore servicing fee revenue, does not reflect current period-end market levels.

Over the five years ended December 31, 2023, we estimate that worldwide equity and fixed income market valuations impacted our servicing fees revenue by approximately 2% on average with a range of (4)% to 8% annually and approximately 1% and (4)% in 2023 and 2022, respectively. The impact of changes in worldwide fixed income markets on our servicing fees, which historically was included within client activity and asset flows, is now reflected within change in market valuations. See Table 3: Daily Averages, Month-End Averages and Year-End Equity Indices for selected indices. While the specific indices presented are indicative of general market trends, the asset types and classes relevant to individual client portfolios can and do differ, and the performance of associated relevant indices and of client portfolios can therefore differ from the performance of the indices presented. In addition, our asset classifications may differ from those industry classifications presented.

Assuming that all other factors remain constant, including client activity, asset flows and pricing, we estimate, using relevant information as of December 31, 2023, that a 10% increase or decrease in worldwide equity valuations, on a weighted average basis, over the relevant periods for which our servicing fees are calculated, would result in a corresponding change in our total servicing fee revenues, on average and over multiple quarters, of approximately 3%. We estimate, similarly assuming all other factors remain constant and using relevant information as of December 31, 2023, that changes in worldwide fixed income markets, which on a weighted average basis and over time are typically less volatile than worldwide equity markets, have a smaller corresponding impact on our servicing fee revenues on average and over time. In periods of higher fixed income market volatility such as we have been experiencing since the second quarter of 2022, the impact of fixed income markets on our servicing fee revenues may increase.

	Daily A	verages of I	ndices	Month-End	d Averages	of Indices	Year-End Indices			
	Years Er	nded Decem	nber 31,	Years Ended December 31,			Years Ended December 31,			
	2023	2022	% Change	2023	2022	% Change	2023 2022		% Change	
S&P 500 [®]	4,284	4,099	5 %	4,323	4,078	6 %	4,770	3,840	24 %	
MSCI EAFE®	2,093	1,976	6	2,101	1,965	7	2,236	1,944	15	
MSCI [®] Emerging Markets	985	1,033	(5)	985	1,026	(4)	1,024	956	7	

TABLE 3: DAILY AVERAGES, MONTH-END AVERAGES AND YEAR-END EQUITY INDICES⁽¹⁾

⁽¹⁾ The index names listed in the table are service marks of their respective owners.

TABLE 4: YEAR-END DEBT INDICES⁽¹⁾

	As of December 31,						
	2023	2022	% Change				
Bloomberg U.S. Aggregate Bond Index [®]	2,162	2,049	6 %				
Bloomberg Global Aggregate Bond Index [®]	471	446	6				

⁽¹⁾ The index names listed in the table are service marks of their respective owners.

Client Activity and Asset Flows

Client activity and asset flows are impacted by the number of transactions we execute on behalf of our clients, including FX settlements, equity and derivative trades, and wire transfer activity, as well as actions by our clients to change the asset class in which their assets are invested. Our servicing fee revenues are impacted by a number of factors, including transaction volumes, asset levels and asset classes in which funds are invested, as well as industry trends associated with these client-related activities.

Our clients may change the asset classes in which their assets are invested, based on their market outlook, risk acceptance tolerance or other considerations. Over the five years ended December 31, 2023, we estimate that client activity and asset flows, together, impacted our servicing fees revenue by approximately (1)% on average with a range of (3)% to 1% annually and approximately (3)% and 0% in 2023 and 2022, respectively. As noted under "Changes in Market Valuations" in this section, this analysis now excludes, but in prior reporting previously included, the impact of changes in worldwide fixed income markets on our servicing fees. See Table 5: Industry Asset Flows for selected asset flow information. While the asset flows presented are indicative of general market trends, the asset types and classes relevant to individual client portfolios can and do differ, and our flows may differ from those market trends. In addition, our asset classifications may differ from those industry classifications presented.

TABLE 5: INDUSTRY ASSET FLOWS

	Years Ended	Decemb	er 31,
(In billions)	2023		2022
North America - (US Domiciled) - Morningstar Direct Market Data ⁽¹⁾⁽²⁾⁽³⁾			
Long-Term Funds ⁽⁴⁾	\$ (489.8)	\$	(890.3)
Money Market	920.6		(56.7)
Exchange-Traded Fund	 590.2		576.8
Total Flows	\$ 1,021.0	\$	(370.2)
Europe - Morningstar Direct Market Data ⁽¹⁾⁽²⁾⁽⁵⁾			
Long-Term Funds ⁽⁴⁾	\$ (78.9)	\$	(170.2)
Money Market	186.2		98.1
Exchange-Traded Fund	 135.3		79.3
Total Flows	\$ 242.6	\$	7.2

⁽¹⁾ Industry data is provided for illustrative purposes only. It is not intended to reflect our activity or our clients' activity and is indicative of only segments of the entire industry.

(5) The year ended December 31, 2023 data for Europe is on a rolling twelve month basis for December 2022 through November 2023, sourced by Morningstar.

Net New Business

Over the five years ended December 31, 2023, net new business, which includes business both won and lost, has affected our servicing fee revenues by approximately 0% on average with a range of 0% to 1% annually and approximately 1% in both 2023 and 2022.

Gross investment servicing mandates were \$904 billion of AUC/A in 2023 and \$1.80 trillion of AUC/A per year on average over the five years ended December 31, 2023, ranging from approximately \$0.79 trillion to \$3.52 trillion of AUC/A annually in any given year.

Servicing fee revenue associated with new servicing mandates may vary based on the breadth of services provided, the time required to install the assets, and the types of assets installed.

Revenues associated with new mandates are not reflected in our servicing fee revenue until the assets have been installed. Our installation timeline, in general, can range from 6 to 36 months, with the average installation timeline being approximately 9 to 12 months over the past 2 years. We expect that our more complex installations, including new State Street Alpha mandates, will generally be on the longer end of the 6 to 36 month range. With respect to the current asset mandates of approximately \$2.30 trillion of AUC/A that are yet to be installed as of December 31, 2023, we expect the conversion will occur over the coming 24 months, with approximately 70-80% expected to be installed in 2024, with the remaining expected to be installed throughout 2025 and 2026. The expected timing of these installations is subject to change due to a variety of factors, including adjusted implementation schedules agreed with clients, scope adjustments, and product and functionality changes.

⁽²⁾ Source: Morningstar. The data includes long-term mutual funds, ETFs and money market funds. Mutual fund data represents estimates of net new cash flow, which is new sales minus redemptions combined with net exchanges, while ETF data represents net issuance, which is gross issuance less gross redemptions. Data for Fund of Funds, Feeder funds and Obsolete funds were excluded from the series to prevent double counting. Data is from the Morningstar Direct Asset Flows database.

⁽³⁾ The year ended December 31, 2023 data for North America (US domiciled) includes Morningstar direct actuals for January 2023 through November 2023 and Morningstar direct estimates for December 2023.

⁽⁴⁾ The long-term fund flows reported by Morningstar direct in North America are composed of US domiciled market flows mainly in Equities, Allocation and Fixed-Income asset classes. The long-term fund flows reported by Morningstar direct in EMEA are composed of the European market flows mainly in Equities, Allocation and Fixed-Income asset classes.

Pricing

The industry in which we operate has historically faced pricing pressure, and our servicing fee revenues are also affected by such pressures today. Consequently, no assumption should be drawn as to future revenue run rate from announced servicing AUC/A wins, as the amount of revenue associated with AUC/A, once installed, can vary materially. On average, over the five years ended December 31, 2023, we estimate that pricing pressure with respect to existing clients has impacted our servicing fees by approximately (3)% annually, with the impact ranging from (2)% to (4)% in any given year and approximately (2)% in both 2023 and 2022. Pricing concessions can be a part of a contract renegotiation with a client including terms that may benefit us, such as extending the term of our relationship with the client, expanding the scope of services that we provide or reducing our dependency on manual processes through the standardization of the services we provide. The timing of the impact of additional revenue generated by anticipated additional services and the amount of revenue generated, may differ from expectations due to the impact of pricing concessions on existing services due to the necessary time required to onboard those new services or process changes, the nature of those services and client investment practices and other factors. These same market pressures also impact the fees we negotiate when we win business from new clients.

Historically, and based on an indicative sample of revenue, we estimate that approximately 60%, on average, of our servicing fee revenues have been variable due to changes in asset valuations including changes in daily average valuations of AUC/A; another approximately 15%, on average, of our servicing fees are impacted by the volume of activity in the funds we serve; and the remaining approximately 25% of our servicing fees tend not to be variable in nature nor impacted by market fluctuations or values.

Based on the impact of the above, client activity and asset flows, net new business and pricing, noted drivers of our servicing fee revenue will vary depending on the mix of products and services we provide to our clients. The full impact of changes in market valuations and the volume of activity in the funds may not be fully reflected in our servicing fee revenues in the periods in which the changes occur, particularly in periods of higher volatility.

					••			
(In billions)	Dece	mber 31, 2023	De	ecember 31, 2022	0	December 31, 2021	% Change 2023 vs. 2022	% Change 2022 vs. 2021
Collective funds, including ETFs	\$	14,070	\$	12,261	\$	15,722	15 %	(22)%
Mutual funds		11,009		9,610		11,575	15	(17)
Pension products		8,352		7,734		8,443	8	(8)
Insurance and other products		8,379		7,138		7,938	17	(10)
Total	\$	41,810	\$	36,743	\$	43,678	14	(16)

TABLE 6: ASSETS UNDER CUSTODY AND/OR ADMINISTRATION BY PRODUCT⁽¹⁾⁽²⁾

TABLE 7: ASSETS UNDER CUSTODY AND/OR ADMINISTRATION BY ASSET CLASS⁽²⁾

(In billions)	Decer	nber 31, 2023	D	ecember 31, 2022	D	ecember 31, 2021	% Change 2023 vs. 2022	% Change 2022 vs. 2021
Equities	\$	24,317	\$	20,575	\$	25,974	18 %	(21)%
Fixed-income		11,043		10,318		12,587	7	(18)
Short-term and other investments		6,450		5,850		5,117	10	14
Total	\$	41,810	\$	36,743	\$	43,678	14	(16)

TABLE 8: ASSETS UNDER CUSTODY AND/OR ADMINISTRATION BY GEOGRAPHY⁽²⁾⁽³⁾

(In billions)	Decer	nber 31, 2023	De	ecember 31, 2022	D	ecember 31, 2021	% Change 2023 vs. 2022	% Change 2022 vs. 2021
Americas	\$	29,951	\$	26,981	\$	32,427	11 %	(17)%
Europe/Middle East/Africa		8,913		7,136		8,599	25	(17)
Asia/Pacific		2,946		2,626		2,652	12	(1)
Total	\$	41,810	\$	36,743	\$	43,678	14	(16)

⁽¹⁾ Certain previously reported amounts presented have been reclassified to conform to current-period presentation.

⁽²⁾ Consistent with past practice, AUC/A values for certain asset classes are based on a lag, typically one-month.

(3) Geographic mix is generally based on the domicile of the entity servicing the funds and is not necessarily representative of the underlying asset mix.

Asset servicing mandates newly announced in 2023 totaled approximately \$904 billion of AUC/A. Servicing assets remaining to be installed in future periods totaled approximately \$2.30 trillion as of December 31, 2023, which will be reflected in AUC/A in future periods after installation and will generate servicing fee revenue in subsequent periods. The full revenue impact of such mandates will be realized as the assets are installed and additional services are added over that period.

New asset servicing mandates may be subject to completion of definitive agreements, approval of applicable boards and shareholders and customary regulatory approvals. New asset servicing mandates and servicing assets remaining to be installed in future periods exclude certain new business which has been contracted, but for which the client has not yet provided permission to publicly disclose and the expected installation date extends beyond

one quarter. These excluded assets, which from time to time may be significant, will be included in new asset servicing mandates and reflected in servicing assets remaining to be installed in the period in which the client provides its permission. Servicing mandates and servicing assets remaining to be installed in future periods are presented on a gross basis based on factors present on or about the time we determine the business to be won by us and are not updated based on subsequent developments, including changes in assets, market valuations, scope and, potentially, termination. Such assets therefore do not include the impact of clients who have notified us during the period of their intent to terminate or reduce their relationship with us, which may from time to time be significant.

With respect to these new servicing mandates, once installed we may provide various services, including back office services such as custody and safekeeping, transaction processing and trade settlement, fund administration, reporting and record keeping, security servicing, fund accounting, middle office services such as investment book of records, transaction management, loans, cash derivatives and collateral services, recordkeeping, client reporting and investment analytics, markets services such as FX trading services, liquidity solutions, currency and collateral management and securities finance, and front office services such as portfolio management solutions, risk analytics, scenario analysis, performance and attribution, trade order and execution management, pre-trade compliance and ESG investment tools. Revenues associated with new servicing mandates may vary based on the breadth of services provided, the timing of installation, and the types of assets.

As previously disclosed, in early 2021, due to a decision to diversify providers, one of our large asset servicing clients is moving a significant portion of its ETF assets currently with State Street to one or more other providers. Prior to the commencement of the transition of assets, which began in 2022, we estimated that the financial impact of this transition represented approximately 1.9% of our 2021 total fee revenue. We began to see the impact of the transition on our fee revenue and income growth trends primarily towards the end of 2023, with the remainder expected to be realized through 2025 as the transition continues. On a quarterly run rate basis, we estimate that the fourth quarter of 2023 reflects approximately half of the revenue impact of the exiting business. On a full year basis, we estimate that 2023 reflects approximately a fourth of the revenue impact of the exiting business. We expect to continue as a significant service provider for this client after this transition and for the client to continue to be meaningful to our business.

Management Fee Revenue

Management fees decreased 3% in 2023 compared to 2022, as the previously disclosed shift of certain management fees into NII, client insourcing and the impacts of a strategic ETF product suite repricing initiative were partially offset by higher average equity market levels.

Management fees generated outside the U.S. were approximately 26% of total management fees in both 2023 and 2022.

Management fees generally are affected by our level of AUM, which we report based on month-end valuations. Management fees for certain components of managed assets, such as ETFs, mutual funds and Undertakings for Collective Investments in Transferable Securities, are affected by daily average valuations of AUM. Management fee revenue is more sensitive to market valuations than servicing fee revenue, as a higher proportion of the underlying services provided, and the associated management fees earned, are dependent on equity and fixed-income security valuations. Additional factors, such as the relative mix of assets managed, may have a significant effect on our management fee revenue. While certain management fees are directly determined by the values of AUM and the investment strategies employed, management fees may reflect other factors, including performance fee arrangements, as well as our relationship pricing for clients.

Asset-based management fees for passively managed products, to which our AUM is currently primarily weighted, are generally charged at a lower fee on AUM than for actively managed products. Actively managed products may also include performance fee arrangements which are recorded when the fee is earned, based on predetermined benchmarks associated with the applicable account's performance.

In light of the above, we estimate, using relevant information as of December 31, 2023 and assuming that all other factors remain constant, including the impact of business won and lost and client flows, that:

- A 10% increase or decrease in worldwide equity valuations, on a weighted average basis, over the relevant periods for which our management fees are calculated, would result in a corresponding change in our total management fee revenues, on average and over multiple quarters, of approximately 5%; and
- Changes in worldwide fixed income markets, which on a weighted average basis and over time are typically less volatile than worldwide equity markets, will have a significantly smaller corresponding impact on our management fee revenues on average and over time.

Daily averages, month-end averages and year-end indices demonstrate worldwide changes in equity and debt markets that affect our management fee revenue. Year-end indices affect the values of AUM as of those dates. See Table 3: Daily Averages, Month-End Averages and Year-End Equity Indices for selected indices. While the specific indices presented are indicative of general market trends, the asset types and classes relevant to individual client portfolios can and do differ, and the performance of associated relevant indices and of client portfolios can therefore differ from the performance of the indices presented. In addition, our asset classifications may differ from those industry classifications presented.

TABLE 9: ASSETS UNDER MANAGEMENT BY ASSET CLASS AND INVESTMENT APPROACH

(In billions)	December 31, 2023	December 31, 2022	December 31, 2021	% Change 2023 vs. 2022	% Change 2022 vs. 2021
Equity:					
Active	\$ 47	\$ 54	\$ 80	(13)%	(33)%
Passive	2,466	2,074	2,594	19	(20)
Total equity	2,513	2,128	2,674	18	(20)
Fixed-income:					
Active	71	83	103	(14)	(19)
Passive	538	471	520	14	(9)
Total fixed-income	609	554	623	10	(11)
Cash ⁽¹⁾	467	376	368	24	2
Multi-asset-class solutions:					
Active	21	28	34	(25)	(18)
Passive	289	181	188	60	(4)
Total multi-asset-class solutions	310	209	222	48	(6)
Alternative investments ⁽²⁾ :					
Active	11	35	56	(69)	(38)
Passive	218	179	195	22	(8)
Total alternative investments	229	214	251	7	(15)
Total	\$ 4,128	\$ 3,481	\$ 4,138	19	(16)

⁽¹⁾ Includes both floating- and constant-net-asset-value portfolios held in commingled structures or separate accounts.

(2) Includes real estate investment trusts, currency and commodities, including SPDR® Gold Shares and SPDR® Gold MiniSharesSM Trust. We are not the investment manager for the SPDR® Gold Shares and SPDR®Gold MiniSharesSM Trust, but act as the marketing agent.

TABLE 10: GEOGRAPHIC MIX OF ASSETS UNDER MANAGEMENT⁽¹⁾

(In billions)	Decem	December 31, 2023		mber 31, 2022	Dece	mber 31, 2021	% Change 2023 vs. 2022	% Change 2022 vs. 2021
North America	\$	3,029	\$	2,544	\$	2,931	19 %	(13)%
Europe/Middle East/Africa		602		511		592	18	(14)
Asia/Pacific		497		426		615	17	(31)
Total	\$	4,128	\$	3,481	\$	4,138	19	(16)

⁽¹⁾Geographic mix is based on client location or fund management location.

TABLE 11: EXCHANGE - TRADED FUNDS BY ASSET CLASS⁽¹⁾

(In billions)	Decem	December 31, 2023		mber 31, 2022	Dec	ember 31, 2021	% Change 2023 vs. 2022	% Change 2022 vs. 2021
Alternative Investments ⁽²⁾	\$	73	\$	67	\$	72	9 %	(7)%
Equity		1,038		817		970	27	(16)
Multi Asset		1		1		1	—	—
Fixed-Income		156		134		135	16	(1)
Total Exchange-Traded Funds	\$	1,268	\$	1,019	\$	1,178	24	(13)

⁽¹⁾ ETFs are a component of AUM presented in the preceding table.

(2) Includes real estate investment trusts, currency and commodities, including SPDR[®] Gold Shares and SPDR[®] Gold MiniSharesSM Trust. We are not the investment manager for the SPDR[®] Gold Shares and SPDR[®]Gold MiniSharesSM Trust, but act as the marketing agent.

TABLE 12: ACTIVITY IN ASSETS UNDER MANAGEMENT BY PRODUCT CATEGORY

(In billions)	Equity ⁽¹⁾	Fixed- Income ⁽¹⁾		Cash ⁽¹⁾⁽²⁾		Multi-Asset-Class Solutions ⁽¹⁾		Alternative Investments ⁽¹⁾⁽³⁾		Total
Balance as of December 31, 2020	\$ 2,171	\$	549	\$	349	\$	186	\$ 212	\$	3,467
Long-term institutional flows, net ⁽⁴⁾	(25)		70		(2)		16	10		69
Exchange-traded fund flows, net	94		23		_		_	(10)		107
Cash fund flows, net	_				20					20
Total flows, net	69		93		18		16			196
Market appreciation (depreciation)	476		(7)		2		22	43		536
Foreign exchange impact	 (42)		(12)	_	(1)		(2)	(4)		(61)
Total market/foreign exchange impact	434		(19)		1		20	39	_	475
Balance as of December 31, 2021	\$ 2,674	\$	623	\$	368	\$	222	\$ 251	\$	4,138
Long-term institutional flows, net ⁽⁴⁾	(97)		18		1		19	—		(59)
Exchange-traded fund flows, net	 _		22							22
Total flows, net	(97)		40		1		19			(37)
Market appreciation (depreciation)	(398)		(94)		9		(28)	(30)		(541)
Foreign exchange impact	 (51)		(15)		(2)		(4)	(7)		(79)
Total market/foreign exchange impact	(449)		(109)		7		(32)	(37)	_	(620)
Balance as of December 31, 2022	\$ 2,128	\$	554	\$	376	\$	209	\$ 214	\$	3,481
Long-term institutional flows, net ⁽⁴⁾	(98)		13		(1)		65	(18)		(39)
Exchange-traded fund flows, net	73		17		—		—	(2)		88
Cash fund flows, net	 _		_	_	76					76
Total flows, net	(25)		30		75		65	(20)		125
Market appreciation (depreciation)	409		26		16		35	32		518
Foreign exchange impact	1		(1)		_		1	3		4
Total market/foreign exchange impact	410		25		16		36	35	_	522
Balance as of December 31, 2023	\$ 2,513	\$	609	\$	467	\$	310	\$ 229	\$	4,128

⁽¹⁾ The implementation of an improved internal data management system for product level data in the first quarter of 2021 resulted in some AUM reclassifications between the categories presented for prior periods to align with the current presentation. There was no impact to the total level of reported AUM.

⁽²⁾ Includes both floating- and constant-net-asset-value portfolios held in commingled structures or separate accounts.

(3) Includes real estate investment trusts, currency and commodities, including SPDR® Gold Shares and SPDR® Gold MiniSharesSM Trust. We are not the investment manager for the SPDR® Gold Shares and SPDR®Gold MiniSharesSM Trust, but act as the marketing agent.

⁽⁴⁾ Amounts represent long-term portfolios, excluding ETFs.

Foreign Exchange Trading Services

Foreign exchange trading services revenue, as presented in Table 2: Total Revenue, decreased 8% in 2023 compared to 2022, primarily reflecting lower direct FX spreads, a decline in market volatility and lower client FX volumes. Foreign exchange trading services revenue comprises revenue generated by FX trading and revenue generated by brokerage and other trading services, which made up 63% and 37%, respectively, of foreign exchange trading services revenue in 2023, and 68% and 32%, respectively in 2022.

We primarily earn FX trading revenue by acting as a principal market-maker through both "direct sales and trading" and "indirect FX trading."

- Direct sales and trading: Represent FX transactions at negotiated rates with clients and investment
 managers that contact our trading desk directly. Clients are able to choose their own execution time and
 method, trading by voice or electronically on one of the several available multibank platforms. These
 principal market-making activities include transactions for funds serviced by third party custodians or prime
 brokers, as well as those funds under custody with us.
- Indirect FX trading: Represents FX transactions with clients, for which we are the funds' custodian, or their
 investment managers, routed to our FX desk through our asset-servicing operation. We execute indirect FX
 trades as a principal at rates disclosed to our clients. Indirect FX is designed to address FX trades that
 relate to the purchase, sale or holding of a security where clients chose their execution frequency (either
 hourly or once per day), allowing us to offer straight-through processing and a fully automated service.

Our FX trading revenue is influenced by multiple factors, including: the volume and type of client FX transactions and related spreads; currency volatility, reflecting market conditions; and our management of exchange rate, interest rate and other market risks associated with our FX activities. The relative impact of these factors on our total FX trading revenues often differs from period to period. For example, assuming all other factors remain constant, increases or decreases in volumes or bid-offer spreads across product mix tend to result in increases or decreases, as the case may be, in client-related FX revenue.

Our clients that utilize indirect FX trading can, in addition to executing their FX transactions through dealers not affiliated with us, transition from indirect FX trading to either direct sales and trading execution, including our "Street

FX" service, or to one of our electronic trading platforms. Street FX, in which we continue to act as a principal market-maker, enables our clients to define their FX execution strategy and automate the FX trade execution process, both for funds under custody with us as well as those under custody at another bank.

We also earn foreign exchange trading services revenue through "electronic FX services" and "other trading, transition management and brokerage revenue."

- Electronic FX services: Our clients may choose to execute FX transactions through one of our electronic trading platforms. These transactions generate revenue through a "click" fee.
- Other trading, transition management and brokerage revenue: As our clients look to us to enhance and preserve portfolio values, they may choose to utilize our Transition or Currency Management capabilities or transact with our Equity Trade execution group. These transactions, which are not limited to foreign exchange, generate revenue via commissions charged for trades transacted during the management of these portfolios.

Fund Connect is another one of our electronic trading platforms: it is a global trading, analytics and cash management tool with access to more than 400 money market funds from leading providers.

Securities Finance

Securities finance revenue, as presented in Table 2: Total Revenue, increased 2% in 2023 compared to 2022, as higher prime services revenue and higher agency spreads were partially offset by lower agency balances.

Our securities finance business consists of three components:

- (1) an agency lending program for State Street Global Advisors managed investment funds with a broad range of investment objectives, which we refer to as the State Street Global Advisors lending funds;
- (2) an agency lending program for third-party investment managers and asset owners, which we refer to as the agency lending funds; and
- (3) security lending transactions which we enter into as principal, which we refer to as our prime services business.

Securities finance revenue earned from our agency lending activities, which is composed of our split of both the spreads related to cash collateral and the fees related to non-cash collateral, is principally a function of the volume of securities on loan, the interest rate spreads and fees earned on the underlying collateral and our share of the fee split.

As principal, our prime services business borrows securities from the lending client or other market participants and then lends such securities to the subsequent borrower, either our client or a broker/dealer. We act as principal when the lending client is unable to, or elects not to, transact directly with the market and execute the transaction and furnish the securities. In our role as principal, we provide support to the transaction through our credit rating. While we source a significant proportion of the securities furnished by us in our role as principal from third parties, we have the ability to source securities through assets under custody from clients who have designated us as an eligible borrower.

Market influences may continue to affect client demand for securities finance, and as a result our revenue from, and the profitability of, our securities lending activities in future periods. In addition, the constantly evolving regulatory environment, including revised or proposed capital and liquidity standards, interpretations of those standards, and our own balance sheet management activities, may influence modifications to the way in which we deliver our agency lending or prime services businesses, the volume of our securities lending activity and related revenue and profitability in future periods.

Software and Processing Fees

Software and processing fees revenue, presented in Table 2: Total Revenue, increased 3% in 2023 compared to 2022, primarily due to higher front office software and data revenue associated with CRD.

Software and processing fees revenue includes diverse types of fees and revenue, including fees from software licensing and maintenance and fees from our structured products business.

Front office software and data revenue, which primarily includes revenue from CRD, Alpha Data Platform and Alpha Data Services, increased 5% in 2023 compared to 2022, primarily driven by higher software-enabled and professional services revenue, partially offset by lower on-premises renewals.

Revenue related to the front office solutions provided by CRD is primarily driven by the sale of term software licenses and SaaS, including professional services such as consulting and implementation services, software support and maintenance. Approximately 50%-70% of revenue associated with a sale of software to be installed on-premises is recognized at a point in time when the customer benefits from obtaining access to and use of the software license, with the percentage varying based on the length of the contract and other contractual terms. The

remainder of revenue for on-premise installations is recognized over the length of the contract as maintenance and other services are provided. Upon renewal of an on-premises software contract, the same pattern of revenue recognition is followed with 50%-70% recognized upon renewal and the remaining balance recognized over the term of the contract. Revenue for a SaaS related arrangement, where the customer does not take possession of the software, is recognized over the term of the contract as services are provided. Upon renewal of a SaaS arrangement, revenue continues to be recognized as services are provided under the new contract. As a result of these differences in how portions of CRD revenue are accounted for, CRD revenue may vary more than other business units quarter to quarter.

Lending related and other fees decreased 3% in 2023 compared to 2022, primarily driven by the municipal finance and stable value wrap business. Lending related and other fees primarily consists of fee revenue associated with our fund finance, leveraged loans, municipal finance, insurance and stable value wrap businesses.

Other Fee Revenue

Other fee revenue includes market-related adjustments and income associated with other equity method investments.

Other fee revenue increased \$181 million in 2023, compared to 2022, primarily driven by a previously disclosed tax credit investment accounting change and the positive impact of market-related adjustments, partially offset by lower fair value adjustments on equity investments and the impact of the Argentine peso devaluation. For further information on the tax credit investment accounting change, please refer to Note 1 to the consolidated financial statements in this Form 10-K.

Additional information about fee revenue is provided under "Line of Business Information" included in this Management's Discussion and Analysis.

Net Interest Income

See Table 2: Total Revenue, for the breakout of interest income and interest expense for the years ended December 31, 2023, 2022 and 2021.

NII is defined as interest income earned on interest-earning assets less interest expense incurred on interestbearing liabilities. Interest-earning assets, which principally consist of investment securities, interest-bearing deposits with banks, loans, resale agreements and other liquid assets, are financed primarily by client deposits, short-term borrowings and long-term debt.

NIM represents the relationship between annualized FTE NII and average total interest-earning assets for the period. It is calculated by dividing FTE NII by average interest-earning assets. Revenue that is exempt from income taxes, mainly earned from certain investment securities (state and political subdivisions), is adjusted to a FTE basis using the U.S. federal and state statutory income tax rates.

NII on an FTE basis increased 8% in 2023 compared to 2022, primarily due to the impact of higher interest rates, partially offset by lower average deposit balances and deposit mix shift towards interest-bearing deposits.

Investment securities' net purchase premium amortization, which is included in interest income, was \$3 million in 2023, compared to \$225 million in 2022 and \$556 million in 2021. The decrease in net purchase premium amortization in 2023, as compared to 2022, was primarily driven by a shift in the non-MBS portfolio from a net unamortized purchase premium as of December 31, 2022 to a net unamortized purchase discount as of December 31, 2023, as well as reduced prepayment rates on the MBS portfolio due to higher interest rates.

Interest income related to debt securities is recognized in our consolidated statement of income using the effective interest method, or on a basis approximating a level rate of return over the contractual or estimated life of the security. The rate of return considers any non-refundable fees or costs, as well as purchase premiums or discounts, resulting in amortization or accretion, accordingly. The amortization of premiums and accretion of discounts are adjusted for prepayments when they occur, which primarily impact mortgage-backed securities.

The following table presents the investment securities net premium amortization (discount accretion) for the periods indicated:

TABLE 13: INVESTMENT SECURITIES NET PREMIUM AMORTIZATION

		Years Ended December 31,														
		2023				2022				2021						
(Dollars in millions)	N	IBS	No	n-MBS	Т	otal ⁽¹⁾	Ν	IBS	No	n-MBS	Total ⁽¹⁾	MBS	No	n-MBS	Т	「otal ⁽¹⁾
Unamortized purchase premiums and (discounts) at period end	\$	418	\$	(264)	\$	154	\$	520	\$	208	728	\$ 712	\$	502	\$	1,214
Net premium amortization (discount accretion)		81		(78)		3		142		83	225	342		214		556

⁽¹⁾ Totals exclude premiums or discounts created from the transfer of securities from AFS to HTM. Additional information on the transfer of securities is provided in Note 3 to the consolidated financial statements in this Form 10-K.

See Table 14: Average Balances and Interest Rates - Fully Taxable-Equivalent Basis, for the breakout of NII on a FTE basis for the years ended December 31, 2023, 2022 and 2021.

TABLE 14: AVERAGE BALANCES AND INTEREST RATES - FULLY TAXABLE-EQUIVALENT BASIS⁽¹⁾

		Years Ended December 31,									
		2023			2022			2021			
(Dollars in millions; fully taxable- equivalent basis)	Average Balance	Interes Revenu Expens	e/	Average Balance	Interest Revenue/ Expense	Rate	Average Balance	Interest Revenue/ Expense	Rate		
Interest-bearing deposits with banks ⁽²⁾	\$ 69,883	\$ 2,8	69 4.11 %	\$ 76,498	\$ 842	1.10 %	\$ 89,996	\$ (15)	(0.02)%		
Securities purchased under resale agreements ⁽³⁾	1,764	3	12 17.67	2,116	188	8.88	4,193	27	0.63		
Trading account assets	711			721	_	0.01	752	_	0.01		
Investment securities:											
Investment securities available for sale	42,850	1,7	48 4.08	53,613	733	1.37	66,584	583	0.88		
Investment securities held-to-maturity	62,915	1,2	62 2.01	58,316	979	1.68	44,832	665	1.48		
Investment securities held-to-maturity purchased under money market liquidity facility	_			_	_	_	314	4	1.35		
Total Investment securities	105,765	3,0	10 2.85	111,929	1,712	1.53	111,730	1,252	1.12		
Loans	34,800	1,8		35,117	973	2.77	31,009	640	2.07		
Other interest-earning assets ⁽⁴⁾	18,098	1,1	31 6.25	20,850	383	1.84	22,355	17	0.08		
Total interest-earning assets	231,021	9,1	85 3.98	247,231	4,098	1.66	260,035	1,921	0.74		
Cash and due from banks	3,925			3,652			5,057				
Other non-interest-earning assets	39,750			35,547			34,651				
Total assets	\$ 274,696			\$ 286,430			\$ 299,743				
Interest-bearing deposits:											
U.S.	\$ 110,204	\$ 3,9	76 3.61 %	\$ 98,252	\$ 887	0.90 %	\$ 104,848	\$ 10	0.01 %		
Non-U.S. ⁽²⁾⁽⁵⁾	62,689	1,0	15 1.62	76,842	80	0.10	82,126	(273)	(0.33)		
Total interest-bearing deposits ⁽⁵⁾⁽⁶⁾	172,893	4,9	91 2.89	175,094	967	0.55	186,974	(263)	(0.07)		
Securities sold under repurchase agreements	3,904		34 0.87	3,633	14	0.39	667	_	_		
Federal funds purchased	65		3 4.82	—	—	—	—	—	—		
Short-term borrowings under money market liquidity facility	_			_	_	_	315	4	1.21		
Other short-term borrowings	1,120		40 3.60	1,188	26	2.18	788	2	0.21		
Long-term debt	17,355	8	88 5.12	14,132	376	2.66	13,383	219	1.64		
Other interest-bearing liabilities ⁽⁷⁾	3,891	4	65 11.96	2,725	161	5.91	5,486	41	0.75		
Total interest-bearing liabilities	199,228	6,4	21 3.22	196,772	1,544	0.78	207,613	3	—		
Non-interest-bearing deposits ⁽⁶⁾	32,218			47,780			48,430				
Other non-interest-bearing liabilities	19,073			15,992			17,615				
Preferred shareholders' equity	1,976			1,976			2,076				
Common shareholders' equity	22,201			23,910			24,009				
Total liabilities and shareholders' equity	\$ 274,696			\$ 286,430			\$ 299,743				
Excess of rate earned over rate paid			0.75 %			0.87 %			0.74 %		
Net interest income, fully taxable- equivalent basis		\$ 2,7	64		\$ 2,554			\$ 1,918			
Net interest margin, fully taxable- equivalent basis			1.20 %			1.03 %			0.74 %		
Tax-equivalent adjustment			(5)		(10)			(13)			
Net interest income, GAAP basis		\$ 2,7	59		\$ 2,544			\$ 1,905			

⁽¹⁾ Rates earned/paid on interest-earning assets and interest-bearing liabilities include the impact of hedge activities associated with our asset and liability management activities where applicable.

⁽²⁾ Negative values reflect the impact of interest rate environments outside of the U.S. where central bank rates were below zero for several major currencies.

⁽³⁾ Reflects the impact of balance sheet netting under enforceable netting agreements of approximately \$140.36 billion, \$71.02 billion and \$62.15 billion for the years ended December 31, 2023, 2022 and 2021, respectively. Excluding the impact of netting, the average interest rates would be approximately 0.22%, 0.26% and 0.04% for the years ended December 31, 2023, 2022 and 2021, respectively.

⁽⁴⁾ Reflects the impact of balance sheet netting under enforceable netting agreements of approximately \$4.94 billion, \$5.39 billion and \$5.60 billion for the years ended December 31, 2023, 2022 and 2021, respectively. Excluding the impact of netting, the average interest rates would be approximately 3.61%, 1.46% and 0.06% for the years ended December 31, 2023, 2022 and 2021, respectively.

⁽⁵⁾ Average rate includes the impact of FX swap costs of approximately \$54 million, \$20 million and (\$68) million for the years ended December 31, 2023, 2022 and 2021, respectively. Average rates for total interest-bearing deposits excluding the impact of FX swap costs were 2.86%, 0.55% and (0.10)% for the years ended December 31, 2023, 2022 and 2021, respectively.

(6) Total deposits averaged \$205.11 billion, \$222.87 billion and \$235.40 billion for the years ended December 31, 2023, 2022 and 2021, respectively.

⁽⁷⁾ Reflects the impact of balance sheet netting under enforceable netting agreements of approximately \$4.67 billion, \$4.59 billion and \$5.48 billion for the years ended December 31, 2023, 2022 and 2021, respectively. Excluding the impact of netting, the average interest rates would be approximately 5.43%, 2.20% and 0.38% for the years ended December 31, 2023, 2022 and 2021, respectively.

Changes in the components of interest-earning assets and interest-bearing liabilities are discussed in more detail below. Additional information about the components of interest income and interest expense is provided in Note 17 to the consolidated financial statements in this Form 10-K.

Average total interest-earning assets were \$231.02 billion in 2023 compared to \$247.23 billion in 2022. The decrease is primarily due to lower client deposit balances.

Interest-bearing deposits with banks averaged \$69.88 billion in 2023 compared to \$76.50 billion in 2022. These deposits primarily reflect our maintenance of cash balances at the Federal Reserve, the European Central Bank (ECB) and other non-U.S. central banks. The lower levels of average cash balances reflect lower levels of client deposits.

Securities purchased under resale agreements averaged \$1.76 billion in 2023 compared to \$2.12 billion in 2022. As a member of FICC, we may net securities sold under repurchase agreements against those purchased under resale agreements with counterparties that are also members of the clearing organization, when specific netting criteria are met. The impact of balance sheet netting was \$140.36 billion on average in 2023 compared to \$71.02 billion in 2022, primarily driven by an increase in FICC repo volumes.

We are a direct and sponsoring member of FICC. As a sponsoring member within FICC, we enter into repurchase and resale transactions in eligible securities with sponsored clients and with other FICC members and, pursuant to FICC Government Securities Division rules, submit, novate and net the transactions. We may sponsor clients to clear their eligible repurchase transactions with FICC, backed by our guarantee to FICC of the prompt and full payment and performance of our sponsored member clients' respective obligations. We generally obtain a security interest from our sponsored clients in the high quality securities collateral that they receive, which is designed to mitigate our potential exposure to FICC.

Additionally, as a member of FICC, we may be required to pay a pro rata share of the losses incurred by the organization and provide liquidity support in the event of the default of another member to the extent that the defaulting member's clearing fund obligation and the prescribed loss allocation to FICC is depleted. It is difficult to estimate our maximum possible exposure under the membership agreement, since this would require an assessment of future claims that may be made against us that have not yet occurred. We did not record any liabilities under these arrangements as of both December 31, 2023 and 2022. Average investment securities decreased to \$105.77 billion in 2023 from \$111.93 billion in 2022. The portfolio declined across major asset classes, which was primarily driven by a smaller balance sheet from lower client deposits amidst a higher level of market rates.

Loans averaged \$34.80 billion in 2023 compared to \$35.12 billion in 2022. Average core loans, which exclude overdrafts and highlight our efforts to grow our lending portfolio, averaged \$30.97 billion in 2023 compared to \$29.10 billion in 2022. The increase is primarily due to growth in CLOs in loan form and consumer real estate loans, partially offset by a decline in leveraged loans. Additional information about these loans is provided in Note 4 to the consolidated financial statements in this Form 10-K.

Average other interest-earning assets, largely associated with our prime service business, decreased to \$18.10 billion in 2023 from \$20.85 billion in 2022, primarily driven by a decrease in the level of cash collateral posted. Other interest-earning assets primarily reflects prime services assets where cash has been posted to borrow securities from lenders, which are then lent by us, as principal, to borrowers. This cash includes both cash from borrowers and cash utilized from our balance sheet, and is presented on a net basis on the balance sheet where we have enforceable netting agreements. Noninterest earning assets also included a portion of our prime service assets where borrower-provided noncash collateral has been utilized to borrow securities from lenders, which we subsequently loan, as principal, to our borrowers; in this structure our investment portfolio securities are encumbered, but this is not reflected on the balance sheet. Combined with our prime services liabilities, revenue from these activities generates securities finance fee revenue as well as net interest income.

Aggregate average total interest-bearing deposits decreased to \$172.89 billion in 2023 from \$175.09 billion in 2022. The decrease is driven by the higher market interest rate environment across most major currencies and quantitative tightening, partially offset by our focus on deposit-raising initiatives and rotation from non-interest bearing deposits. Future deposit levels will be influenced by the underlying asset servicing business, client behavior, the mix of interest-bearing and non-interest-bearing deposits and market conditions, including the general levels of U.S. and non-U.S. interest rates.

Average short-term borrowings decreased to \$1.12 billion in 2023 from \$1.19 billion in 2022.

Average long-term debt was \$17.36 billion in 2023 compared to \$14.13 billion in 2022. These amounts reflect issuances, redemptions and

maturities of senior debt during the respective periods.

Average other interest-bearing liabilities, largely associated with our prime services business, were \$3.89 billion in 2023 compared to \$2.73 billion in 2022. Other interest-bearing liabilities is primarily driven by cash received from our custody clients, which is presented on a net basis where we have enforceable netting agreements. Non-interest bearing liabilities also include a portion of our prime services liabilities where client provided non-cash collateral has been received and we have rehypothecation rights. Securities received as collateral from our custody clients where we have no rehypothecation rights are used as a credit mitigant only and remain off balance sheet.

Several factors could affect future levels of NII and NIM, including the volume and mix of client deposits and funding sources; central bank actions; balance sheet management activities; changes in the level and slope of U.S. and non-U.S. interest rates; revised or proposed regulatory capital or liquidity standards, or interpretations of those standards; the yields earned on securities purchased compared to the yields earned on securities sold or matured and changes in the type and amount of credit or other loans we extend.

Based on market conditions and other factors, including regulatory standards, we continue to reinvest the majority of the proceeds from pay-downs and maturities of investment securities in highly-rated U.S. and non-U.S. securities, such as federal agency MBS, sovereign debt securities and U.S. Treasury and agency securities. The pace at which we reinvest and the types of investment securities purchased will depend on the impact of market conditions, the implementation of regulatory standards, including interpretation of those standards and other factors over time. We expect these factors and the levels of global interest rates to impact our reinvestment program and future levels of NII and NIM.

Provision for Credit Losses

In 2023, we recorded a \$46 million provision for credit losses, compared to \$20 million in 2022, primarily reflecting an increase in loan loss reserves associated with commercial real estate.

Additional information is provided under "Loans" in "Financial Condition" in this Management's Discussion and Analysis and in Note 4 to the consolidated financial statements in this Form 10-K.

Expenses

Table 15: Expenses, provides the breakout of expenses for the years ended December 31, 2023, 2022 and 2021. Total expenses increased 9% compared to 2022, primarily reflecting the impact of

the 2023 notable items, higher salaries and continued business investments, partially offset by productivity savings. Notable items totaling \$620 million, including \$387 million associated with the FDIC special assessment and \$203 million of repositioning charges, contributed to the increase in total expenses in 2023 relative to 2022.

TABLE 15: EXPENSES

	Years Er	nded Dece	ember 31,	% Change 2023 vs.	% Change 2022 vs.
(Dollars in millions)	2023	2022	2021	2022	2021
Compensation and employee benefits	\$ 4,744	\$ 4,428	\$ 4,554	7 %	(3)%
Information systems and communications	1,703	1,630	1,661	4	(2)
Transaction processing services	957	971	1,024	(1)	(5)
Occupancy	426	394	444	8	(11)
Amortization of other intangible assets	239	238	245	_	(3)
Acquisition and restructuring costs	(15)	65	65	nm	_
Other:					
Professional services	428	375	334	14	12
Other	1,101	700	562	57	25
Total other	1,529	1,075	896	42	20
Total expenses	\$ 9,583	\$ 8,801	\$ 8,889	9	(1)
Number of employees at year-end	46,451	42,226	38,784	10	9

Compensation and employee benefits expenses increased 7% in 2023 compared to 2022, primarily due to higher repositioning charges, higher salaries and employee benefits, partially offset by lower contractor spend and seasonal expenses.

Total headcount increased 10% as of December 31, 2023 compared to December 31, 2022, reflecting the consolidation of one of our operations joint ventures in India. Associated headcount cost was previously reflected in compensation and employee benefits expenses.

Information systems and communications expenses increased 4% in 2023 compared to 2022, primarily reflecting the impact of notable items in 2023 and higher technology and infrastructure investments, partially offset by optimization savings, insourcing and vendor savings.

Transaction processing services expenses decreased 1% in 2023 compared to 2022, primarily due to lower sub-custody costs and broker fees.

Occupancy expenses increased 8% in 2023 compared 2022, primarily driven by an episodic 2022 gain on a sale leaseback transaction and expanded international real estate footprint, partially offset by savings from real estate footprint optimization.

Amortization of other intangible assets was flat in 2023 compared to 2022.

Other expenses increased 42% in 2023 compared to 2022, primarily reflecting the impact of

the FDIC special assessment, as well as higher marketing expenses and professional fees.

Acquisition and Restructuring Costs

In 2023, we released a \$15 million accrual related to the BBH Investor Services acquisition transaction that we are no longer pursuing. In 2022, we recorded acquisition costs of \$65 million related to the same transaction.

Repositioning Charges

In 2023, we recorded net repositioning charges of approximately \$203 million to enable the next phase of our productivity efforts to streamline operations and technology, and improve efficiency. Expenses for 2023 included \$182 million of compensation and employee benefits expenses related to workforce rationalization and \$21 million of occupancy costs related to real estate footprint optimization.

In 2022, we recorded repositioning charges of \$78 million, consisting of \$50 million of compensation and benefits expense primarily related to streamlining the Investment Services organization, \$20 million of occupancy charges related to real estate footprint optimization and \$8 million of BBH-related repositioning charges recorded in acquisition and restructuring costs.

The following table presents aggregate activity for repositioning charges for the periods indicated:

(In millions)	Employee Related Costs		Real Est Actior		Total		
Accrual Balance at December 31, 2020	\$	190	\$	6	\$	196	
Accruals for Repositioning Charges		(32)		29		(3)	
Payments and Other Adjustments		(90)		(29)		(119)	
Accrual Balance at December 31, 2021		68		6		74	
Accruals for Repositioning Charges		58		20		78	
Payments and other adjustments		(43)		(21)		(64)	
Accrual Balance at December 31, 2022		83		5		88	
Accruals for Repositioning Charges		182		21		203	
Payments and other adjustments		(58)		(25)		(83)	
Accrual Balance at December 31, 2023	\$	207	\$	1	\$	208	

TABLE 16: RESTRUCTURING AND REPOSITIONING CHARGES

Income Tax Expense

Income tax expense was \$372 million in 2023 compared to \$553 million in 2022. Our effective tax rate was 16.1% in 2023 compared to 16.6% in 2022. Income tax expense for 2023 included the impact of the tax credit investment accounting change. For further information on the tax credit investment accounting change, please refer to Note 1 to the consolidated financial statements in this Form 10-K.

Additional information regarding income tax expense, including unrecognized tax benefits and tax contingencies, is provided in Notes 13 and 22 to the consolidated financial statements in this Form 10-K.

LINE OF BUSINESS INFORMATION

Our operations are organized into two lines of business: Investment Servicing and Investment Management, which are defined based on products and services provided. The results of operations for these lines of business are not necessarily comparable with those of other companies, including companies in the financial services industry. For the description of our lines of business refer to "Lines of Business" in Item 1 in this Form 10-K. Certain amounts are not allocated to our two lines of business. For further information, please refer to Note 24 to the consolidated financial statements in this Form 10-K.

TABLE 17: INVESTMENT SERVICING LINE OF BUSINESS

Investment Servicing

RESULTS

RESULIS						
(Dollars in millions,	Years E	nded Dece	mber 31,	% Change	% Change	
except where otherwise noted)	2023	2022	2021	2023 vs. 2022	2022 vs. 2021	
Servicing fees	\$4,922	\$5,087	\$5,531	(3)%	(8)%	
Foreign exchange trading services	1,140	1,271	1,149	(10)	11	
Securities finance	402	397	402	1	(1)	
Software and processing fees	811	789	738	3	7	
Other fee revenue	145	46	59	nm	(22)	
Total fee revenue	7,420	7,590	7,879	(2)	(4)	
Net interest income	2,740	2,551	1,919	7	33	
Total other income		(2)	(1)	nm	nm	
Total revenue	10,160	10,139	9,797	_	3	
Provision for credit losses	46	20	(33)	nm	nm	
Total expenses	7,413	7,260	7,182	2	1	
Income before income tax expense	\$2,701	\$2,859	\$2,648	(6)	8	
Pre-tax margin	27 %	28 %	27 %			
Average assets (in billions)	\$271.5	\$283.2	\$296.5			

nm Not meaningful

Servicing Fees

Servicing fees, as presented in Table 17: Investment Servicing Line of Business Results, decreased 3% in 2023 compared to 2022, primarily due to lower client activity and adjustments, normal pricing headwinds, lower average fixed income markets and a previously disclosed client transition, partially offset by higher average equity market levels and net new business.

For additional information about servicing fees and the impact of worldwide equity and fixed-income valuations on our fee revenue, as well as other key drivers of our servicing fee revenue, refer to "Fee Revenue" in "Consolidated Results of Operations" included in this Management's Discussion and Analysis.

Expenses

Total expenses for Investment Servicing increased 2% in 2023 compared to 2022, as expense growth from higher salaries, headcount and continued business investments were partially offset by productivity and optimization savings. Seasonal deferred incentive compensation expense and payroll taxes were \$131 million in 2023 compared to \$143 million in 2022. Additional information about expenses is provided under "Expenses" in "Consolidated Results of Operations" included in this Management's Discussion and Analysis.

Investment Management

TABLE 18: INVESTMENT MANAGEMENT LINE OF BUSINESS RESULTS

 Yea	rs Enc	led Decembe		% Change 2023	% Change 2022	
2023		2022		2021	vs. 2022	vs. 2021
\$ 1,876	\$	1,939	\$	2,053	(3)%	(6)%
125		82		62	52	32
24		19		14	26	36
35		(47)		4	nm	nm
2,060		1,993		2,133	3	(7)
19		(7)		(14)	nm	(50)
2,079		1,986		2,119	5	(6)
1,540		1,396		1,445	10	(3)
\$ 539	\$	590	\$	674	(9)	(12)
26 %		30 %		32 %		
\$ 3.2	\$	3.2	\$	3.2		
\$	2023 \$ 1,876 125 24 35 2,060 19 2,079 1,540 \$ 539 26 %	2023 \$ 1,876 \$ 125 24 35 2,060 19 2,079 1,540 \$ 539 \$ 26 % \$ 26 % \$	2023 2022 \$ 1,876 \$ 1,939 125 82 24 19 24 19 35 (47) 2,060 1,993 19 (7) 2,079 1,986 1,396 1,540 1,396 \$ 590 26 % 30 % 30 % 30 %	\$ 1,876 \$ 1,939 \$ 125 82 82 19 24 19	2023 2022 2021 \$ 1,876 \$ 1,939 \$ 2,053 125 82 62 24 19 14 35 (47) 4 2,060 1,993 2,133 19 (7) (14) 1,445 1,445 2,079 1,986 2,119 1,445 5 539 590 \$ 674 26 % 30 % 32 % 32 %	2023 2022 2021 % Change 2023 vs. 2022 \$ 1,876 \$ 1,939 \$ 2,053 (3)% 125 82 62 52 24 19 14 26 35 (47) 4 nm 2,060 1,993 2,133 3 19 (7) (14) nm 2,079 1,986 2,119 5 1,540 1,396 1,445 10 \$ 539 \$ 590 \$ 674 (9) 26 % 30 % 32 % 30 %

(1) Includes revenues from SPDR® Gold Shares and SPDR® Gold MiniSharesSM Trust AUM where we are not the investment manager but act as the marketing agent.

(2) Includes revenue for reimbursements received for certain ETFs associated with State Street Global Advisors where we act as the distribution and marketing agent.

⁽³⁾ Includes other revenue items that are primarily driven by equity market movements.

^{nm} Not meaningful

Investment Management total revenue increased 5% in 2023 compared to 2022.

Management Fees

Management fees decreased 3% in 2023 compared to 2022, as the previously disclosed shift of certain management fees into NII, client insourcing and the impacts of a strategic ETF product suite repricing initiative were partially offset by higher average equity market levels.

For additional information about the impact of worldwide equity and fixed-income valuations, as well as other key drivers of our management fees revenue, refer to "Fee Revenue" in "Consolidated Results of Operations" included in this Management's Discussion and Analysis.

Expenses

Total expenses for Investment Management increased 10% in 2023 compared to 2022, reflecting higher salaries, headcount and continued business investments. Seasonal deferred incentive compensation expense and payroll taxes were \$50 million in 2023, compared to \$65 million in 2022.

Additional information about expenses is provided under "Expenses" in "Consolidated Results of Operations" included in this Management's Discussion and Analysis.

For additional information about our two lines of business, as well as the revenues, expenses and capital allocation methodologies associated with them, refer to Note 24 to the consolidated financial statements in this Form 10-K.

FINANCIAL CONDITION

The structure of our consolidated statement of condition is primarily driven by the liabilities generated by our Investment Servicing and Investment Management lines of business. Our clients' needs and our operating objectives determine the volume, mix and currency denomination of our assets and liabilities. As our clients execute their worldwide cash management and investment activities, they utilize deposits and short-term investments that constitute the majority of our liabilities. These liabilities are generally in the form of interest-bearing transaction account deposits, which are denominated in a variety of currencies; noninterest-bearing demand deposits; and repurchase agreements, which generally serve as short-term investment alternatives for our clients.

Deposits and other liabilities resulting from client initiated transactions are invested in assets that generally have contractual maturities significantly longer than our liabilities; however, we evaluate the operational nature of our deposits and seek to maintain appropriate short-term liquidity of those liabilities that are not operational in nature and maintain longer-termed assets for our operational deposits. Our assets consist primarily of securities held in our AFS or HTM portfolios and short-duration financial instruments, such as interest-bearing deposits with banks and securities purchased under resale agreements. The actual mix of assets is determined by the characteristics of the client liabilities and our desire to maintain a well-diversified portfolio of high-quality assets.

Additional information on our financial condition is presented in Table 14: Average Balances and Interest Rates - Fully Taxable-Equivalent Basis. We believe the average statement of condition is a better measure of the balance sheet trends as period-end balances can be impacted by the timing of client activities including deposits and withdrawals.

Investment Securities TABLE 19: CARRYING VAL SECURITIES	UES O		STMENT		
<i>a</i>		of Decembe	<u> </u>		
(In millions)	2023	2022	2021		
Available-for-sale:					
U.S. Treasury and federal agencies:		•			
Direct obligations	\$ 8,301	\$ 7,981	\$ 17,939		
Mortgage-backed securities ⁽¹⁾	10,755	8,509	18,208		
Total U.S. Treasury and federal agencies	19,056	16,490	36,147		
Non-U.S. debt securities:					
Mortgage-backed securities	1,857	1,623	1,995		
Asset-backed securities ⁽²⁾	2,137	1,669	2,087		
Non-U.S. sovereign, supranational and non-U.S. agency	15,100	14,089	23,547		
Other ⁽³⁾	2,735	2,091	3,098		
Total non-U.S. debt securities	21,829	19,472	30,727		
Asset-backed securities:					
Student loans ⁽⁴⁾	114	115	211		
Collateralized loan obligations ⁽⁵⁾	2,527	2,355	2,155		
Non-agency CMBS and RMBS ⁽⁶⁾	249	231	52		
Other	90	88	91		
Total asset-backed securities	2,980	2,789	2,509		
State and political subdivisions	355	823	1,272		
Other U.S. debt securities ⁽⁷⁾	306	1,005	2,744		
Total available-for-sale securities ⁽⁸⁾⁽⁹⁾	\$44,526	\$40,579	\$73,399		
Held-to-maturity:					
U.S. Treasury and federal agencies:					
Direct obligations	\$ 8,584	\$11,693	\$ 2,170		
Mortgage-backed securities ⁽¹⁰⁾	39,472	42,307	33,481		
Total U.S. Treasury and federal agencies	48,056	54,000	35,651		
Non-U.S. debt securities:					
Non-U.S. sovereign, supranational and non-U.S. agency	5,757	6,603	1,564		
Total non-U.S. debt securities	5,757	6,603	1,564		
Asset-backed securities:					
Student loans ⁽⁴⁾	3,298	3,955	4,908		
Non-agency CMBS and RMBS ⁽¹¹⁾	6	142	307		
Total asset-backed securities	3,304	4,097	5,215		
Total held-to-maturity securities ⁽⁸⁾⁽¹²⁾	\$ 57,117	\$64,700	\$42,430		

⁽¹⁾ As of December 31, 2023 and 2022, the total fair value included \$5.54 billion and \$6.78 billion, respectively, of agency CMBS and \$5.21 billion and \$1.73 billion, respectively, of agency MBS.

 $^{(2)}$ As of December 31, 2023 and 2022, the fair value includes non-U.S. collateralized loan obligations of \$1.02 billion and \$0.86 billion, respectively.

⁽³⁾ As of December 31, 2023 and 2022, the fair value includes non-U.S. corporate bonds of \$2.36 billion and \$1.14 billion, respectively.

⁽⁴⁾ Primarily comprised of securities guaranteed by the federal government with respect to at least 97% of defaulted principal and accrued interest on the underlying loans.

 $^{\rm (5)}$ Excludes collateralized loan obligations in loan form. Refer to Note 4 for additional information.

⁽⁶⁾ Consists entirely of non-agency CMBS as of both December 31, 2023 and 2022.
⁽⁷⁾ As of December 31, 2023 and 2022, the fair value of U.S. corporate bonds was \$0.31 billion and \$1.01 billion, respectively.

⁽⁸⁾ An immaterial amount of accrued interest related to HTM and AFS investment securities was excluded from the amortized cost basis for the period ended December 31, 2023.

⁽⁹⁾ As of December 31, 2023, we had no allowance for credit losses on AFS investment securities. As of December 31, 2022, we had an allowance for credit losses on AFS investment securities of \$2 million.

 $^{(10)}$ As of December 31, 2023 and 2022, the total amortized cost included \$5.23 billion and \$4.99 billion of agency CMBS, respectively.

⁽¹¹⁾ Consists entirely of non-agency RMBS as of December 31, 2023. As of December 31, 2022, the total amortized cost included \$133 million of non-agency CMBS and \$9 million of non-agency RMBS.

⁽¹²⁾ As of December 31, 2023, we had an allowance for credit losses on HTM investment securities of \$1 million. As of December 31, 2022, we had no allowance for credit losses on HTM investment securities.

.. _

Additional information about our investment securities portfolio is provided in Note 3 to the consolidated financial statements in this Form 10-K.

We manage our investment securities portfolio by taking into consideration the interest rate and duration characteristics of our client liabilities along with the context of the overall structure of our consolidated statement of condition, and in consideration of the global interest rate environment. We consider a well-diversified, high-credit quality investment securities portfolio to be an important element in the management of our consolidated statement of condition.

Average duration of our investment securities portfolio, including the impact of hedges, was 2.7 years and 2.6 years as of December 31, 2023 and 2022, respectively.

Approximately 96% and 95% of the carrying value of the portfolio was rated "AA" or higher as of December 31, 2023 and 2022, respectively, as follows:

TABLE 20: INVESTMENT PORTFOLIO BY EXTERNAL CREDIT RATING

	December 31, 2023	December 31, 2022
AAA ⁽¹⁾	85 %	84 %
AA	11	11
A	2	3
BBB	2	2
	100 %	100 %

⁽¹⁾ Includes U.S. Treasury and federal agency securities that are split-rated, "AAA" by Moody's Investors Service and "AA+" by Standard & Poor's and also includes Agency MBS securities which are not explicitly rated but which have an explicit or assumed guarantee from the U.S. government.

The following table presents the diversification of the investment portfolio with respect to asset class composition as of December 31, 2023 and 2022.

TABLE 21: INVESTMENT PORTFOLIO BY ASSET CLASS

	December 31, 2023	December 31, 2022
U.S. Agency Mortgage-backed securities	39 %	37 %
Non-U.S. sovereign, supranational and non-U.S. agency	20	19
U.S. Treasuries	17	19
Asset-backed securities	10	9
Other credit	14	16
	100 %	100 %

Non-U.S. Debt Securities

Approximately 27% and 25% of the aggregate carrying value of our investment securities portfolio was non-U.S. debt securities as of December 31, 2023 and 2022, respectively.

TABLE 22: NON-U.S. DEBT SECURITIES ⁽¹⁾												
(In millions)	Dece	ember 31, 2023	Decen	nber 31, 2022								
Available-for-sale:												
Canada	\$	4,020	\$	3,685								
United Kingdom		2,141		1,449								
Australia		1,833		2,159								
Germany		1,389		1,147								
France		1,386		1,059								
Japan		769		768								
Netherlands		690		542								
Italy		412		290								
Austria		339		769								
Sweden		270		—								
Brazil		257		202								
Singapore		249		_								
Spain		230		250								
Republic of Korea		223		230								
Other ⁽²⁾		7,621		6,922								
Total	\$	21,829	\$	19,472								
Held-to-maturity:												
Spain	\$	805	\$	804								
France		524		638								
Belgium		459		703								
Ireland		440		442								
Germany		212		123								
Netherlands		177		172								
Austria		150		362								
Finland		131		213								
Canada		112		—								
Singapore		3		269								
Other ⁽²⁾		2,744		2,877								
Total	\$	5,757	\$	6,603								

⁽¹⁾ Geography is determined primarily based on the domicile of collateral or issuer.
⁽²⁾ As of December 31, 2023, other non-U.S. investments include \$6.83 billion supranational bonds in AFS securities and \$2.74 billion supranational bonds in HTM securities.

Approximately 86% of the aggregate carrying value of these non-U.S. debt securities was rated "AAA" or "AA" as of both December 31, 2023 and 2022. The majority of these securities comprised senior positions within the security structures; these positions have a level of risk mitigation provided through subordination and other forms of credit protection. As of December 31, 2023 and 2022, approximately 28% and 26%, respectively, of the aggregate carrying value of these non-U.S. debt securities was floating-rate.

As of December 31, 2023, our non-U.S. debt securities had an average market-to-book ratio of 99.2%, and an aggregate pre-tax net unrealized loss of \$217 million, consisting of gross unrealized gains of \$125 million and gross unrealized losses of \$342 million. These unrealized amounts included:

- a pre-tax net unrealized loss of \$72 million, consisting of gross unrealized gains of \$117 million and gross unrealized losses of \$189 million, associated with non-U.S. AFS debt securities; and
- a pre-tax net unrealized loss of \$145 million, consisting of gross unrealized gains of \$8 million and gross unrealized losses of \$153 million, associated with non-U.S. HTM debt securities.

As of December 31, 2023, the underlying collateral for non-U.S. MBS and ABS primarily included mortgages in Australia, the United Kingdom, the Netherlands and Italy. The securities listed under "Canada" were composed of Canadian government securities and provincial bonds, corporate debt and non-U.S. agency securities. The securities listed under "France" were composed of sovereign bonds, corporate debt, covered bonds, ABS and Non-U.S. agency securities. The securities listed under "Japan" were substantially composed of Japanese government securities.

Municipal Obligations

We carried approximately \$0.36 billion of municipal securities classified as state and political subdivisions in our investment securities portfolio as of December 31, 2023, as shown in Table 19: Carrying Values of Investment Securities, all of which were classified as AFS. As of December 31, 2023, we also provided approximately \$6.44 billion of credit and liquidity facilities to municipal issuers.

TABLE 23: STATE AND MUNICIPAL OBLIGORS⁽¹⁾

(Dollars in millions)	Mun	otal icipal irities	Credit and Liquidity Facilities ⁽²⁾		 Total	% of Total Municipal Exposure
December 31, 2023 State of Issuer:						
Texas	\$	112	\$	2,387	\$ 2,499	37 %
New York		25		1,687	1,712	25
California		28		1,082	 1,110	16
Total	\$	165	\$	5,156	\$ 5,321	
December 31, 2022 State of Issuer:						
Texas	\$	178	\$	2,395	\$ 2,573	33 %
New York		154		1,607	1,761	23
California		84		1,299	 1,383	18
Total	\$	416	\$	5,301	\$ 5,717	

⁽¹⁾ Represented 5% or more of our aggregate municipal credit exposure of approximately \$6.80 billion and \$7.81 billion across our businesses as of December 31, 2023 and 2022, respectively.

 $^{\rm (2)}$ Includes municipal loans which are also presented within Table 25: U.S. and Non-U.S. Loans .

Our aggregate municipal securities exposure presented in Table 23: State and Municipal Obligors, was concentrated primarily with highly-rated counterparties, with approximately 96% of the obligors rated "AA" or higher as of December 31, 2023. As of that date, approximately 65% and 35% of our aggregate municipal securities exposure was associated with general obligation and revenue bonds, respectively. The portfolios are also diversified geographically, with the states that represent our largest exposures dispersed across the U.S.

Additional information with respect to our assessment of the allowance for credit losses on debt securities and impairment of AFS securities is provided in Note 3 to the consolidated financial statements in this Form 10-K.

TABLE 24: CONTRACTUAL MATURITIES AND YIELDS

As of December 31, 2023	Und	er 1 Year	1 to 5	Years	6 to 10	Years	Over 10 Years		Total
(Dollars in millions)	Amour	t Yield	Amount	Yield	Amount	Yield	Amount	Yield	Amount
Available-for-sale ⁽¹⁾ :									
U.S. Treasury and federal agencies:									
Direct obligations	\$ 27	9 — %	\$ 7,385	1.77 %	\$ 637	1.87 %	\$ —	— %	\$ 8,301
Mortgage-backed securities	3	9 5.75	1,718	5.55	3,797	5.60	5,201	5.27	10,755
Total U.S. treasury and federal agencies	31	8	9,103		4,434		5,201		19,056
Non-U.S. debt securities:				-					
Mortgage-backed securities	24	3 4.93	262	4.24	_	_	1,352	4.91	1,857
Asset-backed securities	33	9 4.72	558	4.65	649	4.74	591	4.76	2,137
Non-U.S. sovereign, supranational and non-U.S. agency	5,47	2 0.84	7,291	2.94	2,337	3.19	_	_	15,100
Other	33	5 3.36	2,169	3.54	231	3.96		_	2,735
Total non-U.S. debt securities	6,38	9	10,280		3,217		1,943		21,829
Asset-backed securities:									
Student loans	3	2 7.80	_	_	16	6.25	66	5.71	114
Collateralized loan obligations	8	0 6.66	323	6.04	1,422	6.67	702	7.00	2,527
Non-agency CMBS and RMBS	-		20	5.05	_	_	229	6.83	249
Other	-		90	6.25		_		_	90
Total asset-backed securities	11	2	433		1,438		997		2,980
State and political subdivisions ⁽²⁾	9	3 6.05	128	5.52	134	6.25	_	_	355
Other U.S. debt securities	22	8 3.04	78	2.65		_		_	306
Total	\$ 7,14	0	\$ 20,022	_	\$ 9,223		\$ 8,141		\$ 44,526
Held-to-maturity ⁽¹⁾ :									
U.S. Treasury and federal agencies:									
Direct obligations	\$ 3,27	7 1.44 %	\$ 5,272	0.52 %	\$ 24	1.75 %	\$ 11	5.80 %	\$ 8,584
Mortgage-backed securities	13	0 2.80	727	3.21	4,359	1.88	34,256	2.40	39,472
Total U.S. treasury and federal agencies	3,40	7	5,999	-	4,383		34,267		48,056
Non-U.S. debt securities:				-					
Non-U.S. sovereign, supranational and non-U.S. agency	1,97	1 2.02	3,262	1.57	524	0.75		_	5,757
Total non-U.S. debt securities	1,97	1	3,262		524				5,757
Asset-backed securities:									
Student loans	22	5 5.88	317	6.48	500	6.27	2,256	5.89	3,298
Non-agency CMBS and RMBS		1 4.83				_	5	4.67	6
Total asset-backed securities	22	6	317		500		2,261		3,304
Total	\$ 5,60	4	\$ 9,578		\$ 5,407		\$ 36,528		\$ 57,117

 $^{\left(1\right)}$ The maturities of MBS, ABS and CMOs are based on expected principal payments.

⁽²⁾ Yields were calculated on a FTE basis, using applicable statutory tax rates (21.0% as of December 31, 2023).

Loans

TABLE 25: U.S.	AND NON-	U.S. LOANS
----------------	----------	------------

	As of December 31,											
(In millions)		2023		2022		2021						
Domestic ⁽¹⁾ :												
Commercial and financial:												
Fund Finance ⁽²⁾	\$	13,697	\$	12,154	\$	12,296						
Leveraged Loans		2,412		2,431		3,106						
Overdrafts		1,225		1,707		1,796						
Collateralized loan obligations in loan form		150		100		100						
Other ⁽³⁾		2,512		1,871		2,262						
Commercial real estate		3,069		2,985		2,554						
Total domestic		23,065		21,248		22,114						
Foreign ⁽¹⁾ :												
Commercial and financial:												
Fund Finance ⁽²⁾		4,956		3,949		4,965						
Leveraged Loans		1,194		1,118		1,328						
Overdrafts		1,047		1,094		1,312						
Collateralized loan obligations in loan form		6,369		4,741		2,813						
Total foreign		13,566		10,902		10,418						
Total loans ⁽⁴⁾		36,631		32,150		32,532						
Allowance for loan losses		(135)		(97)		(87)						
Loans, net of allowance	\$	36,496	\$	32,053	\$	32,445						

 $^{\left(1\right)}$ Domestic and foreign categorization is based on the borrower's country of domicile.

⁽²⁾ Fund finance loans include primarily \$9.69 billion private equity capital call finance loans, \$6.63 billion loans to real money funds and \$1.05 billion loans to business development companies as of December 31, 2023, compared to \$7.57 billion and \$9.15 billion private equity capital call finance loans, \$6.61 billion and \$6.40 billion loans to real money funds and \$1.11 billion and \$1.39 billion loans to business development companies as of December 31, 2022, and 2021, respectively.

⁽³⁾ Includes \$2.23 billion securities finance loans, \$276 million loans to municipalities and \$5 million other loans as of December 31, 2023, \$1.51 billion securities finance loans, \$321 million loans to municipalities and \$42 million other loans as of December 31, 2022 and \$1.78 billion securities finance loans, \$455 million loans to municipalities and \$23 million other loans as of December 31, 2021.

⁽⁴⁾ As of December 31, 2023, excluding overdrafts, floating rate loans totaled \$31.42 billion and fixed rate loans totaled \$2.94 billion. We have entered into interest rate swap agreements to hedge the forecasted cash flows associated with EURIBOR indexed floating-rate loans. See Note 10 to the consolidated financial statements in this Form 10-K for additional details.

The increase in domestic loans was primarily driven by an increase in fund finance loans and other loans, partially offset by lower overdrafts, and the increase in foreign loans was primarily driven by fund finance loans and collateralized loan obligations in loan form as of December 31, 2023 compared to December 31, 2022.

As of December 31, 2023 and 2022, our leveraged loans totaled approximately \$3.61 billion and \$3.55 billion, respectively. We sold \$519 million of leveraged loans in 2023.

In addition, we had binding unfunded commitments as of December 31, 2023 and 2022 of \$121 million and \$98 million, respectively, to participate in syndications of leveraged loans. Additional information about these unfunded commitments is provided in Note 12 to the consolidated financial statements in this Form 10-K. These leveraged loans, which are primarily rated "speculative" under our internal risk-rating framework (refer to Note 4 to the consolidated financial statements in this Form 10-K), are externally rated "BBB," "BB" or "B," with approximately 92% and 96% of the loans rated "BB" or "B" as of December 31, 2023 and 2022, respectively. Our investment strategy involves generally limiting our investment to larger, more liquid credits underwritten by major global financial institutions, applying our internal credit analysis process to each potential investment and diversifying our exposure by counterparty and industry segment. However, these loans have significant exposure to credit losses relative to higherrated loans in our portfolio.

As of December 31, 2023, the commercial real estate portfolio consists of, by asset class, approximately 37% multifamily residential, 35% office buildings and 28% other asset classes, and the portfolio does not have any construction exposure. Additionally, as of December 31, 2023, the commercial real estate loans are on properties located in multiple markets across the United States, with no significant concentrations (New York Metro is the largest concentration at approximately 16%).

Additional information about all of our loan segments, as well as underlying classes, is provided in Note 4 to the consolidated financial statements in this Form 10-K.

TABLE 26: CONTRACTUAL MATURITIES FOR LOANS

	As of December 31, 2023													
(In millions)	U	Inder 1 year		1 to 5 years		to 15 years	Total							
Domestic:														
Commercial and financial	\$	13,714	\$	5,100	\$	1,182	\$ 19,996							
Commercial real estate		149		1,489		1,431	3,069							
Total domestic		13,863		6,589		2,613	23,065							
Foreign:														
Commercial and financial		3,851		3,093		6,622	13,566							
Total foreign		3,851		3,093		6,622	13,566							
Total loans	\$	17,714	\$	9,682	\$	9,235	\$ 36,631							

TABLE 27: CLASSIFICATION OF LOAN BALANCES DUE AFTER ONE YEAR

	As of December 31, 2023											
(In millions)	prede	ns with etermined est rates	Loans with floatin or adjustable interest rates									
Domestic:												
Commercial and financial	\$	276	\$	6,005								
Commercial real estate		2,514		405								
Total domestic		2,790		6,410								
Foreign:												
Commercial and financial				9,714								
Total foreign		_		9,714								
Total loans	\$	2,790	\$	16,124								

Allowance for credit losses

TABLE 28: ALLOWANCE FOR CREDIT LOSSES

	Years	oer 31,			
(In millions)	2023	2022		2021	
Allowance for credit losses:					
Beginning balance	\$ 121	\$ 108	\$	148	
Provision for credit losses (funded commitments) ⁽¹⁾	56	16		(29)	
Provisions for credit losses (unfunded commitments)	(9)	4		(2)	
Provisions for credit losses (investment securities and all other)	(1)	_		(2)	
Charge-offs ⁽²⁾	(17)	(7)		(2)	
Other ⁽³⁾	_	_		(5)	
Ending balance	\$ 150	\$ 121	\$	108	

 $^{\left(1\right) }$ The provision for credit losses is primarily related to commercial and financial loans.

⁽²⁾ The charge-offs are related to commercial and financial loans.

⁽³⁾ Consists primarily of foreign currency translation.

In 2023, we recorded a \$46 million provision for credit losses, compared to \$20 million in 2022, primarily reflecting an increase in loan loss reserves associated with commercial real estate.

As of December 31, 2023, approximately \$72 million of our allowance for credit losses was related to leveraged loans included in the commercial and financial segment and \$60 million was related to commercial real estate loans, compared to \$73 million and \$19 million as of December 31, 2022, respectively. The remaining \$18 million and \$29 million as of December 31, 2023 and 2022, respectively, was related to other loans, off-balance sheet commitments, interest-bearing deposits with banks and other financial assets held at amortized cost, including investment securities. As of December 31, 2023, the allowance for credit losses represented 0.4% of total loans.

As our view on current and future economic conditions changes, our allowance for credit losses related to these loans may be impacted through a change to the provisions for credit losses, reflecting factors such as credit migration within our loan portfolio, as well as changes in management's economic outlook.

Additional information with respect to the allowance for credit losses, net impairment losses and gross unrealized losses related to investment securities, is provided in "Allowance for Credit Losses" under Significant Accounting Estimates and Note 3 to the consolidated financial statements in this Form 10-K.

RISK MANAGEMENT

Overview

In the normal course of our business activities, we are exposed to a variety of risks, some that are inherent in the financial services industry, and others that are more specific to our business activities. Our risk management framework focuses on material risks, which include the following:

- credit and counterparty risk;
- liquidity risk, including funding and management;
- operational risk;
- information technology risk;
- operational resiliency risk;
- market risk associated with our trading activities;
- market risk associated with our non-trading activities, referred to as asset and liability management, consisting primarily of interest rate risk;
- model risk;
- strategic risk; and
- reputational, compliance, fiduciary and business conduct risk.

Many of these risks, as well as certain factors underlying each of them, could affect our businesses and our consolidated financial statements, and are discussed in detail under "Risk Factors" in this Form 10-K.

The identification, assessment, monitoring, mitigation and reporting of risks are essential to our financial performance and successful management of our businesses. Accordingly, the scope of our business requires that we consider these risks as part of a comprehensive and well-integrated risk management function.

These risks, if not effectively managed, can result in losses to us as well as erosion of our capital and damage to our reputation. Our approach to risk management, including Board and senior management oversight and a system of policies, procedures, limits, risk measurement and monitoring and internal controls, allows for an assessment of risks within a framework for evaluating opportunities for the prudent use of capital that appropriately balances risk and return.

Our objective is to optimize our returns while operating at a prudent level of risk. In support of this objective, we have instituted a risk appetite framework that aligns our business strategy and financial objectives with the level of risk that we are willing to incur.

We manage risk with a focus on the following objectives:

- A culture of risk awareness that extends across all of our business activities;
- The identification, classification and quantification of our material risks;

- The establishment of our risk appetite and associated limits and policies, and our compliance with these limits;
- The establishment of a risk management structure at the "top of the house" that enables the control and coordination of risk-taking across the business lines;
- The implementation of stress testing practices and a dynamic risk-assessment capability (additional information with respect to our stress-testing process and practices is provided under "Capital" in this Management's Discussion and Analysis);
- A direct link between risk and strategicdecision making processes and incentive compensation practices; and
- The overall flexibility to adapt to the everchanging business and market conditions.

Our risk appetite framework outlines the quantitative limits and qualitative goals that define the level and type of risk we are willing to undertake in the course of executing our business strategy, and also serves as a guide in setting risk limits across our business units. It further defines responsibilities for measuring and monitoring risk against limits, and for reporting, escalating, approving and addressing Our risk appetite framework exceptions. is established by ERM, a corporate risk oversight group, in conjunction with the MRAC and the RC of the Board. The Board formally reviews and approves our risk appetite statement annually, or more frequently in response to shifts in endogenous or exogenous risk conditions.

Governance and Structure

Our approach to risk management involves all levels of management, from the Board and its committees, including its Examining and Audit Committee (E&A Committee), the RC, the Human Resources Committee (HRC) and the TOPS, to each business unit and employee. We allocate responsibility for risk oversight so that risk/return decisions are made under a process designed to place appropriate personnel in positions of decisionmaking authority and subject to robust review and challenge. Risk management is the responsibility of each employee, and is implemented through three lines of defense:

- The business units, which own and manage the risks inherent in their business, are considered the first line of defense;
- ERM and other support functions, such as Compliance, Finance and Vendor Management, provide the second line of defense; and
- Corporate Audit is the third line of defense, reports to the E&A committee of the Board and is independent from the business units, ERM and other corporate functions. Corporate Audit provides independent assurance to the Board over the design and operating effectiveness of key internal controls included within the risk management framework.

The responsibilities for effective review and challenge reside with senior managers, management oversight committees, Corporate Audit and, ultimately, the Board and its committees.

Corporate-level risk committees provide focused oversight, and establish corporate standards and policies for specific risks, including credit, sovereign exposure, market, liquidity, operational, information technology as well as new business products, regulatory compliance and ethics, vendor risk and model risks. These committees have been delegated the responsibility to develop recommendations and remediation strategies to address issues that affect or have the potential to affect us.

We maintain a risk governance committee structure which serves as the formal governance mechanism through which we seek to undertake the consistent identification, management and mitigation of various risks facing us in connection with our business activities. This governance structure is enhanced and integrated through multi-disciplinary involvement, particularly through ERM. The following chart presents this structure.

While our risk management program is designed to manage the risks in our businesses, internal and external factors may create risks that cannot always be identified or anticipated.



Board Committees:

Risk Committee (RC)

Examining & Audit Committee (E&A Committee)

Human Resources Committee (HRC) Technology and Operations Committee (TOPS)

Management Risk Governance Committee Structure

Executive Management Committees:

Management Risk ar (MR	nd Capital Committee AC)	Business Conduct and Compliance Committee (BCCC)	Comr	Technology and Operational Risk Committee (TORC)							
Risk Committees:											
Asset-Liability Committee (ALCO)	Credit and Market Risk Committee (CMRC)	Fiduciary Review Committee	Operational Risk and Controls Committee	Technology Risk Committee							
Recovery and Resolution Planning (RRP) Executive Review Board	Basel Oversight Committee (BOC)	Civil Rights Momentum Committee	Global Third Party and Outsourcing Risk Committee	Enterprise Continuity Steering Committee							
CCAR Steering Committee	Model Risk Committee (MRC)	Core Compliance and Ethics Committee	Executive Operations Management Committee	Enterprise Data Management Committee							
Country Risk Committee	SSGA Risk Committee	Legal Entity Oversight Committee									
Regulatory Reporting Oversight Committee	New Business and Product Committee	Conduct Standards Committee									

Enterprise Risk Management

The goal of ERM is to ensure that risks are proactively identified, well-understood and prudently managed in support of our business strategy. ERM provides risk oversight, support and coordination to allow for the consistent identification, measurement and management of risks across business units separate from the business units' activities, and is responsible for the formulation and maintenance of corporate-wide risk management policies and guidelines.

Risk identification and assessments serve to enable ERM's understanding of business unit strategy, risk profile, and potential exposures and support the management of risk. This is achieved through a series of risk assessments across our business using techniques for the identification, assessment, and measurement of risk across a spectrum of potential frequency and severity combinations, including business-specific programs to identify, assess and measure risk, such as new business and product review and approval, new client screening, and, as deemed appropriate, targeted risk primary assessments. Two risk assessment programs, which are supplemented by other business-specific programs, are the core of this component:

- The Material Risk Identification process utilizes a bottom-up approach to identify our most significant risk exposures across onand off-balance sheet risk-taking activities. The program is designed to consider risks that could have a material impact irrespective of their likelihood or frequency. This can include risks that may have an impact on longer-term business objectives, such as significant change management activities or long-term strategic initiatives.
- The risk and control assessment program. See also "Operational Risk Management" below.

In addition, ERM establishes and reviews limits and, in collaboration with business unit management, monitors key risks. Ultimately, ERM works to validate that risk-taking occurs within the risk appetite statement approved by the Board and conforms to associated risk policies, limits and guidelines.

The Chief Risk Officer (CRO) is responsible for our risk management globally, leads ERM and has a dual reporting line to our CEO and the Board's RC.

Board Committees

The Board has four committees which assist it in discharging its responsibilities with respect to risk management: the RC, the E&A Committee, the HRC and the TOPS.

- The RC is responsible for oversight related to the operation of our global risk management framework, including policies and procedures establishing risk management governance and processes and risk control infrastructure. It is responsible for reviewing and discussing with management our assessment and management of all risks applicable to our operations, including credit, market, interest liquidity, operational, regulatory. rate, technology, business. compliance and reputation risks, and related policies. In addition, the RC provides oversight of capital policies, capital planning and balance sheet management, resolution planning and monitors capital adequacy in relation to risk. It is also responsible for discharging the duties and obligations of the Board under applicable Basel and other regulatory requirements.
- The E&A Committee oversees management's operation of our comprehensive system of internal controls covering the integrity of our consolidated financial statements and reports, compliance with laws, regulations and corporate policies. The E&A Committee acts on behalf of the Board in monitoring and overseeing the performance of Corporate reviewing Audit and in certain communications with banking regulators. The E&A Committee has direct responsibility for the appointment, compensation, retention, evaluation and oversight of the work of our independent registered public accounting firm, including sole authority for the establishment of pre-approval policies and procedures for all audit engagements and any non-audit engagements.
- The HRC has direct responsibility for the oversight of human capital management, all compensation plans, policies and programs in which executive officers participate and incentive, retirement, welfare as well as equity plans in which certain of our other employees participate. In addition. it oversees the alignment of our incentive compensation arrangements with our safety and soundness, including the integration of risk management objectives, and related policies, arrangements and control processes consistent with applicable related regulatory rules and guidance.
- The TOPS leads and assists in the Board's oversight of technology and operational risk management and the role of these risks, including cyber risk, in executing our strategy and supporting our global business

requirements. The TOPS reviews strategic initiatives from a technology and operational risk perspective and reviews and approves technology-related risk matters. In addition, the TOPS reviews matters related to corporate information security and cybersecurity programs, and their related risks, operational and technology resiliency, data and access management and third-party risk management.

Executive Management Committees

MRAC is the senior management decisionmaking body for risk and capital issues, and oversees our financial risks, our consolidated statement of condition, and our capital adequacy, liquidity and recovery and resolution planning. Its responsibilities include:

- The approval of our global risk policies, capital and liquidity management frameworks, including our risk appetite framework;
- The monitoring and assessment of our capital adequacy based on internal policies and regulatory requirements;
- The oversight of our firm-wide risk identification, model risk governance, stress testing and Recovery and Resolution Planning programs; and
- The ongoing monitoring and review of risks undertaken within the businesses, and our senior management oversight and approval of risk strategies and tactics.

MRAC is co-chaired by our CRO and Chief Financial Officer, who regularly present to the RC on developments in the risk environment and performance trends in our key business areas.

BCCC provides oversight of the management of culture, conduct and compliance risks, our commitments to clients and others with whom we do business, and our potential reputational risks, on an enterprise-wide basis. Management considers adherence to high ethical standards to be critical to the success of our business and to our reputation. The BCCC is co-chaired by our Chief Compliance Officer and our General Counsel.

TORC provides oversight and assesses the effectiveness of enterprise-wide technology and operational risk management programs. TORC also reviews areas of improvement to manage and control technology and operational risk consistently across the organization. TORC is co-chaired by the Chief Operating Officer and the CRO.

Risk Committees

The following second line risk committees, under the oversight of the respective executive management committees, have focused responsibilities for oversight of specific areas of risk management:

Management Risk and Capital Committee

- ALCO is the senior corporate oversight and decision-making body for balance sheet strategy, Global Treasury business activities and risk management for interest rate risk, liquidity risk and non-trading market risk. ALCO's roles and responsibilities are designed to be complementary to, and in coordination with the MRAC, which approves the corporate risk appetite and associated balance sheet strategy;
- **CMRC** is the senior risk oversight and decision-making body for our credit, counterparty, and trading-related activities. It is responsible, as part of the second line of defense within ERM, for overseeing alignment of these activities with our appetite for risk and prevailing policy and guidelines. This committee also serves as a forum to discuss, address, and escalate material risk issues;
- BOC provides oversight and governance over Basel related regulatory requirements, assesses compliance with respect to Basel regulations and approves all material methodologies and changes, policies and reporting;
- **RRP Executive Review Board** oversees the development of recovery and resolution plans as required by banking regulators;
- **MRC** monitors the overall level of model risk and provides oversight of the model governance process pertaining to all models, including the validation of key models and the ongoing monitoring of model performance. The MRC may also, as appropriate, mandate remedial actions and compensating controls to be applied to models to address modeling deficiencies as well as other issues identified;
- **CCAR Steering Committee** provides primary supervision of the stress tests performed in conformity with the Federal Reserve's CCAR process and the Dodd-Frank Act, and is responsible for the overall management, review, and approval of all material assumptions, methodologies, and results of each stress scenario;

- Street Global Advisors State Risk Committee is the most senior oversight and decision making committee for risk management within State Street Global Advisors; the committee is responsible for overseeing the alignment of State Street Global Advisors' strategy, and risk appetite, as well as alignment with our corporate-wide strategy and risk management standards;
- New Business and Product Committee provides oversight of the evaluation of the risk inherent in proposed new products or services, new business, and extensions of existing products or services, including justification. economic material risk, compliance, regulatory and legal considerations, and capital and liquidity analyses;
- Country Risk Committee oversees the identification, assessment, monitoring, reporting and mitigation, where necessary, of country risks; and
- Regulatory Reporting Oversight Committee is responsible for providing oversight of regulatory reporting and related report governance processes and accountabilities.

Business Conduct and Compliance Committee

- Fiduciary Review Committee reviews and assesses the fiduciary risk management programs of those units in which we serve in a fiduciary capacity;
- Civil Rights Momentum Committee provides oversight, monitoring, support, and guidance over the company's civil rights efforts, including acting as the forum for assessing strategic civil rights corporate activities;
- Compliance Program Oversight Committee provides review and oversight of our compliance programs, including our culture of compliance and high standards of ethical behavior;
- Legal Entity Oversight Committee establishes standards with respect to the governance of our legal entities, monitors adherence to those standards, and oversees the ongoing evaluation of our legal entity structure, including the formation, maintenance and dissolution of legal entities; and
- The Conduct Standards Committee provides oversight of our enforcement of employee conduct standards.

Technology and Operational Risk Committee

- **Operational Risk and Controls Committee** along with the support of regional business or entity-specific working groups and committees, is responsible for oversight of our operational risk programs, including determining that the implementation of those programs is designed to identify, manage and control operational risk in an effective and consistent manner across the firm;
- Technology Risk Committee is responsible for the global oversight, review and monitoring of operational, legal and regulatory compliance and reputational risk that may result in a significant change to our information technology or cyber risk profile or a material financial loss or reputational impact to global technology services. The Committee serves as a forum to provide regular reporting to TORC and escalate technology and cyber risk and control issues to TORC, as appropriate;
- Enterprise Continuity Steering Committee considers matters pertaining to continuity and related risks, including oversight in determining the direction of the continuity program;
- **Global Third Party and Outsourcing Risk** Committee is responsible for overseeing our framework and processes for the assessment, and identification, ongoing management of third party and outsourcingrelated risks. This committee is also a decision-making body for third party risk acceptance and the end-to-end third party management process, including the oversight of appropriate controls and risk mitigants that comply with applicable regulatory standards;
- Executive Operations Management Committee is a forum for the development of strategy, decision-making, and escalation for operations, regulatory remediation, product management, technology, and the operating model; and
- Enterprise Data Management Committee oversees the enterprise-wide data management strategy, provides senior oversight of the programs associated with enterprise-wide data management, serves as an escalation point for material and emerging enterprise-wide data management issues, and determines / oversees enterprise-wide data management priorities and strategy.

Credit Risk Management

Core Policies and Principles

We define credit risk as the risk of financial loss if a counterparty, borrower or obligor, collectively referred to as a counterparty, is either unable or unwilling to repay borrowings or settle a transaction in accordance with underlying contractual terms. We assume credit risk in our traditional non-trading lending activities, such as overdrafts, loans and contingent commitments, in our investment securities portfolio, where recourse to a counterparty exists, and in our direct and indirect trading activities, such as securities purchased under a resale agreement, principal securities lending and FX and indemnified agency securities lending. We also assume credit risk in our day-to-day treasury and securities and other settlement operations, in the form of deposit placements and other cash balances, with central banks or private sector institutions and fees receivables.

We distinguish between three major types of credit risk:

- **Default risk** the risk that a counterparty fails to meet its contractual payment obligations;
- **Country risk** the risk that we may suffer a loss, in any given country, due to any of the following reasons: deterioration of economic conditions, political and social upheaval, nationalization and appropriation of assets, government repudiation of indebtedness, exchange controls and disruptive currency depreciation or devaluation; and
- Settlement risk the risk that the settlement or clearance of transactions will fail, which arises whenever the exchange of cash, securities or other assets is not simultaneous.

The acceptance of credit risk by us is governed by corporate policies and guidelines, which include standardized procedures applied across the entire organization. These policies and guidelines include specific requirements related to each counterparty's risk profile; the markets served; counterparty, industry and country concentrations; and regulatory compliance. These policies and procedures also implement a number of core principles, which include the following:

 We measure and consolidate credit risks attributed to each counterparty, or group of counterparties, in accordance with a "oneobligor" principle that aggregates risks across our business units;

- ERM reviews and approves all material extensions of credit, and material changes to such extensions of credit (such as changes in term, collateral structure or covenants), in accordance with assigned credit-approval authorities;
- Credit-approval authorities are assigned to individuals according to their qualifications, experience and training, and these authorities are periodically reviewed. Our largest exposures require approval by the Credit Committee, a sub-committee of the CMRC. With respect to small and low-risk extensions of credit to certain types of counterparties, approval authority may be granted to individuals outside of ERM;
- We seek to avoid or limit undue concentrations of risk. Counterparty (or groups of counterparties), industry, country and product-specific concentrations of risk are subject to frequent review and approval in accordance with our risk policies and appetite;
- We evaluate the creditworthiness of counterparties through a detailed risk assessment, including the use of internal risk-rating methodologies;
- We review all extensions of credit and the creditworthiness of counterparties at least annually. The nature and extent of these reviews are determined by the size, nature and term of the extensions of credit and the creditworthiness of the counterparty; and
- We subject all corporate policies and guidelines to annual review as an integral part of our periodic assessment of our risk appetite.

Our corporate policies and guidelines require that all extensions of credit are consistent with the bank's standards, limit credit-related losses, and our goal of maintaining a strong financial condition.

Structure and Organization

The Credit Risk group within ERM is responsible for the assessment, approval and monitoring of credit risk across our business. The group is managed centrally, has dedicated teams in a number of locations worldwide, and is responsible for related policies and procedures, and for our internal creditrating systems and methodologies. In addition, the group, in conjunction with the business units, establishes measurements and limits to control the amount of credit risk accepted across its various business activities, both at the portfolio level and for individual counterparty each or group of

counterparties, to individual sectors, and also to counterparties by product and country of risk. These measurements and limits are reviewed periodically, but at least annually.

In conjunction with other groups in ERM, the Credit Risk group is responsible for the design, implementation and oversight of our credit risk measurement and management systems, including data and assessment systems, quantification systems and the reporting framework.

Various key committees within our company are responsible for the oversight of credit risk and associated credit risk policies, systems and models. All credit-related activities are governed by our risk appetite framework and our credit risk guidelines, which define our general philosophy with respect to credit risk and the manner in which we control, manage and monitor such risks.

The previously described CMRC (refer to "Risk Committees") has primary responsibility for the oversight, review and approval of the credit risk guidelines and policies. Credit risk guidelines and policies are reviewed periodically, but at least annually.

The Credit Committee, a sub-committee of the CMRC, has responsibility for assigning credit authority and approving the largest and higher-risk extensions of credit to individual counterparties or groups of counterparties.

CMRC provides periodic updates to MRAC and the Board's RC.

Credit Ratings

We perform initial and ongoing reviews to exercise due diligence on the creditworthiness of our counterparties when conducting any business with them or approving any credit limits.

This due diligence process generally includes the assignment of an internal credit rating, which is determined by the use of internally developed and validated methodologies, scorecards and a 15-grade rating scale. This risk-rating process incorporates the use of risk-rating tools in conjunction with management judgment; gualitative and guantitative inputs are captured in a replicable manner and, following a formal review and approval process, an internal credit rating based on our rating scale is assigned. We generally rate our counterparties individually, although some counterparties defined by us as low-risk are rated on a pooled basis. Credit ratings are reviewed and approved by the Credit Risk group or its delegates. We evaluate and rate the credit risk of our counterparties on an ongoing basis. To facilitate comparability across the portfolio, counterparties within a given sector are rated using a risk-rating tool developed for that sector.

Our risk-rating methodologies are approved for use by the Trading Markets Committee, a subcommittee of the CMRC, after completion of internal model validation processes, and are subject to an annual review, including re-validation.

Risk Parameter Estimates

Our internal risk-rating system promotes a clear and consistent approach to determining appropriate credit risk classifications for our credit counterparties and exposures. This allows us to track the changes in risk associated with these counterparties and exposures over time. This capability enhances our ability to calculate both risk exposures and capital, and enables better strategic decision making across the organization.

More specifically, our internal risk rating system is used for the following purposes:

- The assessment of the creditworthiness of new counterparties and, in conjunction with our risk appetite statement, the development of appropriate credit limits for our products and services, including loans, foreign exchange, securities finance, placements and repurchase agreements;
- The automation of limit approvals for certain low-risk counterparties, as defined in our credit risk guidelines and based on the counterparty's probability-of-default;
- The development of approval authority matrices based on PD; riskier counterparties with higher PDs require higher levels of approval for a comparable PD and limit size compared to less risky counterparties with lower PDs;
- The analysis of risk concentration trends using historical PD and exposure-at-default (EAD), data;
- The determination of the level of management review of short-duration advances depending on PD; riskier counterparties with higher rating class values generally trigger higher levels of management escalation for comparable short-duration advances compared to less risky counterparties with lower rating-class values;
- The monitoring of credit facility utilization levels using EAD values and the identification of instances where counterparties have exceeded limits;
- The aggregation and comparison of counterparty exposures with risk appetite levels to determine if businesses are maintaining appropriate risk levels; and

• The determination of our regulatory capital requirements for the AIRB set forth in the Basel framework.

Credit Risk Mitigation

We seek to limit our credit exposure and reduce any potential credit losses through the use of various types of credit risk mitigation. The Basel III final rule permits us to reflect the application of credit risk mitigation when it meets the standards outlined therein. Examples of forms of credit risk mitigation include a security interest in financial and nonfinancial assets (collateral), netting and guarantees. Where permissible, we apply the recognition of collateral, guarantees and netting to mitigate overall risk within our counterparty credit portfolio. While credit default swaps are permitted under the Basel III final rule, we do not actively use credit default swaps as a risk mitigation tool.

Collateral

In many parts of our business, we regularly require or agree for collateral to be received from or provided to clients and counterparties in connection with contracts that involve credit risk. In our trading businesses, this collateral is typically in the form of cash, as well as highly-rated and/or liquid securities (i.e. government securities and other bonds or equity securities). Credit risks in our non-trading and securities finance businesses are also often secured by bonds and equity securities and by other types of assets. Collateral serves to reduce the risk of loss inherent in an exposure. However, changing market values of the collateral we hold, unexpected increases in the credit exposure to a client or counterparty, reductions in the value or change in the type of securities held by us, as well as operational errors or errors in the manner in which we seek to exercise our rights, may reduce the risk mitigation effects of collateral. While collateral is often an alternative source of repayment, it does not replace the requirement within our policies and guidelines for high-quality underwriting. We also may choose to incur credit exposure without the benefit of collateral or other risk mitigating credits rights.

Our credit risk guidelines require that the collateral we accept for risk mitigation purposes is of high quality, can be reliably valued and is supported by a valid security interest that permits liquidation if or when required. Generally, when collateral is of lower quality, more difficult to value or more challenging to liquidate, higher discounts to market values are applied for the purposes of measuring credit risk. For certain less liquid collateral, longer liquidation periods are assumed when determining the credit exposure.

All types of collateral are assessed regularly by ERM, as is the basis on which the collateral is valued. Our assessment of collateral, including the ability to liquidate collateral in the event of a counterparty default, and also with regard to market values of collateral under a variety of hypothetical market conditions, is an integral component of our assessment of risk and approval of credit limits. We also seek to identify, limit and monitor instances of "wrong-way" risk, where a counterparty's risk of default is positively correlated with the risk of our collateral eroding in value.

We maintain policies and procedures requiring that documentation used to collateralize a transaction is legal, valid, binding and enforceable in the relevant jurisdictions. We also conduct legal reviews to assess whether our documentation meets these standards on an ongoing basis.

Netting

Netting is a mechanism that allows institutions and counterparties to net offsetting exposures and payment obligations against one another through the use of qualifying master netting agreements. A master netting agreement allows for certain rights and remedies upon a counterparty default, including the right to net obligations arising under derivatives or other transactions under such agreement. In such an event, the netting of obligations would result in a single net claim owed by, or to, the counterparty. This is commonly referred to as "close-out netting," and is pursued wherever possible. We may also enter into master agreements that allow for the netting of amounts payable on a given day and in the same currency, reducing our settlement risk. This is commonly referred to as "payment netting," and is widely used in our foreign exchange activities.

As with collateral, we have policies and procedures in place to apply close-out and payment netting only to the extent that we have verified legal validity and enforceability of the master agreement. In the case of payment netting, operational constraints may preclude us from reducing settlement risk, notwithstanding the legal right to require the same under the master netting agreement. In the event we become unable, due to operational constraints, actions by regulators, changes in accounting principles. law regulation or (or related interpretations) or other factors, to net some or all of our offsetting exposures and payment obligations under those agreements, we would be required to gross up our assets and liabilities on our statement of condition and our calculation of RWA, accordingly. This would result in a potentially material change in our regulatory ratios, including LCR, and present increased credit. liquidity. asset-and-liability management and operational risks, some of which could be material.

Guarantees

A guarantee is a financial instrument that results in credit support being provided by a third party, (i.e., the protection provider) to the underlying obligor (the beneficiary of the provided protection) on account of an exposure owing by the obligor. The protection provider may support the underlying exposure either in whole or in part. Support of this kind may take different forms. Typical forms of guarantees provided to us include financial guarantees, letters of credit, bankers' acceptances, purchase undertaking agreement contracts and insurance.

We have established a review process to evaluate guarantees under the applicable requirements of our policies and Basel 111 requirements. Governance for this evaluation is covered under policies and procedures that require regular reviews of documentation, jurisdictions and credit quality of protection providers.

Credit Limits

Central to our philosophy for our management of credit risk is the approval and imposition of credit limits, against which we monitor the actual and potential future credit exposure arising from our business activities with counterparties or groups of counterparties. Credit limits are a reflection of our risk appetite, which may be determined by the creditworthiness of the counterparty, the nature of the risk inherent in the business undertaken with the counterparty, or a combination of relevant credit factors. Our risk appetite for certain sectors and certain countries and geographic regions may also influence the level of risk we are willing to assume to certain counterparties.

The analysis and approval of credit limits is undertaken similarly across our businesses, although the nature and extent of the analysis may vary, based on the type, term and magnitude of the risk being assumed. Credit limits and underlying exposures are assessed and measured on both a gross and net where appropriate, with net exposure basis determined by deducting the value of any collateral held. For certain types of risk being assumed, we will also assess and measure exposures under a variety of hypothetical market conditions. Credit limit approvals across our business are undertaken by the Credit Risk group, by individuals to whom credit authority has been delegated, or by the Credit Committee.

Credit limits are re-evaluated annually, or more frequently as needed, and are revised periodically on prevailing and anticipated market conditions, changes in counterparty or country-specific credit ratings and outlook, changes in our risk appetite for certain counterparties, sectors or countries, and enhancements to the measurement of credit utilization.

Reporting

Ongoing active monitoring and management of our credit risk is an integral part of our credit risk management framework. We maintain management information systems to identify, measure, monitor and report credit risk across businesses and legal entities, enabling ERM and our businesses to have timely access to information on credit limits and exposures. Monitoring is performed along the dimensions of counterparty, industry, country and product-specific risks to facilitate the identification of concentrations of risk and emerging trends.

Key aspects of this credit risk reporting structure include governance and oversight groups and policies that define standards for the reporting of credit risk, data aggregation and sourcing systems.

The Credit Risk group routinely assesses the composition of our overall credit risk portfolio for alignment with our stated risk appetite. This assessment includes routine analysis and reporting of the portfolio, monitoring of market-based indicators, the assessment of industry trends and developments and regular reviews of concentrated risks. The Credit Risk group is also responsible, in conjunction with the business units, for defining the appetite for credit risk in the major sectors in which we have a concentration of business activities. These sector-level risk appetite statements, which include counterparty selection criteria and granular underwriting guidelines, are reviewed periodically and approved by the CMRC.

Monitoring

Regular surveillance of credit and counterparty risks is undertaken by our business units, the Credit Risk group and designees with ERM, allowing for oversight. This surveillance process includes, but is not limited to, the following components:

- Annual Reviews. A formal review of counterparties is conducted at least annually and includes a review of operating performance, primary risk factors and our internal credit risk rating. This annual review also includes a review of current and proposed credit limits, an assessment of our ongoing risk appetite and assessment that supporting legal documentation remains effective.
- Interim Monitoring. Monitoring of our largest and riskiest counterparties is undertaken more frequently, utilizing financial information, market indicators and other relevant credit and performance measures. The nature and extent of this interim monitoring is individually tailored to certain counterparties and/or industry sectors to identify material changes to the risk profile of a counterparty (or group of counterparties)

and assign an updated internal risk rating in a timely manner.

We maintain an active "surveillance list" for all counterparties. The surveillance list status denotes a concern with some aspect of a counterparty's risk profile that warrants closer monitoring of the counterparty's financial performance and related risk factors. Our ongoing monitoring processes are designed to facilitate the early identification of counterparties whose creditworthiness is deteriorating; any counterparty may be placed on the surveillance list by ERM at its sole discretion.

Counterparties on the surveillance list generally correspond with the non-investment grade or near non-investment grade ratings established by the major independent credit-rating agencies. The surveillance list also includes any counterparties rated "Special Mention," "Substandard," "Doubtful" and "Loss."

The Credit Risk group maintains primary responsibility for our surveillance list processes, and generates a quarterly report of all surveillance list counterparties. The surveillance list is formally reviewed at least on a quarterly basis, with participation from senior Credit Risk staff, and representatives from the business units and our corporate finance and legal groups as appropriate. These meetings include a review of individual surveillance list counterparties, together with credit limits and prevailing exposures, and are focused on actions to contain, reduce or eliminate the risk of loss to us. Identified actions are documented and monitored.

Controls

GCR provides a separate level of surveillance and oversight over the integrity of our credit risk management processes, including the internal riskrating system. GCR reviews counterparty credit ratings for all identified sectors on an ongoing basis. GCR is subject to oversight by the CMRC, and provides periodic updates to the Board's RC.

Specific activities of GCR include the following:

- Perform separate and objective assessments of our credit and counterparty exposures to determine the nature and extent of risk undertaken by the business units;
- Execute periodic credit process and credit product reviews to assess the quality of credit analysis, compliance with policies, guidelines and relevant regulation, transaction structures and underwriting standards, and risk-rating integrity;

- Identify and monitor developing counterparty, market and/or industry sector trends to limit risk of loss and protect capital;
- Deliver regular and formal reporting to stakeholders, including exam results, identified issues and the status of requisite actions to remedy identified deficiencies;
- Allocate resources for specialized risk assessments (on an as-needed basis); and
- Liaise with assurance partners and regulatory personnel on matters relating to risk rating, reporting and measurement.

Allowance for Credit Losses

We record an allowance for credit losses related to certain on-balance sheet credit exposures, including our financial assets held at amortized cost, as well as certain off-balance sheet credit exposures, including unfunded commitments and letters of credit. Review and evaluation of the adequacy of the allowance for credit losses is ongoing throughout the year, but occurs at least quarterly, and is based, among other factors, on our evaluation of the level of risk in the portfolio and the estimated effects of our forecasts on our counterparties. We utilize multiple economic scenarios, consisting of a baseline, upside and downside scenarios, to develop our forecast of expected losses.

In 2023, the majority of the increase in the allowance estimate reflected an increase in reserves for the commercial real estate portfolio, with management's economic outlook and the leveraged loan portfolio remaining relatively stable. Allowance estimates are subject to uncertainties, including those inherent in our model and economic assumptions, and management may use qualitative adjustments. If future data and forecasts deviate relative to the forecasts utilized to determine our allowance for credit losses as of December 31, 2023, or if credit risk migration is higher or lower than forecast, our allowance for credit losses will also change.

Additional information about the allowance for credit losses is provided in Notes 3 and 4 to the consolidated financial statements in this Form 10-K.

Liquidity Risk Management

Our liquidity framework contemplates areas of potential risk to our liquidity based on our activities, size and other appropriate risk-related factors. In managing liquidity risk we employ limits, maintain established metrics and early warning indicators and perform routine stress testing to identify potential liquidity needs. This process involves the evaluation of a combination of internal and external scenarios which assist us in measuring our liquidity position and in identifying potential increases in cash needs or decreases in available sources of cash, as well as the potential impairment of our ability to access the global capital markets.

We manage our liquidity on a global, consolidated basis as well as on a stand-alone basis at our Parent Company and at certain branches and subsidiaries of State Street Bank. State Street Bank generally has access to markets and funding sources limited to banks, such as the federal funds market, and the Federal Reserve's discount window and the Bank Term Funding Program. The Parent Company is managed to a more conservative liquidity profile, reflecting narrower market access. Additionally, the Parent Company typically holds, or has direct access to, primarily through SSIF, a direct subsidiary of the Parent Company, and the support agreement, as discussed in "Supervision and Regulation" in Business in this Form 10-K, cash and equivalents intended to meet its current debt maturities and other cash needs, as well as those projected over the next twelve-month period. Absent financial distress at the Parent Company, the liquid assets available at SSIF continue to be available to the Parent Company. As of December 31, 2023, the value of our Parent Company's net liquid assets totaled \$659 million, compared with \$460 million as of December 31, 2022, excluding available liquidity through SSIF. As of December 31, 2023, our Parent Company and State Street Bank had approximately \$0.98 billion of senior notes or subordinated debentures outstanding that will mature in the next twelve months.

As a SIFI, our liquidity risk management activities are subject to heightened and evolving regulatory requirements, including interpretations of those requirements, under specific U.S. and international regulations and also resulting from published and unpublished guidance, supervisory activities, such as stress tests, resolution planning, examinations and other regulatory interactions. Satisfaction of these requirements could, in some cases, result in changes in the composition of our investment portfolio, reduced NII or NIM, a reduction in the level of certain business activities or modifications to the way in which we deliver our products and services. If we fail to meet regulatory requirements to the satisfaction of our regulators, we could receive negative regulatory stress test results, incur a resolution plan deficiency or determination of a non-credible resolution plan or otherwise receive an adverse regulatory finding. Our efforts to satisfy, or our failure to satisfy, these regulatory requirements could materially adversely affect our business, financial condition or results of operations.

Governance

Global Treasury is responsible for our management of liquidity. This includes the day-to-day management of our global liquidity position, the

development and monitoring of early warning indicators, key liquidity risk metrics, the creation and execution of stress tests, the evaluation and implementation of regulatory requirements, the maintenance and execution of our liquidity guidelines and contingency funding plan (CFP), and routine management reporting to ALCO, MRAC and the Board's RC.

Global Treasury Risk Management, part of ERM, provides separate oversight over the identification, communication and management of Global Treasury's risks in support of our business strategy. Global Treasury Risk Management reports to the CRO. Global Treasury Risk Management's responsibilities relative to liquidity risk management include the development and review of policies and guidelines; the monitoring of limits related to adherence to the liquidity risk guidelines and associated reporting.

Liquidity Framework

We manage liquidity according to several principles that are equally important to our overall liquidity risk management framework:

- Structural liquidity management addresses liquidity by monitoring and directing the composition of our consolidated statement of condition. Structural liquidity is measured by metrics such as the percentage of total wholesale funds to consolidated total assets, and the percentage of non-government investment securities to client deposits. In addition, on a regular basis and as described below, our structural liquidity is evaluated under various stress scenarios.
- **Tactical liquidity management** addresses our day-to-day funding requirements and is largely driven by changes in our primary source of funding, which are client deposits. Fluctuations in client deposits may be supplemented with short-term borrowings, repurchase agreements, FHLB products and certificates of deposit.
- Stress testing and contingent funding planning are longer-term strategic liquidity risk management practices. Regular and ad hoc liquidity stress testing are performed under various severe but plausible scenarios at the consolidated level and at significant subsidiaries, including State Street Bank. These tests contemplate severe market and events specific to us under various time horizons and severities. Tests contemplate the impact of material changes in key funding sources, credit ratings, additional collateral requirements, contingent uses of funding, systemic shocks to the financial markets and

operational failures based on market and assumptions specific to us. The stress tests evaluate the required level of funding versus available sources in an adverse environment. As stress testing contemplates potential forward-looking scenarios, results also serve as a trigger to activate specific liquidity stress levels and contingent funding actions.

CFPs are designed to assist senior management with decision-making associated with any contingency funding response to a possible or actual crisis scenario. The CFPs define roles, responsibilities and management actions to be taken in the event of deterioration of our liquidity profile caused by either an event specific to us or a broader disruption in the capital markets. Specific actions are linked to the level of stress indicated by these measures or by management judgment of market conditions.

Liquidity Risk Metrics

In managing our liquidity, we employ early warning indicators and metrics intended to detect situations which may result in a liquidity stress, including changes in our stock price and spreads on our long-term debt. Additional metrics that are critical to the management of our consolidated statement of condition and monitored as part of our routine liquidity management include measures of our fungible cash position, purchased wholesale funds, unencumbered liquid assets, deposits and the total of investment securities and loans as a percentage of total client deposits.

Asset Liquidity

Central to the management of our liquidity is asset liquidity, which consists primarily of HQLA. HQLA is the amount of liquid assets that qualify for inclusion in the LCR. As a banking organization, we are subject to a minimum LCR under the LCR rule approved by U.S. banking regulators. The LCR is intended to promote the short-term resilience of internationally active banking organizations, like us, to improve the banking industry's ability to absorb shocks arising from market stress over a 30 calendar day period and improve the measurement and management of liquidity risk. The LCR measures an institution's HQLA against its net cash outflows. HQLA primarily consists of unencumbered cash and certain high quality liquid securities that qualify for inclusion under the LCR rule. Net cash outflows are measured as prescribed under the LCR rule which provides a significant benefit for deposits classified as operational. We report the LCR to the Federal Reserve daily. For both the guarters ended December 31, 2023 and December 31, 2022, average daily LCR for the Parent Company was 106%. The impact of higher deposits on the Parent Company's LCR is

limited by a cap, known as the transferability restriction, on the HQLA from State Street Bank that can be recognized at the Parent Company as defined in the U.S. LCR Final Rule. This restriction limits the HQLA used in the calculation of the Parent Company's LCR to the amount of net cash outflows of its principal banking subsidiary (State Street Bank). The average HQLA, post-prescribed haircuts for the Parent Company under the LCR final rule definition was \$128.96 billion for the quarter ended December 31, 2023 compared to \$139.88 billion for the quarter ended December 31, 2022, primarily due to a decrease in client deposits relative to the prior period. For the quarter ended December 31, 2023, the LCR for State Street Bank was approximately 122%.

In addition, we are subject to the final rule issued by the U.S. banking agencies implementing the Basel Committee on Banking Supervision's (BCBS's) NSFR in the U.S. which became effective on July 1, 2021. The final rule requires large banking organizations to maintain an amount of available stable funding, which is a weighted measure of a company's funding sources over a one-year time horizon, calculated by applying standardized weightings to the company's equity and liabilities based on their expected stability. The amount of stable funding can be no less than the amount of required stable funding, which is calculated by standardized applying weightings to assets. derivatives exposures and certain other items based on their liquidity characteristics. As a U.S. G-SIB, we are required to maintain an NSFR that is equal to or greater than 100%. Pursuant to the BCBS's NSFR final rule, as a subsidiary of a U.S. G-SIB, State Street Bank is similarly required to maintain an NSFR that is equal to or greater than 100%. As of December 31, 2023, both the Parent Company's and State Street Bank's NSFR were above the 100% minimum NSFR requirement. The average NSFR for the Parent Company was 136% for the fourth quarter of 2023 and 132% for the third guarter of 2023.

We maintained average cash balances in excess of regulatory requirements governing deposits with the Federal Reserve of approximately \$69.28 billion at the Federal Reserve, the ECB and other non-U.S. central banks for the quarter ended December 31, 2023, and \$79.52 billion for the quarter ended December 31, 2022. The higher levels of average cash balances with central banks reflect higher levels of client deposits.

Liquid securities carried in our asset liquidity include securities pledged without corresponding advances from the Federal Reserve Bank of Boston (FRBB), the FHLB, and other non-U.S. central banks. State Street Bank is a member of the FHLB. This membership allows for advances of liquidity in varying terms against high-quality collateral, which helps facilitate asset-and-liability management. Access to primary, intraday and contingent liquidity provided by these utilities is an important source of contingent liquidity with utilization subject to underlying conditions. As of December 31, 2023, we had no outstanding primary credit borrowings from the FRBB discount window, \$1 billion outstanding of Bank Term Funding Program and \$2.5 billion outstanding of FHLB funding. As of December 31, 2022, we had no outstanding primary credit borrowings from the FRBB discount window or any other central bank facility and \$2.0 billion outstanding borrowings from the FHLB.

In addition to the investment securities included in our asset liquidity, we have other unencumbered investment securities and certain loans that we can pledge as collateral to access these various facilities. These additional assets are available sources of liquidity, although not as rapidly deployed as those included in our LCR asset liquidity.

The average fair value of total unencumbered securities was \$76.86 billion for the quarter ended December 31, 2023, compared to \$78.25 billion for the quarter ended December 31, 2022.

Measures of liquidity include LCR and NSFR, which are described in "Supervision and Regulation" in Business in this Form 10-K.

Uses of Liquidity

Significant uses of our liquidity could result from the following: withdrawals of client deposits; drawdowns by our custody clients of lines of credit; advances to clients to settle securities transactions; increases in our investment and loan portfolios; or other permitted purposes. Such circumstances would generally arise under stress conditions including deterioration in credit ratings. A recurring use of our liquidity involves our deployment of HQLA from our investment portfolio to post collateral to financial institutions serving as sources of securities under our prime services program.

We had unfunded commitments to extend credit with gross contractual amounts totaling \$34.20 billion and \$31.20 billion and standby letters of credit totaling \$1.51 billion and \$2.13 billion as of December 31, 2023 and 2022, respectively. These amounts do not reflect the value of any collateral. As of December 31, 2023, approximately 75% of our unfunded commitments to extend credit and 35% of our standby letters of credit expire within one year. Since many of our commitments are expected to expire or renew without being drawn upon, the gross contractual amounts do not necessarily represent our future cash requirements.

Information about our resolution planning and the impact actions under our resolution plans could have on our liquidity is provided in "Supervision and Regulation" in Business in this Form 10-K.

Funding

Deposits

We provide products and services including custody, accounting, administration, daily pricing, FX services. cash management, financial asset management, securities finance and investment advisory services. As a provider of these products and services, we generate client deposits, which have generally provided a stable, low-cost source of funds. As a global custodian, clients place deposits with our entities in various currencies. As of December 31, 2023, approximately 70% of our average total deposit balances were denominated in U.S. dollars, 15% in EUR, 5% in GBP and 10% in all other currencies. As of December 31, 2022, 65% of our average total deposit balances were denominated in U.S. dollars, 15% in EUR, 10% in GBP and 10% in all other currencies.

Short-Term Funding

Our on-balance sheet liquid assets are also an integral component of our liquidity management strategy. These assets provide liquidity through maturities of the assets, but more importantly, they provide us with the ability to raise funds by pledging the securities as collateral for borrowings or through outright sales. In addition, our access to the global capital markets gives us the ability to source incremental funding from wholesale investors. As discussed earlier under "Asset Liquidity," State Street Bank's membership in the FHLB allows for advances of liquidity with varying terms against high-quality collateral.

Short-term secured funding also comes in the form of securities lent or sold under agreements to repurchase. These transactions are short-term in nature, generally overnight and are collateralized by high-quality investment securities. These balances were \$1.87 billion and \$1.18 billion as of December 31, 2023 and 2022, respectively.

State Street Bank continues to maintain a line of credit with a financial institution of CAD \$1.40 billion, or approximately \$1.06 billion, as of December 31, 2023, to support its Canadian securities processing operations. The line of credit has no stated termination date and is cancellable by either party with prior notice. As of both December 31, 2023 and 2022, there was no balance outstanding on this line of credit.

Long-Term Funding

We have the ability to issue debt and equity securities under our current universal shelf registration statement to meet current commitments and business needs. In addition, State Street Bank also has current authorization from the Board to issue unsecured senior debt. The total amount remaining for issuance pursuant to this authority is \$2.15 billion as of December 31, 2023.

On January 26, 2023, we issued \$500 million aggregate principal amount of 4.857% fixed-to-floating rate senior notes due 2026 and \$750 million aggregate principal amount of 4.821% fixed-to-floating rate senior notes due 2034.

On May 18, 2023, we issued \$1 billion aggregate principal amount of 5.104% fixed-to-floating rate senior notes due 2026 and \$1 billion aggregate principal amount of 5.159% fixed-to-floating rate senior notes due 2034.

On August 3, 2023, we issued \$1.2 billion aggregate principal amount of 5.272% fixed rate senior notes due 2026 and \$300 million aggregate principal amount of floating rate senior notes due 2026.

On November 21, 2023, we issued \$1 billion aggregate principal amount of 5.684% fixed-to-floating rate senior notes due 2029 and \$500 million aggregate principal amount of 6.123% fixed-to-floating rate senior subordinated notes due 2034.

On December 3, 2023, we redeemed \$500 million aggregate principal amount of 3.776% fixed-to-floating rate senior notes due 2024.

Agency Credit Ratings

Our ability to maintain consistent access to liquidity is fostered by the maintenance of high investment grade ratings as measured by major credit rating agencies.

TABLE 29: CREDIT RATINGS

	As of	2023	
	Standard & Poor's	Moody's Investors Service	Fitch
State Street:			
Senior debt	Α	A1	AA-
Subordinated debt	A-	A2	Α
Junior subordinated debt	BBB	A3	NR
Preferred stock	BBB	Baa1	BBB+
Outlook	Stable	Negative	Stable
State Street Bank:			
Short-term deposits	A-1+	P-1	F1+
Long-term deposits	AA-	Aa1	AA+
Senior debt/Long-term issuer	AA-	Aa3	AA
Subordinated debt	Α	Aa3	NR
Outlook	Stable	Negative	Stable

Factors essential to maintaining high credit ratings include:

- diverse and stable core earnings;
- relative market position;
- strong risk management;
- strong capital ratios;
- diverse liquidity sources, including the global capital markets and client deposits;
- strong liquidity monitoring procedures; and
- preparedness for current or future regulatory developments.

High ratings limit borrowing costs and enhance our liquidity by:

- providing confidence for unsecured funding and depositors;
- increasing the potential market for our debt and improving our ability to offer products;
- facilitating reduced collateral haircuts in secured lending transactions; and
- engaging in transactions in which clients value high credit ratings.

A downgrade or reduction in our credit ratings could have a material adverse effect on our liquidity by restricting our ability to access the capital markets, which could increase the related cost of funds. In turn, this could cause the sudden and large-scale withdrawal of unsecured deposits by our clients, which could lead to drawdowns of unfunded commitments to extend credit or trigger requirements under securities purchase commitments; or require additional collateral or force terminations of certain trading derivative contracts.

A majority of our derivative contracts have been entered into under bilateral agreements with counterparties who may require us to post collateral or terminate the transactions based on changes in our credit ratings. We assess the impact of these arrangements by determining the collateral that would be required assuming a downgrade by major rating agencies. The additional collateral or termination payments related to our net derivative liabilities under these arrangements that could have been called by counterparties in the event of a downgrade in our credit ratings below levels specified in the agreements is provided in Note 10 to the consolidated financial statements in this Form 10-K. Other funding sources, such as secured financing transactions and other margin requirements, for which there are no explicit triggers, could also be adversely affected.

Contractual Cash Obligations and Other Commitments

The long-term contractual cash obligations included within Table 30: Long-Term Contractual Cash Obligations were recorded in our consolidated statement of condition as of December 31, 2023, except for the interest portions of long-term debt and finance leases.

December 31, 2023	Payments Due by Period												
(In millions)	s than 1 year	1-3 years			4-5 years	Over 5 years			Total				
Long-term debt ⁽¹⁾⁽²⁾	\$ 977	\$	7,382	\$	1,697	\$	8,596	\$	18,652				
Operating leases	172		274		201		357		1,004				
Finance lease and equipment financing obligations ⁽²⁾	76		122		_		_		198				
Tax liability	22		28		_		_		50				
Total contractual cash obligations	\$ 1,247	\$	\$ 7,806		\$ 1,898		\$ 8,953		19,904				

⁽¹⁾ Long-term debt excludes finance lease obligations and equipment financing (presented as a separate line item) and the effect of interest rate swaps. Interest payments were calculated at the stated rate with the exception of floating-rate debt, for which payments were calculated using the indexed rate in effect as of December 31, 2023.

(2) Additional information about contractual cash obligations related to long-term debt and operating and finance leases is provided in Notes 9 and 20 to the consolidated financial statements in this Form 10-K.

Total contractual cash obligations shown in Table 30: Long-Term Contractual Cash Obligations do not include:

- Obligations which will be settled in cash, primarily in less than one year, such as client deposits, federal funds purchased, securities sold under repurchase agreements and other short-term borrowings. Additional information about deposits, federal funds purchased, securities sold under repurchase agreements and other short-term borrowings is provided in Note 8 to the consolidated financial statements in this Form 10-K.
- Obligations related to derivative instruments because the derivative-related amounts recorded in our consolidated statement of condition as of December 31, 2023 did not represent the amounts that may ultimately be paid under the contracts upon settlement. Additional information about our derivative instruments is provided in Note 10 to the consolidated financial statements in this Form 10-K. We have obligations under pension and other post-retirement benefit plans, with additional information provided in Note 19 to the consolidated financial statements in this Form 10-K, which are not included in Table 30: Long-Term Contractual Cash Obligations.

	Duration of Commitment as of December 31, 2023														
(In millions)	L	∟ess than 1 year		1-3 years		4-5 years		Over 5 years	Total amounts committed ⁽¹⁾						
Indemnified securities financing	\$	279,916	\$	_	\$	_	\$	_	\$	279,916					
Unfunded credit facilities		23,531		4,698		5,450		518		34,197					
Standby letters of credit		535		600		375		_		1,510					
Purchase obligations ⁽²⁾		438		772		226		81		1,517					
Total commercial commitments	\$	304,420	\$	6,070	\$	6,051	\$	599	\$	317,140					

TABLE 31: OTHER COMMERCIAL COMMITMENTS

⁽¹⁾ Total amounts committed reflect participations to independent third parties, if any.

⁽²⁾ Amounts represent obligations pursuant to legally binding agreements, where we have agreed to purchase products or services with a specific minimum quantity defined at a fixed, minimum or variable price over a specified period of time.

Additional information about the commitments presented in Table 31: Other commercial commitments, except for purchase obligations, is provided in Note 12 to the consolidated financial statements in this Form 10-K.

Operational Risk Management

Overview

Operational risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events.

In providing an array of products and services, we are exposed to operational risk. Operational risk may result from, but is not limited to, errors relating to transaction processing, breaches of internal control systems, or business interruption due to system failures or other events. Operational risk also includes potential legal or regulatory actions that could arise as a byproduct of our failure to maintain and execute an adequate system of internal control. In the case of an operational risk event, we could suffer financial loss and potential regulatory action, as well as reputational damage.

Unforeseen external events, including natural disasters, terrorist attacks, pandemics, global conflicts, or other geopolitical events (including the ongoing war in Ukraine and the Israel-Hamas war), may result in stress on the operating environment and increase operational risk.

Operational risk encompasses fiduciary risk and legal risk. Fiduciary risk is defined as the risk that we fail to properly exercise our fiduciary duties in our provision of products or services to clients. Legal risk is the risk of loss resulting from failure to comply with laws and contractual obligations.

Operational risk is inherent in the performance of investment servicing and investment management activities on behalf of our clients. Whether it be fiduciary risk, risk associated with execution and processing or other types of operational risk, a consistent, transparent and effective operational risk framework is key to identifying, monitoring and managing operational risk. To mitigate these risks, we have established policies, procedures, an internal control standards and an operational risk framework. Controls are designed to manage operational risk at levels appropriate to our business model, the business environment and the markets in which we operate taking into account factors such as regulation and competition.

The organizational framework for operational risk is based on risk management activities comprising:

- Governance: We have established governance structures to oversee and assess our operational risk management activities and our operational risk policy;
- Accountability: Business managers are responsible for maintaining an effective system of internal controls commensurate

with their risk profiles and in accordance with State Street policies and procedures. Operational risk management is the second line function responsible for developing risk management policies and tools for assessing, measuring and monitoring operational risk; and

 Operational Risk Management Framework: An established operational risk management framework supports and drives the identification, assessment, mitigation and monitoring of operational risk.

Governance

Our Board is responsible for the approval and oversight of our overall operational risk policy.

Our operational risk policy establishes our approach to our management of operational risk across our business. The policy identifies the responsibilities of individuals and committees charged with oversight of the management of operational risk, and articulates a broad mandate that supports implementation of the operational risk framework.

Executive management manages and oversees our operational risk through membership on risk management committees, including TORC and the Operational Risk and Controls Committee, each of which ultimately reports to a committee of the Board.

The Operational Risk and Controls Committee, chaired by the global head of operational risk, oversees the operational risk framework and policies, reviews and monitors program outputs and metrics, and monitors resolution of significant operational risk matters.

Accountability

Accountability for managing operational risk spans the first and second lines of defense:

- The global head of Operational Risk, a member of the CRO's executive management team, leads ERM's corporate ORM group. ORM is responsible for developing risk management policies and tools for assessing, measuring, monitoring and managing operational risk. The ORM function includes risk oversight of all line of business and functions; and
- Business Managers are responsible for managing day to day operations, maintaining an effective system of internal controls and managing operational risks within risk appetite in its normal course of business.

Corporate Audit, as a third line of defense, performs separate reviews of the application of operational risk management practices and methodologies utilized across our business.

Operational Risk Management Framework

The operational risk management framework has been established in a structured manner to drive the identification, assessment, mitigation and monitoring of operational risk. Operational risk management framework includes key elements such as risk and control self assessment, capital analysis, monitoring and reporting and documentation and guidelines. These framework components are described below.

Risk and Control Self Assessment

The objective of the risk and control self assessment program is to proactively identify, assess and manage operational risks and related controls associated with day-to-day operations. A key component of understanding how risks are managed is to understand the effectiveness of controls. Effectiveness of controls is concluded through testing, both internal and external, business control assurance activities and self-assessments along with other control function reviews, such as a SOX testing program.

Capital Analysis

The primary measurement tool used to quantify operational risk capital and RWA related to operational risk under the advanced approaches is the loss distribution approach (LDA) model. Such required capital and RWA totaled \$3.50 billion and \$43.77 billion, respectively, as of December 31, 2023, compared to \$3.42 billion and \$42.76 billion, respectively, as of December 31, 2022; refer to the "Capital" section in "Financial Condition," of this Management's Discussion and Analysis.

The LDA model incorporates the three required operational risk elements described below:

- Internal loss event data is collected from across our business in conformity with our operating loss policy that establishes the requirements for collecting and reporting individual loss events;
- External loss event data from other financial institutions supplements our internal loss data pool with respect to loss event severity; and
- Business environment and internal control factors are those characteristics of a bank's internal and external operating environment that bear an exposure to operational risk.

Monitoring and Reporting

The objective of risk monitoring is to proactively monitor the changing business environment and corresponding operational risk exposure. It is achieved through monitoring tools that are designed to help us to understand changes in the business environment, internal control factors, risk metrics, risk assessments, exposures and operating effectiveness, as well as details of loss events and progress on risk initiatives implemented to mitigate potential risk exposures.

Operational risk reporting is intended to provide transparency, thereby enabling management to manage risk, provide oversight and escalate issues in a timely manner. It is designed to allow the business units, executive management, and the Board's control functions and committees to gain insight into activities that may result in risks and potential exposures.

Documentation and Guidelines

Documentation and guidelines allow for consistency and repeatability of the various processes that support the operational risk framework across our business.

Operational risk guidelines document our practices and describe the key elements in a business unit's operational risk management program. The purpose of the guidelines is to set forth and define key operational risk terms, provide further detail on our operational risk programs, and detail the business units' responsibilities to identify, assess, measure, monitor and report operational risk. The guideline supports our operational risk policy.

Data standards have been established with the intent of maintaining consistent data repositories and systems that are controlled, accurate and available on a timely basis to support operational risk management.

Information Technology Risk Management

Overview and Principles

We define information technology risk as the risk associated with the use, ownership, operation and adoption of information technology. Information technology risk includes risks potentially triggered by non-compliance with regulatory obligations, information security or cyber incidents, internal control and process gaps, operational events and adoption of new business technologies.

The principal technology risks within our risk policy and risk appetite framework include:

- Third party risk;
- Business disruption and technology resiliency risk;
- Technology change management risk;
- Cyber and information security risk;
- Technology asset and configuration risk; and
- Technology obsolescence risk.

Governance

Our Board is responsible for the approval and oversight of our overall technology risk framework and program. It does so through its TOPS, which reviews and approves our risk policy and appetite framework annually as well as our cybersecurity policy and related standards.

Our risk policy establishes our approach to our management of technology risk across our business. The policy identifies the responsibilities of individuals and committees charged with oversight of the management of technology risk and articulates a broad mandate that supports implementation of the risk framework.

Risk control functions in the business are responsible for adopting and executing the risk framework and reporting requirements. They do this, in part, by developing and maintaining an inventory of critical applications and supporting infrastructure, as well as identifying, assessing and measuring technology risk. They are also responsible for monitoring and evaluating risk on a continual basis using key risk indicators, risk reporting and adopting appropriate risk responses to risk issues.

Enterprise Technology Risk Management (ETRM) is the separate risk function responsible for the technology risk strategy and appetite, and technology risk framework development and execution. ETRM also performs overall technology risk monitoring and reporting to the Board, and provides a separate view of the technology risk posture to executive leadership.

We manage technology risks by:

- Coordinating various risk assessment and risk management activities, including ERM operational risk programs;
- Establishing, through TORC and TOPS of the Board, the enterprise level technology risk and cyber risk appetite and limits;
- Producing enterprise level risk reporting, aggregation, dashboards, profiles and risk appetite statements;
- Validating appropriateness of reporting of information technology and cybersecurity risks and risk acceptance to senior management risk committees and the Board;
- Promoting a strong technology and cybersecurity risk culture through communication;
- Serving as an escalation and challenge point for risk policy guidance, expectations and clarifications;
- Assessing effectiveness of key enterprise information technology and cybersecurity risk and internal control remediation programs; and
- Providing risk oversight, challenge and monitoring for the Enterprise Continuity Services function and Third Party

Management program, including the collection of risk appetite, metrics and key risk indicators, and reviewing issue management processes and consistent program adoption.

Cybersecurity Risk Management

Cybersecurity risk is managed as part of our overall information technology risk, as outlined above under the direction of our Chief Information Security Officer (CISO). Our CISO is an executive vice president at State Street and is responsible for our overall information security program.

Before joining State Street, our CISO worked at a global information technology firm for more than 10 years, holding various positions, including senior vice president and chief security officer, and, prior to that, chief information security officer for that firm's software division. Earlier on, she held leadership and general manager roles at an information management firm and an information security firm, each based in both the United States and Europe. She has worked with the World Economic Forum as a member of their Global Future Council on Cybersecurity. She holds a Doctor of Philosophy in information security and a Bachelor of Science in computer science.

We recognize the significance of cyber-attacks and take steps to mitigate the risks associated with them. We invest in building and maintaining a mature cybersecurity program to leverage people, technology and processes to protect our systems and the data in our care. We have also implemented a program to help us better measure and manage cybersecurity risk, including those risks we face when we engage third parties for products and services.

We design our information and systems access restrictions referencing the National Institute of Standards and Technology 800 53R4 Framework and use the supplemental requirements as implementation guidance. Our information security policies and standards are reviewed and updated with the onset of new regulatory changes and/or mandates. These standards are applicable to all corporate functions, business units, subsidiaries and controlled affiliates across the enterprise. Annual audits are conducted by internal and external parties to measure compliance and adherence to the standards.

All employees and third parties that have access to our systems or networks are required to adhere to our cybersecurity policy and standards. Our centralized information security group provides education and training. This training includes a required annual online training class for all employees and third parties that have access to our systems or networks, multiple simulated phishing attacks and regular information security awareness materials.

Every employee and contractor has a defined role in protecting systems and information of State Street, our clients and others. They are responsible for complying with the information security program, reporting suspected violations and threats; and protecting the confidentiality of information assets of us, our clients and others at all times.

We employ Information Security Officers to help the business better understand and manage their information security risks, as well as to work with the centralized GCS team to drive awareness and compliance throughout the business.

We use independent third parties to perform ethical hacks of key systems and penetration tests of our network and certain applications to help us better understand the effectiveness of our controls and to implement more effective controls, and we engage with third parties to conduct reviews of our overall program to help us better align our cybersecurity program with what is required of a large financial services organization.

We have an incident response program in place that is designed to enable a coordinated response to mitigate the impact of cyber-attacks, recover from the attack and to drive the appropriate level of communication to internal and external stakeholders, including timely reporting of material incidents in accordance with SEC rules.

The TORC assesses and manages the effectiveness of our cybersecurity program, which is overseen by the TOPS of our Board. The TOPS receives regular cybersecurity updates throughout the year and is responsible for reviewing and approving the policy on an annual basis.

Market Risk Management

Market risk is defined by U.S. banking regulators as the risk of loss that could result from broad market movements, such as changes in the general level of interest rates, credit spreads, foreign exchange rates or commodity prices. We are exposed to market risk in both our trading and certain of our non-trading, or asset-and-liability management, activities.

Information about the market risk associated with our trading activities is provided below under "Trading Activities." Information about the market risk associated with our non-trading activities, which consists primarily of interest rate risk, is provided below under "Asset-and-Liability Management Activities."

Trading Activities

In the conduct of our trading activities, we assume market risk, the level of which is a function of our overall risk appetite, business objectives and liquidity needs, our clients' requirements, market volatility and our execution against those factors. We engage in trading activities primarily to support our clients' needs and to contribute to our overall corporate earnings and liquidity. In connection with certain of these trading activities, we enter into a variety of derivative financial instruments to support our clients' needs and to manage our interest rate and currency risk. These activities are generally intended to generate foreign exchange trading services revenue and to manage potential earnings volatility. In addition, we provide services related to derivatives in our role as both a manager and a servicer of financial assets.

Our clients use derivatives to manage the financial risks associated with their investment goals and business activities. With the growth of crossborder investing, our clients often enter into foreign exchange forward contracts to convert currency for international investments and to manage the currency risk in their international investment portfolios. As an active participant in the foreign exchange markets, we provide foreign exchange forward and option contracts in support of these client needs, and act as a dealer in the currency markets.

As part of our trading activities, we assume positions in the foreign exchange and interest rate markets by buying and selling cash instruments and entering into derivative instruments, including foreign exchange forward contracts, foreign exchange and interest rate options and interest rate swaps, interest rate forward contracts and interest rate futures. As of December 31, 2023, the notional amount of these derivative contracts was \$2.57 trillion, of which \$2.54 trillion was composed of foreign exchange forward, swap and spot contracts. We seek to match positions closely with the objective of mitigating related currency and interest rate risk. All foreign exchange contracts are valued daily at current market rates.

Governance

Our assumption of market risk in our trading activities is an integral part of our corporate risk appetite. The RC of the Board reviews and oversees our management of market risk, including the approval of key market risk policies and the receipt and review of regular market risk reporting, as well as periodic updates on selected market risk topics.

The previously described CMRC (refer to "Risk Committees") oversees all market risk-taking activities across our business associated with trading. The CMRC, which reports to MRAC, is composed of members of ERM, our Global Markets business and our Global Treasury group, as well as our senior executives who manage our trading businesses and other members of management who possess specialized knowledge. The CMRC meets regularly to monitor the management of our trading market risk activities.

Our business units identify, manage and are responsible for the market risks inherent in their businesses. A dedicated market risk management group within ERM, and other groups within ERM, work with those business units to assist them in the identification, assessment, monitoring, management and control of market risk, and assist business unit managers with their market risk management and measurement activities. ERM provides an additional line of oversight, support and coordination designed to promote the consistent identification, measurement and management of market risk across business units, separate from those business units' discrete activities.

The ERM market risk management group is responsible for the management of corporate-wide market risk, the monitoring of key market risks and the development and maintenance of market risk management policies, guidelines and standards aligned with our corporate risk appetite. This group also establishes and approves market risk tolerance limits and trading authorities based on, but not limited to, measures of notional amounts, sensitivity, VaR and stress. Such limits and authorities are specified in our trading and market risk guidelines which govern our management of trading market risk.

Risk Appetite

Our corporate market risk appetite is specified in policy statements that outline the governance, responsibilities and requirements surrounding the identification, measurement, analysis, management and communication of market risk arising from our trading activities. These policy statements also set forth the market risk control framework designed to monitor, support, manage and control this portion of our risk appetite. All groups involved in the management and control of market risk associated with trading activities are required to comply with the qualitative and quantitative elements of these policy statements. Our trading market risk control framework is composed of the following:

- A trading market risk management process led by ERM, separate from the business units' discrete activities;
- Defined responsibilities and authorities for the primary groups involved in trading market risk management;
- A trading market risk measurement methodology that captures correlation effects and allows aggregation of market risk across risk types, markets and business lines;
- Daily monitoring, analysis and reporting of market risk exposures associated with trading activities against market risk limits;

- A defined limit structure and escalation process in the event of a market risk limit excess;
- Use of VaR models to measure the one-day market risk exposure of trading positions;
- Use of VaR as a ten-day-based regulatory capital measure of the market risk exposure of trading positions;
- Use of non-VaR-based limits and other controls;
- Use of stressed-VaR models, stress-testing analysis and scenario analysis to support the trading market risk measurement and management process by assessing how portfolios and global business lines perform under extreme market conditions;
- Use of back-testing as a diagnostic tool to assess the accuracy of VaR models and other risk management techniques; and
- A new product approval process that requires market risk teams to assess trading-related market risks and apply risk tolerance limits to proposed new products and business activities.

We use our CAP to assess our overall capital and liquidity in relation to our risk profile and provide a comprehensive strategy for maintaining appropriate capital and liquidity levels. With respect to market risk associated with trading activities, our risk management and our calculations of regulatory capital are based primarily on our internal VaR models and stress testing analysis. As discussed in detail under "Value-at-Risk and Stressed VaR" below, VaR is measured daily by ERM.

The CMRC oversees our market risk exposure in relation to limits established within our risk appetite framework. These limits define threshold levels for VaR- and stressed VaR-based measures and are applicable to all trading positions subject to regulatory capital requirements. These limits are designed to mitigate undue concentration of market risk exposure, in light of the primarily non-proprietary nature of our trading activities. The risk appetite framework and associated limits are reviewed and approved by the Board's RC.

Covered Positions

Our trading positions are subject to regulatory market risk capital requirements if they meet the regulatory definition of a "covered position." A covered position is generally defined by U.S. banking regulators as an on- or off-balance sheet position associated with the organization's trading activities that is free of any restrictions on its tradability, but does not include intangible assets, certain credit derivatives recognized as guarantees and certain equity positions not publicly traded. All FX and commodity positions are considered covered positions, regardless of the accounting treatment they receive. The identification of covered positions for inclusion in our market risk capital framework is governed by our trading and market risk guidelines, which outline the standards we use to determine whether a trading position is a covered position.

Our covered positions consist primarily of the trading portfolios held by our Global Markets business. They also arise from certain positions held by our Global Treasury group. These trading positions include products such as foreign exchange spot, foreign exchange forwards, non-deliverable forwards, foreign exchange options, foreign exchange funding swaps, currency futures, financial futures and interest rate futures. New activities are analyzed to determine if the positions arising from such new activities meet the definition of a covered position and conform to our trading and market risk guidelines. This documented analysis, including any decisions with respect to market risk treatments, must receive approval from the CMRC.

We use spot rates, forward points, yield curves and discount factors imported from third-party sources to measure the value of our covered positions, and we use such values to mark our covered positions to market on a daily basis. These values are subject to separate validation by us in order to evaluate reasonableness and consistency with market experience. The mark-to-market gain or loss on spot transactions is calculated by applying the spot rate to the foreign currency principal and comparing the resultant base currency amount to the original transaction principal. The mark-to-market gain or loss on a forward foreign exchange contract or forward cash flow contract is determined as the difference between the life-to-date (historical) value of the cash flow and the value of the cash flow at the inception of the transaction. The mark-to-market gain or loss on interest rate swaps is determined by discounting the future cash flows from each leg of the swap transaction.

Value-at-Risk and Stressed VaR

We use a variety of risk measurement tools and methodologies, including VaR, which is an estimate of potential loss for a given period within a stated statistical confidence interval. We use a risk measurement methodology to measure tradingrelated VaR daily. We have adopted standards for measuring trading-related VaR, and we maintain regulatory capital for market risk associated with our trading activities in conformity with currently applicable bank regulatory market risk requirements.

We utilize an internal VaR model to calculate our regulatory market risk capital requirements. We use a

historical simulation model to calculate daily VaR- and stressed VaR-based measures for our covered positions in conformity with regulatory requirements. Our VaR model seeks to capture identified material risk factors associated with our covered positions, including risks arising from market movements such as changes in foreign exchange rates, interest rates and option-implied volatilities.

We have adopted standards and guidelines to value our covered positions which govern our VaRand stressed VaR-based measures. Our regulatory VaR-based measure is calculated based on historical volatilities of market risk factors during a two-year observation period calibrated to a one-tail, 99% confidence interval and a ten-business-day holding period. We also use the same platform to calculate a one-tail, 99% confidence interval, one-business-day VaR for internal risk management purposes. A 99% one-tail confidence interval implies that daily trading losses are not expected to exceed the estimated VaR more than 1% of the time, or less than three business days out of a year.

Our market risk models, including our VaR model, are subject to change in connection with the governance, validation and back-testing processes described below. These models can change as a result of changes in our business activities, our historical experiences, market forces and events, regulations and regulatory interpretations and other factors. In addition, the models are subject to continuing regulatory review and approval. Changes in our models may result in changes in our measurements of our market risk exposures, including VaR, and related measures, including regulatory capital. These changes could result in material changes in those risk measurements and related measures as calculated and compared from period to period.

Value-at-Risk Measures

VaR measures are based on the most recent two years of historical price movements for instruments and related risk factors to which we have exposure. The instruments in guestion are limited to foreign exchange spot, forward and options contracts and interest rate contracts, including futures and interest rate swaps. Historically, these instruments have exhibited a higher degree of liquidity relative to other available capital markets instruments. As a result, the VaR measures shown reflect our ability to rapidly adjust exposures in highly dynamic markets. For this reason, risk inventory, in the form of net open positions, across all currencies is typically limited. In addition, long and short positions in major, as well as minor, currencies provide risk offsets that limit our potential downside exposure.

Our VaR methodology uses a historical simulation approach based on market-observed changes in foreign exchange rates, U.S. and non-U.S. interest rates and implied volatilities, and incorporates the resulting diversification benefits provided from the mix of our trading positions. Our VaR model incorporates approximately 5,000 risk factors and includes correlations among currency, interest rates and other market rates.

All VaR measures are subject to limitations and must be interpreted accordingly. Some, but not all, of the limitations of our VaR methodology include the following:

- Compared to a shorter observation period, a two-year observation period is slower to reflect increases in market volatility (although temporary increases in market volatility will affect the calculation of VaR for a longer period); consequently, in periods of sudden increases in volatility or increasing volatility, in each case relative to the prior two-year period, the calculation of VaR may understate current risk;
- Compared to a longer observation period, a two-year observation period may not reflect as many past periods of volatility in the markets, because such past volatility is no longer in the observation period; consequently, historical market scenarios of high volatility, even if similar to current or likely future market circumstances, may fall outside the two-year observation period, resulting in a potential understatement of current risk;
- The VaR-based measure is calibrated to a specified level of confidence and does not indicate the potential magnitude of losses beyond this confidence level;
- In certain cases, VaR-based measures approximate the impact of changes in risk factors on the values of positions and portfolios; this may happen because the number of inputs included in the VaR model is necessarily limited; for example, yield curve risk factors do not exist for all future dates;
- The use of historical market information may not be predictive of future events, particularly those that are extreme in nature; this "backward-looking" limitation can cause VaR to understate or overstate risk;
- The effect of extreme and rare market movements is difficult to estimate; this may result from non-linear risk sensitivities as well as the potential for actual volatility and

correlation levels to differ from assumptions implicit in the VaR calculations; and

Intra-day risk is not captured.

We calculate a stressed VaR-based measure using the same model we use to calculate VaR, but with model inputs calibrated to historical data from a range of continuous twelve-month periods that reflect significant financial stress. The stressed VaR model is designed to identify the second-worst outcome occurring in the worst continuous one-year rolling period since July 2007. This stressed VaR meets the regulatory requirement as the rolling ten-day period with an outcome that is worse than 99% of other outcomes during that twelve-month period of financial stress. For each portfolio, the stress period is determined algorithmically by seeking the one-year time horizon that produces the largest ten-businessday VaR from within the available historical data. This historical data set includes the financial crisis of 2008, the highly volatile period surrounding the Eurozone sovereign debt crisis and the Standard & Poor's downgrade of U.S. Treasury debt in August 2011. As the historical data set used to determine the stress period expands over time, future market stress events will be incorporated.

Stress Testing

We have a corporate-wide stress testing program in place that incorporates techniques to measure the potential loss we could suffer in a hypothetical scenario of adverse economic and financial conditions. We also monitor concentrations of risk such as concentration by branch, risk component, and currency pairs. We conduct stress testing on a daily basis based on selected historical stress events that are relevant to our positions in order to estimate the potential impact to our current portfolio should similar market conditions recur, and we also perform stress testing as part of the Federal Reserve's CCAR process. Stress testing is conducted, analyzed and reported at the corporate, trading desk, division and risk-factor level (for example, exchange risk, interest rate risk and volatility risk).

Stress testing results and limits are actively monitored on a daily basis by ERM and reported to the CMRC. Limit breaches are addressed by ERM risk managers in conjunction with the business units, escalated as appropriate, and reviewed by the CMRC if material. In addition, we have established several action triggers that prompt immediate review by management and the implementation of a remediation plan.

We perform scenario analysis daily based on selected historical stress events that are relevant to our positions in order to estimate the potential impact to our current portfolio should similar market

conditions recur. Relevant scenarios are chosen from an inventory of historical financial stresses and applied to our current portfolio. These historical event scenarios involve spot foreign exchange, credit, equity, unforeseen geo-political events and natural disasters, and government and central bank intervention scenarios. Examples of the specific historical scenarios we incorporate in our stress testing program may include the Asian financial crisis of 1997, the September 11, 2001 terrorist attacks in the U.S. and the 2008 financial crisis. We continue to update our inventory of historical stress scenarios as new stress conditions emerge in the financial markets.

As each of the historical stress events is associated with a different time horizon, we normalize results by scaling down the longer horizon events to a ten-day horizon and keeping the shorter horizon events (i.e., events that are shorter than ten days) at their original terms. We also conduct sensitivity analysis daily to calculate the impact of a large predefined shock in a specific risk factor or a group of risk factors on our current portfolio. These predefined shocks include parallel and non-parallel yield curve shifts and foreign exchange spot and volatility surface shifts. In a parallel shift scenario, we apply a constant factor shift across all yield curve tenors. In a nonparallel shift scenario, we apply different shock levels to different tenors of a yield curve, rather than shifting the entire curve by a constant amount. Non-parallel shifts include steepening, flattening and butterflies.

Validation and Back-Testing

We perform frequent back-testing to assess the accuracy of our VaR-based model in estimating loss at the stated confidence level. This back-testing involves the comparison of estimated VaR model outputs to daily, actual profit-and-loss (P&L) outcomes observed from daily market movements. We back-test our VaR model using a "clean" P&L, which excludes non-trading revenue such as fees, commissions and NII, as well as estimated revenue from intraday trading.

Our VaR definition of trading losses excludes items that are not specific to the price movement of the trading assets and liabilities themselves, such as fees, commissions, changes to reserves and gains or losses from intraday activity.

We experienced no back-testing exceptions in 2023 and three back-testing exceptions in 2022. At a

99% confidence interval, the statistical expectation for a VaR model is to witness one exception every hundred trading days (or two to three exceptions per year). Two 2022 back-testing exceptions occurred on days of higher volatility on the back of market concerns on economic outlook, inflation and central bank rate policy. A third back-testing exception occurred during the UK market turmoil in late September 2022.

Our model validation process also evaluates the integrity of our VaR models through the use of regular outcome analysis. This outcome analysis includes back-testing, which compares the VaR model's predictions to actual outcomes using out-of-sample information. Consistent with regulatory guidance, the back-testing compared a "clean" P&L, defined above, with the one-day VaR produced by the model. The back-testing was performed for a time period not used for model development. The number of occurrences where "clean" trading-book P&L exceeded the one-day VaR was within our expected VaR tolerance level.

Market Risk Reporting

Our ERM market risk management group is responsible for market risk monitoring and reporting. We use a variety of systems and controlled market feeds from third-party services to compile data for several daily, weekly and monthly management reports.

The following tables present VaR and stressed VaR associated with our trading activities for covered positions held during the years ended December 31, 2023 and 2022, respectively, as measured by our VaR methodology. Diversification effect in the tables below represents the difference between total VaR and the sum of the VaRs for each trading activity. This effect arises because the risks present in our trading activities are not perfectly correlated.

TABLE 32: TEN-DAY VALUE-AT-RISK ASSOCIATED WITH TRADING ACTIVITIES FOR COVERED POSITIONS

		Year End	ded I	December	31, 2	2023	As of December 31, 2023 Year Ended December 31, 2022									As of cember 31, 2022
(In thousands)	Α	verage	M	aximum	Minimum		VaR		Average		Maximum		Minimum			VaR
Global Markets	\$	11,697	\$	23,797	\$	5,106	\$	9,029	\$	8,567	\$	25,779	\$	2,631	\$	7,591
Global Treasury		2,712		7,311		407		1,591		2,661		7,255		559		5,632
Diversification		(2,819)		(6,829)		(1,021)		(1,276)		(2,591)		(6,959)		311		(6,075)
Total VaR	\$	11,590	\$	24,279	\$	4,492	\$	9,344	\$	8,637	\$	26,075	\$	3,501	\$	7,148

TABLE 33: TEN-DAY STRESSED VALUE-AT-RISK ASSOCIATED WITH TRADING ACTIVITIES FOR COVERED POSITIONS

		Year End	ded	December	31, 2	2023	De	As of cember 31, 2023		Year End	Dec	As of cember 31, 2022				
(In thousands)	Α	verage	Μ	laximum	Minimum		VaR		Average		Maximum		Minimum			VaR
Global Markets	\$	42,569	\$	103,551	\$	19,606	\$	62,724	\$	35,391	\$	97,420	\$	16,413	\$	30,778
Global Treasury		6,710		16,762		3,252		5,578		4,629		17,695		778		8,431
Diversification		(8,463)		(18,555)		(3,486)		(7,936)		(5,693)		(19,176)		(1,014)		(12,206)
Total Stressed VaR	\$	40,816	\$	101,758	\$	19,372	\$	60,366	\$	34,327	\$	95,939	\$	16,177	\$	27,003

The average and period-end stressed VaR-based measures were approximately \$41 million and \$60 million, respectively, for the year ended December 31, 2023, compared to \$34 million and \$27 million, respectively, for the year ended December 31, 2022. The increase in the average stressed VaR is primarily attributed to higher foreign exchange and interest rate risk positions.

The VaR-based measures as presented in the preceding tables are primarily a reflection of the overall level of market volatility and our appetite for taking market risk in our trading activities. While overall levels of volatility have varied over the historical observation periods, smaller residual market risk positions during the quarter have led to a reduction in VaR measures presented.

We have in the past and may in the future modify and adjust our models and methodologies used to calculate VaR and stressed VaR, subject to regulatory review and approval, and any future modifications and adjustments may result in changes in our VaR-based and stressed VaR-based measures.

The following tables present the VaR and stressed-VaR associated with our trading activities attributable to foreign exchange risk, interest rate risk and volatility risk as of December 31, 2023 and 2022, respectively. The totals of the VaR-based and stressed VaR-based measures for the three attributes in total exceeded the related total VaR and total stressed VaR presented in the foregoing tables as of each period-end, primarily due to the benefits of diversification across risk types. Diversification effect in the tables below represents the difference between total VaR and the sum of the VaRs for each trading activity. This effect arises because the risks present in our trading activities are not perfectly correlated.

TABLE 34: TEN-DAY VaR ASSOCIATED WITH TRADING ACTIVITIES BY RISK FACTOR⁽¹⁾

Year Ended December 31, 2023								Year Ended December 31, 2022						
(In thousands)	Foreign Exchange Risk		Interest Rate Risk		Volatility Risk		Foreign Exchange Risk		Interest Rate Risk		Volatility Risk			
By component:														
Global Markets	\$	2,348	\$	10,023	\$	356	\$	5,562	\$	4,656	\$	358		
Global Treasury		496		1,446		_		5,602		1,442		_		
Diversification		(324)		(831)		_		(6,344)		(1,155)		_		
Total VaR	\$	2,520	\$	10,638	\$	356	\$	4,820	\$	4,943	\$	358		

TABLE 35: TEN-DAY STRESSED VaR ASSOCIATED WITH TRADING ACTIVITIES BY RISK FACTOR⁽¹⁾

	Year Ended December 31, 2023							Year Ended December 31, 2022						
(In thousands)	Foreign Exchange Risk		Interest Rate Risk		Volatility Risk		Foreign Exchange Risk		Interest Rate Risk		Volatility Risk			
By component:														
Global Markets	\$	5,402	\$	64,418	\$	501	\$	9,527	\$	37,077	\$	565		
Global Treasury		4,978		6,347		_		7,623		9,941		_		
Diversification		(2,891)		(6,209)		_		(8,189)		(15,328)		_		
Total Stressed VaR	\$	7,489	\$	64,556	\$	501	\$	8,961	\$	31,690	\$	565		

⁽¹⁾ For purposes of risk attribution by component, foreign exchange refers only to the risk from market movements in period-end rates. Forwards, futures, options and swaps with maturities greater than period-end have embedded interest rate risk that is captured by the measures used for interest rate risk. Accordingly, the interest rate risk embedded in these foreign exchange instruments is included in the interest rate risk component.

Asset and Liability Management Activities

The primary objective of asset and liability management is to provide sustainable NII under varying economic conditions, while protecting the economic value of the assets and liabilities carried on our consolidated statement of condition from the adverse effects of changes in interest rates. While many market factors affect the level of NII and the economic value of our assets and liabilities, one of the most significant factors is our exposure to movements in interest rates. Most of our NII is earned from the investment of client deposits generated by our businesses. We invest these client deposits in assets that conform generally to the liquidity characteristics of our balance sheet liabilities, as well as the currency composition of our significant non-U.S. dollar denominated client deposits.

We quantify NII sensitivity using an earnings simulation model that includes our expectations for new business growth, changes in balance sheet mix and investment portfolio positioning. This measure compares our baseline view of NII over a twelve-month horizon, based on our internal forecast of interest rates, to a wide range of rate shocks. Our baseline view of NII is updated on a regular basis. Table 36, Key Interest Rates for Baseline Forecasts, presents the spot and 12-month forward rates used in our baseline forecasts at December 31, 2023 and 2022. Our baseline rate forecast as of December 31, 2023 was generally consistent with common market expectations for global central bank actions at that point in time, which implied that rates have reached peak levels and rate cuts will begin in the first half of 2024.

TABLE 36: KEY INTEREST RATES FOR BASELINE FORECASTS

		December 31, 2023		I	December 31, 2022	
	Fed Funds Target	ECB Target ⁽¹⁾	10-Year Treasury	Fed Funds Target	ECB Target ⁽¹⁾	10-Year Treasury
Spot rates	5.50 %	4.00 %	3.88 %	4.50 %	2.00 %	3.87 %
12-month forward rates	4.25	2.75	3.87	4.75	3.00	3.81

⁽¹⁾ European Central Bank deposit facility rate.

In Table 37: Net Interest Income Sensitivity, we report the expected change in NII over the next twelve months from instantaneous 100 basis point shocks to various tenors on the yield curve relative to our baseline rate forecast, including the impacts from U.S. and non-U.S. rates. Each scenario assumes no management action is taken to mitigate the adverse effects of changes in interest rates on our financial performance. While investment securities balances and composition can fluctuate with the level of rates as prepayment assumptions change, for purposes of this analysis our deposit balances and mix are assumed to remain consistent with the baseline forecast which assumes client deposit balance rotation including reductions in non-interest-bearing deposit balances. The results of these scenarios should not be extrapolated for other (e.g., more severe) shocks as the impact of interest rate shocks may not be linear. In lower rate scenarios, the full impact of the shock is realized for all currencies even if the result is negative interest rates.

TABLE 37: NET INTEREST INCOME SENSITIVITY

			Decem	ber 31, 2023	;		December 31, 2022					
(In millions)	U.S.	Dollar		II Other rrencies	_	Total	U.	S. Dollar		Il Other urrencies		Total
Rate change:			Benefi	t (Exposure)					Benef	it (Exposure)		
Parallel shifts:												
+100 bps shock	\$	(26)	\$	274	\$	248	\$	(225)	\$	432	\$	207
–100 bps shock		4		(227)		(223)		207		(419)		(212)
Steeper yield curve:												
'+100 bps shift in long-end rates ⁽¹⁾		28		11		39		42		23		65
'-100 bps shift in short-end rates ⁽¹⁾		35		(215)		(180)		250		(397)		(147)
Flatter yield curve:												
'+100 bps shift in short-end rates ⁽¹⁾		(53)		262		209		(267)		409		142
'-100 bps shift in long-end rates ⁽¹⁾		(30)		(11)		(41)		(43)		(22)		(65)

⁽¹⁾ The short end is 0-3 months. The long end is 5 years and above. Interim term points are interpolated.

Our overall balance sheet, including all currencies, continues to be asset sensitive with an NII benefit in higher rate scenarios and NII exposure in lower rate scenarios. As of December 31, 2023, our USD balance sheet's NII sensitivity is relatively neutral given expectations for USD deposit betas and the repricing characteristics of our USD assets. Compared to December 31, 2022, our USD NII positioning is less liability sensitive as a result of lower investment portfolio balances and hedging activity, partially offset by impact from rising deposit betas and deposit rotation. As of December 31, 2023, non-USD NII benefits from higher rate scenarios and is exposed to lower rates primarily driven by our sensitivities on the short-end of the yield curve. USD and non-USD NII sensitivities are also impacted by routine currency-level baseline forecasting updates and refinements, including deposit betas.

EVE sensitivity is a discounted cash flow model designed to estimate the fair value of assets and liabilities under a series of interest rate shocks over a long-term horizon. In the following table, we report our EVE sensitivity to 200 bps instantaneous rate shocks, relative to spot interest rates. Management compares the change in EVE sensitivity against our aggregate Tier 1 and Tier 2 risk-based capital. EVE sensitivity is dependent on the timing of interest and principal cash flows. Also, the measure only evaluates the spot balance sheet and does not include the impact of new business assumptions.

TABLE 38: ECONOMIC VALUE OF EQUITY SENSITIVITY

As	of	Decem	ber	31.

		•••••••••	
(In millions)	 2023	2022	
Rate change:	Benefit (E	xposure)	
+200 bps shock	\$ (1,447)	\$	(917)
–200 bps shock	1,683		1,082

As of December 31, 2023, EVE sensitivity remains exposed to upward shifts in interest rates. Compared to December 31, 2022, our sensitivity in the up 200bp shock scenario increased due to lower liability duration driven by client deposit rotation and higher betas.

Both NII sensitivity and EVE sensitivity are routinely monitored as market conditions change. For additional information about our Asset and Liability Management Activities, refer to Management's Discussion and Analysis of Financial Condition and Results of Operations, "Risk Management."

Model Risk Management

The use of models is widespread throughout the financial services industry, with large and complex organizations relying on sophisticated models to support numerous aspects of their financial decision making. The models contemporaneously represent both a significant advancement in financial management and a source of risk. In large banking organizations like us, model results influence business decisions, and model failure could have a harmful effect on our financial performance. As a result, the MRM Framework seeks to mitigate our model risk.

Our MRM program has three principal components:

- A model risk governance program that defines roles and responsibilities, including the authority to restrict model usage, provides policies and guidance, monitors compliance and reports regularly to the Board on the overall degree of model risk across the corporation;
- A model development process that focuses on sound design and computational accuracy, and includes activities designed to assess data quality, to test for robustness, stability and sensitivity to assumptions, and to conduct ongoing monitoring of model performance; and
- A model validation function designed to verify that models are conceptually sound, computationally accurate, are performing as expected, and are in line with their intended use.

The MRM Framework, highlighted above, also provides insight and guidance into addressing key model risks that arise.

Governance

Models used in the regulatory capital calculation can only be deployed for use after undergoing a model validation by ERM's MRM group. The model validation results and/or a decision by the Model Risk Committee must permit model usage or the model may not be used.

ERM's MRM group is responsible for defining the corporate-wide model risk management framework and maintaining policies that are designed to achieve the framework's objectives. All regulatory capital calculation models, including any artificial intelligence and machine learning models, must comply with the model risk management framework and corresponding policies. The group is responsible for overall model risk governance capabilities, with particular emphasis in the areas of model identification, model validation, model risk reporting, model performance monitoring, tracking of new model development status and committee-level review and challenge.

MRC, which is composed of senior managers representing MRM along with functional areas and business units with key models across the organization, reports to MRAC, and provides guidance and oversight to the MRM function.

Model Development and Ongoing Monitoring

Models are developed under guidelines governing data sourcing, methodology selection and model integrity testing. Model development includes a statement of purpose to align development with intended use. It may also include a comparison of alternative approaches to promote a sound modeling approach.

Model developers conduct an assessment of data quality and relevance. The development teams conduct a variety of tests of the accuracy, robustness and stability of each model.

Model owners submit models to the MVG for validation on a regular basis, as per the existing policy. The model owners also conduct ongoing monitoring of each model.

Model Validation

MVG is part of MRM within ERM and performs model validations and reviews. MVG is independent, as contemplated by applicable bank regulatory requirements, of both the developers and users of the models. MVG validates models through an evaluation process that assesses the appropriateness, accuracy, and suitability of data inputs, methodologies, documentation, assumptions, and processing code. Model validation also encompasses an assessment of model performance, sensitivity, and robustness, as well as a model's potential limitations given its particular assumptions or deficiencies. Based on the results of its review, MVG issues a model use decision and may require remedial actions and/or compensating controls on model use. MVG also maintains a model risk rating system, which assigns a risk rating to each model based on an assessment of a model's inherent and residual risks. These ratings aid in the understanding and reporting of model risk across the model portfolio, and enable the triaging of needs for remediation.

Although model validation is the primary method of subjecting models to independent review and challenge, in practice, a multi-step governance process provides the opportunity for challenge by multiple parties. First, MVG conducts a model validation and issues a model use decision. MVG communicates their result as one of the following three outcomes: "Approved", "Approved with conditions", or "Not Approved". There are three ways in which a model can be deemed "Not approved for

Use" given a validation: 1) the aggregation of the model scoring within MRM's model risk rating system is poor enough to result in a "high" rating, 2) the scoring of one or more model risk rating system element(s) is deemed "critical" resulting in an automatic "high" rating irrespective of the other elements as the "critical" element(s) undermines the model, or 3) the remediation action is not properly taken by the due date resulting in a severe compliance breach that undercuts the model rating. Second, these decisions may be reviewed, challenged, and confirmed by the MRC. Finally, model use decisions, risk ratings, and overall levels of model risk may be escalated to and reviewed by MRAC. MRM also reports regularly on model risk issues to the Board.

Strategic Risk Management

We define strategic risk as the current or prospective impact on earnings or capital arising from adverse business decisions, improper implementation of strategic initiatives, or lack of responsiveness to industry-wide changes. Strategic risks are influenced by changes in the competitive environment; decline in market performance or changes in our business activities; and the potential secondary impacts of reputational risks, not already captured as market, interest rate, credit, operational, model or liquidity risks. We incorporate strategic risk into our assessment of our business plans and risk and capital management processes. Management of strategic risk is an integral component of all aspects of our business.

Separating the effects of a potential material adverse event into operational and strategic risk is sometimes difficult. For instance, the direct financial impact of an unfavorable event in the form of fines or penalties would be classified as an operational risk loss, while the impact on our reputation and consequently the potential loss of clients and corresponding decline in revenue would be classified as a strategic risk loss. An additional example of strategic risk is the integration of a major acquisition. Failure to successfully integrate the operations of an acquired business, and the resultant inability to retain clients and the associated revenue, would be classified as a loss due to strategic risk.

Strategic risk is managed with a long-term focus. Techniques for its assessment and management include the development of business plans, which are subject to review and challenge from senior management and the Board of Directors, as well as a formal review and approval process for all new business and product proposals. The potential impact of the various elements of strategic risk is difficult to quantify with any degree of precision. We use a combination of historical earnings volatility, scenario analysis, stress-testing and management judgment to help assess the potential effect on us attributable to strategic risk. Management and control of strategic risks are generally the responsibility of the business units, with oversight from the control functions, as part of their overall strategic planning and internal risk management processes.

CAPITAL

Managing our capital involves evaluating whether our actual and projected levels of capital are commensurate with our risk profile, are in compliance with all applicable regulatory requirements, and are sufficient to provide us with the financial flexibility to undertake future strategic business initiatives. We assess capital adequacy based on relevant regulatory capital requirements, as well as our own internal capital goals, targets and other relevant metrics.

Framework

Our objective with respect to management of our capital is to maintain a strong capital base in order to provide financial flexibility for our business needs, including funding corporate growth and supporting clients' cash management needs, and to provide protection against loss to depositors and creditors. We strive to maintain an appropriate level of capital, commensurate with our risk profile, on which an attractive return to shareholders is expected to be realized over both the short and long-term, while protecting our obligations to depositors and creditors and complying with regulatory capital requirements.

Our capital management focuses on our risk exposures, the regulatory requirements applicable to us with respect to multiple capital measures, the evaluations and resulting credit ratings of the major independent rating agencies, our return on capital at both the consolidated and line-of-business level and our capital position relative to our peers.

Assessment of our overall capital adequacy includes the comparison of capital sources with capital uses, as well as the consideration of the quality and quantity of the various components of capital. The assessment seeks to determine the optimal level of capital and composition of capital instruments to satisfy all constituents of capital, with the lowest overall cost to shareholders. Other factors considered in our assessment of capital adequacy are strategic and contingency planning, stress testing and planned capital actions.

Capital Adequacy Process (CAP)

Our primary federal banking regulator is the Federal Reserve. Both we and State Street Bank are subject to the minimum regulatory capital requirements established by the Federal Reserve and defined in the Federal Deposit Insurance Corporation Improvement Act. State Street Bank must exceed the regulatory capital thresholds for "well capitalized" in order for our Parent Company to maintain its status as a financial holding company. Accordingly, one of our primary objectives with respect to capital management is to exceed all applicable minimum regulatory capital requirements and for State Street Bank to be "well capitalized" under the PCA guidelines established by the FDIC. Our capital management activities are conducted as part of our corporate-wide CAP and associated Capital Policy and Guidelines.

We consider capital adequacy to be a key element of our financial well-being, which affects our ability to attract and maintain client relationships; operate effectively in the global capital markets; and satisfy regulatory, security holders and shareholder needs. Capital is one of several elements that affect our credit ratings and the ratings of our principal subsidiaries.

In conformity with our Capital Policy and Guidelines, we strive to achieve and maintain specific internal capital levels, not just at a point in time, but over time and during periods of stress, to account for changes in our strategic direction, evolving economic conditions, and financial and market volatility. We have developed and implemented a corporate-wide CAP to assess our overall capital in relation to our risk profile and to provide a comprehensive strategy for maintaining appropriate capital levels. The CAP considers material risks under multiple scenarios, with an emphasis on stress scenarios, and encompasses existing processes and systems used to measure our capital adequacy.

Capital Contingency Planning

Contingency planning is an integral component of capital management. The objective of contingency planning is to monitor current and forecast levels of select capital, liquidity and other measures that serve as early indicators of a potentially adverse capital or liquidity adequacy situation. These measures are one of the inputs used to set our internal capital adequacy level. We review these measures annually for appropriateness and relevance in relation to our financial budget and capital plan. In addition, we maintain an inventory of capital contingency actions designed to conserve or generate capital to support the unique risks in our business model, our client and investor demands and regulatory requirements.

Stress Testing

We administer a robust business-wide stresstesting program that executes stress tests each year to assess the institution's capital adequacy and/or future performance under adverse conditions. Our stress testing program is structured around what we determine to be the key risks inherent in our business, as assessed through a recurring material

risk identification process. The material risk identification process represents a bottom-up approach to identifying the institution's most significant risk exposures across all on- and offbalance sheet risk-taking activities, including credit, market, liquidity, interest rate, operational, fiduciary, business, reputation and regulatory risks. These key risks serve as an organizing principle for much of our risk management framework, as well as reporting, including the "risk dashboard" provided to the Board.

In connection with the focus on our key risks, each stress test incorporates idiosyncratic loss events tailored to our unique risk profile and business activities. Due to the nature of our business model and our consolidated statement of condition, our risks differ from those of a traditional commercial bank. Over the past few years, stress scenarios have included a deep recession in the U.S., including impacts from the COVID-19 pandemic, a break-up of the Eurozone, a severe recession in China and an oil shock precipitated by turmoil in the Middle East/North Africa region.

The Federal Reserve requires bank holding companies with total consolidated assets of \$50 billion or more, which includes us, to submit a capital plan on an annual basis. The Federal Reserve uses its annual CCAR process, which incorporates hypothetical financial and economic stress scenarios, to review those capital plans and assess whether organizations have capital planning banking processes that account for idiosyncratic risks and provide for sufficient capital to continue operations throughout times of economic and financial stress. As part of its CCAR process, the Federal Reserve assesses each organization's capital adequacy, capital planning process and plans to distribute capital, such as dividend payments or stock purchase programs. Management and Board risk committees review, challenge and approve CCAR results and assumptions before submission to the Federal Reserve.

Through the evaluation of our capital adequacy and/or future performance under adverse conditions, the stress testing process provides us important insights for capital planning, risk management and strategic decision-making.

Governance

In order to support integrated decision making, we have identified three management elements to aid in the compatibility and coordination of our CAP:

- Risk Management identification, measurement, monitoring and forecasting of different types of risk and their combined impact on capital adequacy;
- Capital management determination of optimal capital levels; and

Business Management - strategic planning, budgeting, forecasting and performance management.

We have a hierarchical structure supporting appropriate committee review of relevant risk and capital information. The ongoing responsibility for capital management rests with our Treasurer. The Capital Management group within Global Treasury is responsible for the Capital Policy and Guidelines, development of the Capital Plan, the oversight of global capital management and optimization.

The MRAC provides oversight of our capital management, our capital adequacy, our internal targets and the expectations of the major independent credit rating agencies. In addition, MRAC approves our balance sheet strategy and related activities. The Board's RC assists the Board in fulfilling its oversight responsibilities related to the assessment and management of risk and capital. Our Capital Policy is reviewed and approved annually by the Board's RC.

Global Systemically Important Bank

We have been identified by the Financial Stability Board and the Basel Committee on Banking Supervision as a G-SIB. Our designation as a G-SIB is based on a number of factors, as evaluated by banking regulators, and requires us to maintain an additional capital surcharge above the minimum capital ratios set forth in the Basel III rule.

We and our depositary institution subsidiaries are subject to the current Basel III minimum riskbased capital and leverage ratio guidelines.

Additional information about G-SIBs is provided under "Regulatory Capital Adequacy and Liquidity Standards" in "Supervision and Regulation" in Business in this Form 10-K.

Regulatory Capital

We and State Street Bank, as advanced approaches banking organizations, are subject to the U.S. Basel III framework. We are also subject to the final market risk capital rule issued by U.S. banking regulators.

The Basel III rule provides for two frameworks for monitoring capital adequacy: the "standardized "advanced approach" and the approaches". applicable to advanced approaches banking organizations, like us. The standardized approach prescribes standardized calculations for credit risk RWA, including specified risk weights for on and certain off-balance sheet exposures. The advanced approaches consist of the Advanced Internal Ratings-Based Approach used for the calculation of credit risk RWA, and the Advanced Measurement Approach used for the calculation of operational risk RWA.

As required by the Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act) enacted in 2010, we and State Street Bank, as advanced approaches banking organizations, are subject to a "capital floor," also referred to as the Collins Amendment, in the assessment of our regulatory capital adequacy, such that our risk-based capital ratios for regulatory assessment purposes are the lower of each ratio calculated under the advanced approaches and the standardized approach. Under the advanced approaches. State Street and State Street Bank are subject to a 2.5% CCB requirement, plus any applicable countercyclical capital buffer requirement, which is currently set at 0%. Under the standardized approach, State Street Bank is subject to the same CCB and countercyclical capital buffer requirements, but for State Street, the 2.5% CCB requirement is replaced by the SCB requirement according to the SCB rule issued in 2020. In addition, State Street is subject to a G-SIB surcharge.

The SCB replaced, under the standardized approach, the CCB with a buffer calculated as the difference between the institution's starting and lowest projected CET1 ratio under the CCAR severely adverse scenario plus planned common stock dividend payments (as a percentage of RWA) from the fourth through seventh quarter of the CCAR planning horizon. The SCB requirement can be no less than 2.5% of RWA. Breaching the SCB or other regulatory buffer or surcharge will limit a banking organization's ability to make capital distributions and discretionary bonus payments to executive officers.

Our SCB requirement was 2.5% for the period from October 1, 2022 through September 30, 2023. On June 28, 2023, we were notified by the Federal Reserve of the results from the 2023 supervisory stress test. Our SCB calculated under the 2023 supervisory stress test was well below the 2.5% minimum, resulting in an SCB at that floor, which went into effect starting October 1, 2023 and will remain effective through September 30, 2024.

Our minimum risk-based capital ratios as of January 1, 2023 include a CCB of 2.5% and a SCB of 2.5% for the advanced approaches and standardized approach, respectively, a G-SIB surcharge of 1.0%, and a countercyclical buffer of 0.0%. This results in minimum risk-based ratios of 8.0% for the Common Equity Tier 1 (CET1) capital ratio, 9.5% for the tier 1 capital ratio, and 11.5% for the total capital ratio.

Our current G-SIB surcharge, through December 31, 2024, is 1.0%. Based upon preliminary calculations using data as of December 31, 2023, we currently anticipate that our surcharge will remain at 1% through December 31, 2025; however, that calculation has not yet been finalized and is subject to many financial, balance sheet, market and other factors, and consequently there is a risk that a higher G-SIB surcharge of 1.5% will result from the final calculation.

To maintain the status of the Parent Company as a financial holding company, we and our IDI subsidiaries are required, among other requirements, to be "well capitalized" as defined by Regulation Y and Regulation H.

The market risk capital rule requires us to use internal models to calculate daily measures of VaR, which reflect general market risk for certain of our trading positions defined by the rule as "covered positions," as well as stressed-VaR measures to supplement the VaR measures. The rule also requires a public disclosure composed of qualitative and quantitative information about the market risk associated with our trading activities and our related VaR and stressed-VaR measures. The qualitative and quantitative information required by the rule is provided under "Market Risk Management" included in this Management's Discussion and Analysis.

The following table presents the regulatory capital structure and related regulatory capital ratios for us and State Street Bank as of the dates indicated. We are subject to the more stringent of the risk-based capital ratios calculated under the standardized approach and those calculated under the advanced approaches in the assessment of our capital adequacy under applicable bank regulatory standards.

TABLE 39: REGULATORY CAPITAL STRUCTURE AND RELATED REGULATORY CAPITAL RATIOS

					St	ate Street	Cor	poration						State Stre	et l	Bank		
(D - 11 1	(III)		Α	Basel III Advanced pproaches cember 31,		Basel III andardized Approach ecember 31,	A	Basel III Advanced pproaches ecencer 31,		Basel III tandardized Approach ecember 31,	D	Basel III Advanced Approaches ecember 31,		Basel III andardized Approach cember 31,	Α	Basel III Advanced pproaches ecember 31,		Basel III andardized Approach cember 31,
(Dollars in mi	areholders' equity:			2023		2023	_	2022	_	2022		2023		2023		2022		2022
	stock and related si		\$	11.245	\$	11,245	\$	11,234	\$	11,234	\$	13.033	\$	13,033	\$	13.033	\$	13,033
Retained		ai pius	Ψ	27,957	Ψ	27,957	Ψ	27,028	Ψ	27,028	Ψ	14,454	Ψ	14,454	Ψ	16,975	Ψ	16,975
	ited other comprehe	ensive income		(2,354)		(2,354)		(3,711)		(3,711)		(2,097)		(2,097)		(3,428)		(3,428)
Treasury	stock, at cost			(15,025)		(15,025)		(11,336)		(11,336)		_		_		_		_
Total				21,823		21,823		23,215	_	23,215		25,390		25,390		26,580		26,580
Regulatory	capital adjustments	:																
Goodwill a associate	and other intangible d deferred tax liabili	assets, net of ties		(8,470)		(8,470)		(8,545)		(8,545)		(8,208)		(8,208)		(8,288)		(8,288)
Other adju	ustments ⁽¹⁾			(382)		(382)		(123)	_	(123)		(298)		(298)		(19)		(19)
Common equ	uity tier 1 capital			12,971		12,971		14,547		14,547		16,884		16,884		18,273		18,273
Preferred	stock			1,976		1,976	_	1,976	_	1,976								_
Tier 1 capital	I			14,947		14,947		16,523	_	16,523		16,884		16,884		18,273		18,273
Qualifying	subordinated long-	term debt		1,870		1,870		1,376		1,376		536		536		542		542
Adjusted a	allowance for credit	losses		_		150	_	_	_	120		_		150		_		120
Total capital			\$	16,817	\$	16,967	\$	17,899	\$	18,019	\$	17,420	\$	17,570	\$	18,815	\$	18,935
Risk-weighte																		
Credit risk ⁽²⁾			\$	61,210	\$	109,228	\$	61,108	\$	105,739	\$	54,942	\$	107,067	\$	54,675	\$	104,184
Operational	l risk ⁽³⁾			43,768		NA		42,763		NA		42,297		NA		42,325		NA
Market risk				2,475		2,475	_	1,488	_	1,488		2,475	_	2,475	_	1,488	_	1,488
Total risk-wei	ighted assets		\$	107,453	\$	111,703	\$	105,359	\$	107,227	\$	99,714	\$	109,542	\$	98,488	\$	105,672
Capital Ratios:	2023 Minimum Requirements Including Capital Conservation Buffer and G-SIB Surcharge ⁽⁴⁾	2022 Minimum Requirements Including Capital Conservation Buffer and G-SIB Surcharge ⁽⁴⁾																
Common equity tier 1 capital	8.0 %	8.0 %		12.1 %		11.6 %		13.8 %		13.6 %		16.9 %		15.4 %		18.6 %		17.3 %
Tier 1 capital	9.5	9.5		13.9		13.4		15.7		15.4		16.9		15.4		18.6		17.3
Total capital	11.5	11.5		15.7		15.2		17.0		16.8		17.5		16.0		19.1		17.9
.otar oupital		11.5		10.1		10.2		17.0		10.0				10.0		10.1		11.0

(1) Other adjustments within CET1 capital primarily include AOCI hedges that are not recognized at fair value on the balance sheet, the overfunded portion of our defined benefit pension plan obligation net of associated deferred tax liabilities, disallowed deferred tax assets, and other required credit risk-based deductions.

⁽²⁾ Under the advanced approaches, credit risk RWA includes a CVA which reflects the risk of potential fair value adjustments for credit risk reflected in our valuation of OTC derivative contracts. We used a simple CVA approach in conformity with the Basel III advanced approaches.

⁽³⁾ Under the current advanced approaches rules and regulatory guidance concerning operational risk models, RWA attributable to operational risk can vary substantially from period-to-period, without direct correlation to the effects of a particular loss event on our results of operations and financial condition and impacting dates and periods that may differ from the dates and periods as of and during which the loss event is reflected in our financial statements, with the timing and categorization dependent on the processes for model updates and, if applicable, model revalidation and regulatory review and related supervisory processes. An individual loss event can have a significant effect on the output of our operational RWA under the advanced approaches depending on the severity of the loss event and its categorization among the seven Basel-defined UOMs.

⁽⁴⁾ Minimum requirements include a CCB of 2.5% and a SCB of 2.5% for the advanced approaches and the standardized approach, respectively, a G-SIB surcharge of 1.0% and a countercyclical capital buffer of 0%. On June 28, 2023, we were notified by the Federal Reserve of the results from the 2023 supervisory stress test. Our preliminary SCB calculated under the 2023 supervisory stress test was well below the 2.5% minimum, resulting in an SCB at that floor, which will be in effect from October 1, 2023 through September 30, 2024.
^{NA} Not applicable

Our CET1 capital decreased \$1.58 billion as of December 31, 2023 compared to December 31, 2022, primarily due to common share repurchases and dividends declared in 2023, partially offset by net income and an improvement in AOCI. Our Tier 1 capital decreased \$1.58 billion as of December 31, 2023 compared to December 31, 2022 under both the advanced approaches and standardized approach, due to the decrease in CET1 capital.

Our Tier 2 capital increased under the advanced approaches and standardized approach, as of December 31, 2023 compared to December 31, 2022, by \$0.49 billion and \$0.52 billion, respectively, mainly driven by the net issuances of our Tier 2 qualifying debt.

Total capital decreased under the advanced approaches and standardized approach, as of December 31, 2023 compared to December 31, 2022, by \$1.08 billion and \$1.05 billion, respectively, mainly driven by the decrease in CET1 capital, partially offset by an increase in Tier 2 capital.

The table below presents a roll-forward of CET1 capital, Tier 1 capital and total capital for the years ended December 31, 2023 and 2022.

TABLE 40: CAPITAL ROLL-FORWARD

(In millions)	A Ap	Basel III dvanced proaches cember 31, 2023	Basel III Standardized Approach December, 31, 2023	Basel III Advanced Approaches December 31, 2022	Basel III tandardized Approach ecember 31, 2022
Common equity tier 1 capital:					
Common equity tier 1 capital balance, beginning of period	\$	14,547	\$ 14,547	\$ 15,947	\$ 15,947
Net income		1,944	1,944	2,774	2,774
Changes in treasury stock, at cost		(3,689)	(3,689)	(1,327)	(1,327)
Dividends declared		(958)	(958)	(984)	(984)
Goodwill and other intangible assets, net of associated deferred tax liabilities		75	75	390	390
Accumulated other comprehensive income (loss) ⁽¹⁾		1,357	1,357	(2,578)	(2,578)
Other adjustments ⁽¹⁾		(305)	(305)	325	325
Changes in common equity tier 1 capital		(1,576)	(1,576)	(1,400)	(1,400)
Common equity tier 1 capital balance, end of period		12,971	12,971	14,547	14,547
Additional tier 1 capital:					
Tier 1 capital balance, beginning of period		16,523	16,523	17,923	17,923
Changes in common equity tier 1 capital		(1,576)	(1,576)	(1,400)	(1,400)
Net issuance (redemption) of preferred stock		_	_	_	_
Changes in tier 1 capital		(1,576)	(1,576)	(1,400)	(1,400)
Tier 1 capital balance, end of period		14,947	14,947	16,523	16,523
Tier 2 capital:					
Tier 2 capital balance, beginning of period		1,376	1,496	1,588	1,696
Net issuance (redemption) and changes in long-term debt qualifying as tier 2 capital		494	494	(212)	(212)
Changes in allowance for credit losses		_	30		 12
Changes in tier 2 capital		494	524	(212)	(200)
Tier 2 capital balance, end of period		1,870	2,020	1,376	1,496
Total capital:					
Total capital balance, beginning of period		17,899	18,019	19,511	19,619
Changes in tier 1 capital		(1,576)	(1,576)	(1,400)	(1,400)
Changes in tier 2 capital		494	524	(212)	(200)
Total capital balance, end of period	\$	16,817	\$ 16,967	\$ 17,899	\$ 18,019

⁽¹⁾ Accumulated other comprehensive income (loss) includes losses on cash flow hedges where the hedged exposures are not recognized at fair value on the balance sheet, which, under the Capital Rule, must be excluded from CET1 capital. This adjustment is captured in the Other Adjustments line.

The following table presents a roll-forward of the Basel III advanced approaches and standardized approach RWA for the years ended December 31, 2023 and 2022.

TABLE 41: ADVANCED & STANDARDIZED APPROACHES RISK-WEIGHTED ASSETS ROLL-FORWARD

(In millions)	Ā	Basel III Advanced pproaches cember 31, 2023	A Ap	Basel III dvanced proaches ember 31, 2022	Basel III Standardized Approach December 31, 2023	Basel III Standardized Approach December 31, 2022
Total risk-weighted assets, beginning of period	\$	105,359	\$	111,398	\$ 107,227	\$ 111,667
Changes in credit risk-weighted assets:						
Net increase (decrease) in investment securities-wholesale		(1,927)		(4,850)	(1,614)	(3,591)
Net increase (decrease) in loans and overdrafts		405		(3,054)	1,734	(5,387)
Net increase (decrease) in securitization exposures		359		(5)	339	(5)
Net increase (decrease) in repo-style transaction exposures		932		(1,420)	1,851	(5,157)
Net increase (decrease) in over-the-counter derivatives exposures ⁽¹⁾		25		2,161	(311)	6,295
Net increase (decrease) in all other ⁽²⁾		308		4,541	1,490	4,030
Net increase (decrease) in credit risk-weighted assets		102		(2,627)	3,489	(3,815)
Net increase (decrease) in market risk-weighted assets		987		(625)	987	(625)
Net increase (decrease) in operational risk-weighted assets		1,005		(2,787)	NA	NA
Total risk-weighted assets, end of period	\$	107,453	\$	105,359	\$ 111,703	\$ 107,227

⁽¹⁾ Under the advanced approaches, includes CVA RWA.

⁽²⁾ Includes assets not in a definable category, non-material portfolio, cleared transactions, other wholesale, cash and due from banks, interest-bearing deposits with banks and equity exposures. ^{NA}Not applicable.

As of December 31, 2023, total advanced approaches RWA increased \$2.09 billion compared to December 31, 2022, mainly due to an increase in operational risk RWA. The increase in operational risk RWA primarily reflects higher frequency of conduct and business practices events in the five-year frequency window. Credit risk RWA was flat year-over-year. RWA increases in reverse repurchase transactions driven by increased volume and higher equity market levels, in loans driven by new capital call commitments and in securitization driven by new collateralized loan obligation loans, were mostly offset by RWA decreases in derivative exposures driven by volatility.

As of December 31, 2023, total standardized approach RWA increased \$4.48 billion compared to December 31, 2022, mainly driven by an increase in credit risk RWA. The increase in credit risk RWA primarily reflects higher reverse repurchase transactions RWA driven by increased volume and higher equity market levels and higher loans RWA related to new capital call commitments, partially offset by lower investment securities RWA due to the impact of the investment portfolio repositioning.

The regulatory capital ratios as of December 31, 2023, presented in Table 39: Regulatory Capital Structure and Related Regulatory Capital Ratios, are calculated under the advanced approaches and standardized approach in conformity with the Basel III final rule. The advanced approaches based ratios reflect calculations and determinations with respect to our capital and related matters as of December 31, 2023, based on our and external data, quantitative formulae, statistical models, historical correlations and assumptions, collectively referred to as "advanced systems," in effect and used by us for those purposes as of the time we first reported such ratios in a quarterly report on Form 10-Q or an annual report on Form 10-K. Significant components of these advanced systems involve the exercise of judgment by us and our regulators, and our advanced systems may not, individually or collectively, precisely represent or calculate the scenarios, circumstances, outputs or other results for which they are designed or intended.

Our advanced systems are subject to update and periodic revalidation in response to changes in our business activities and our historical experiences, forces and events experienced by the market broadly or by individual financial institutions, changes in regulations and regulatory interpretations and other factors, and are also subject to continuing regulatory review and approval. For example, a significant operational loss experienced by another financial institution, even if we do not experience a related loss, could result in a material change in the output of our advanced systems and a corresponding material change in our risk exposures, our total RWA and our capital ratios compared to prior periods. An operational loss that we experience could also result in a material change in our capital requirements for operational risk under the advanced approaches, depending on the severity of the loss event, its characterization among the seven Basel-defined UOM, and the stability of the distributional approach for a particular UOM, and without direct correlation to the effects of the loss event, or the timing of such effects, on our results of operations.

Due to the influence of changes in these advanced systems, whether resulting from changes in data inputs, regulation or regulatory supervision or interpretation, specific to us or market activities or experiences or other updates or factors, we expect that our advanced systems and our capital ratios calculated in conformity with the Basel III final rule will change and may be volatile over time, and that those latter changes or volatility could be material as calculated and measured from period to period. The full effects of the Basel III final rule on us and State Street Bank are therefore subject to further evaluation and also to further regulatory guidance, action or rule-making.

Tier 1 and Supplementary Leverage Ratios

We are subject to a minimum Tier 1 leverage ratio and SLR. The Tier 1 leverage ratio is based on Tier 1 capital and adjusted quarterly average on-balance sheet assets. The Tier 1 leverage ratio differs from the SLR primarily in that the denominator of the Tier 1 leverage ratio is a quarterly average of on-balance sheet assets, while the SLR additionally includes offbalance sheet exposures. We must maintain a minimum Tier 1 leverage ratio of 4%.

We are also subject to a minimum SLR of 3%, and as a U.S. G-SIB, we must maintain a 2% SLR buffer in order to avoid any limitations on distributions to shareholders and discretionary bonus payments to certain executives. If we do not maintain this buffer, limitations on these distributions and discretionary bonus payments would be increasingly stringent based upon the extent of the shortfall.

TABLE 42: TIER 1 AND SUPPLEMENTARY LEVERAGE RATIOS

	De	cember 31,	De	cember 31,
(Dollars in millions)		2023		2022
State Street:				
Tier 1 capital	\$	14,947	\$	16,523
Average assets		278,659		284,346
Less: adjustments for deductions from tier 1 capital and other		(8,852)		(8,668)
Adjusted average assets for Tier 1 leverage ratio		269,807		275,678
Additional SLR exposure		39,291		40,126
Adjustments for deductions of qualifying central bank deposits		(69,579)		(78,455)
Total assets for SLR	\$	239,519	\$	237,349
Tier 1 leverage ratio ⁽¹⁾		5.5 %		6.0 %
Supplementary leverage ratio		6.2		7.0
State Street Bank ⁽²⁾ :				
Tier 1 capital	\$	16,884	\$	18,273
Average assets		275,324		281,527
Less: adjustments for deductions from tier 1 capital and other		(8,506)		(8,307)
Adjusted average assets for Tier 1 leverage ratio		266,818		273,220
Additional SLR exposure		39,069		42,043
Adjustments for deductions of qualifying central bank deposits		(69,579)		(78,455)
Total assets for SLR	\$	236,308	\$	236,808
Tier 1 leverage ratio (1)	-	6.3 %		6.7 %
Supplementary leverage ratio		7.1		7.7

⁽¹⁾ Tier 1 leverage ratios were calculated in conformity with the Basel III final rule.

Total Loss-Absorbing Capacity (TLAC)

The Federal Reserve's final rule on TLAC, LTD and clean holding company requirements for U.S. domiciled G-SIBs, such as us, is intended to improve the resiliency and resolvability of certain U.S. banking organizations through enhanced prudential standards, and requires us, among other things, to comply with minimum requirements for external TLAC (combined eligible Tier 1 regulatory capital and LTD) and LTD. Specifically, we must hold:

	Amount equal to:
External TLAC	 Greater of: 21.5% of total RWA (18.0% minimum plus 2.5% plus a G-SIB surcharge calculated for these purposes under Method 1 of 1.0% plus any applicable countercyclical buffer, which is currently 0%); and 9.5% of total leverage exposure (7.5% minimum plus the SLR buffer of 2.0%), as defined by the SLR final rule.
Qualifying external LTD	 Greater of: 7.0% of RWA (6.0% minimum plus a G-SIB surcharge calculated for these purposes under method 2 of 1.0%); and 4.5% of total leverage exposure, as defined by the SLR final rule.

The following table presents external TLAC and external LTD as of December 31, 2023.

TABLE 43: TOTAL LOSS-ABSORBING CAPACITY

	As of December 31, 2023									
(Dollars in millions)	Actu	ual	Requirement							
Total loss-absorbing capacity:										
Risk-weighted assets	\$ 32,850	29.4 %	\$ 24,016	21.5 %						
Total leverage exposure	32,850	13.7	22,754	9.5						
Long-term debt:										
Risk-weighted assets	16,753	15.0	7,819	7.0						
Total leverage exposure	16,753	7.0	10,778	4.5						

Additional information about TLAC is provided under "Total Loss-Absorbing Capacity" in "Supervision and Regulation" in Business in this Form 10-K.

 $^{^{(2)}}$ The SLR rule requires that, as of January 1, 2018, (i) State Street Bank maintains an SLR of at least 6.0% to be well capitalized under the U.S. banking regulators' Prompt Corrective Action Framework and (ii) we maintain an SLR of at least 5.0% to avoid limitations on capital distributions and discretionary bonus payments. In addition to the SLR, State Street Bank is subject to a well capitalized Tier 1 leverage ratio requirement of 5.0%.

Regulatory Developments

On July 27, 2023, the U.S. Agencies issued a proposed rule to implement the Basel III Endgame Proposal for large banks, and separately proposed the G-SIB Surcharge Proposal. The Basel III Endgame Proposal would, among other things, eliminate the advanced approaches for monitoring capital adequacy in favor of a new standardized expanded risk-based approach that would include, unlike the current standardized approach, operational risk and CVA risk RWA components, and would also replace the existing market risk rule with the new fundamental review of the FRTB framework. The G-SIB Surcharge Proposal would, among other things, measure the G-SIB surcharge in more granular 0.1% increments as opposed to the 0.5% increments that currently apply.

For additional information about regulatory developments, refer to the "Regulatory Capital Adequacy and Liquidity Standards" section of "Supervision and Regulation" in Business in this Form 10-K.

Capital Actions

Preferred Stock

The following table summarizes selected terms of each of the series of the preferred stock issued and outstanding as of December 31, 2023:

Preferred Stock ⁽¹⁾ :	Issuance Date	Depositary Shares Issued	Amount outstanding (in millions)	Ownership Interest Per Depositary Share	Liquidation Preference Per Share	Liquidation Preference Per Depositary Share	Per Annum Dividend Rate	Dividend Payment Frequency	Carrying Value as of December 31, 2023 (In millions)	Redemption Date ⁽²⁾
Series D	February 2014	30,000,000	\$ 750	1/4,000th	\$ 100,000	\$ 25	5.90% to but excluding March 15, 2024, then 9.008% ⁽³⁾	Quarterly: March, June, September and December	\$ 742	March 15, 2024
Series F	May 2015	250,000	250	1/100th	100,000	1,000	Floating rate equal to the three-month CME term SOFR plus 3.859%, or 9.243% effective December 15, 2023	Quarterly: March, June, September and December	247	September 15, 2020
Series G	April 2016	20,000,000	500	1/4,000th	100,000	25	5.35% ⁽⁴⁾	Quarterly: March, June, September and December	493	March 15, 2026
Series H	September 2018	500,000	500	1/100th	100,000	1,000	Floating rate equal to the three-month CME term SOFR plus 2.801%, or 8.185% effective December 15,2023	Quarterly: March, June, September and December	494	December 15, 2023

TABLE 44: PREFERRED STOCK ISSUED AND OUTSTANDING

⁽¹⁾ The preferred stock and corresponding depositary shares may be redeemed at our option in whole, but not in part, prior to the redemption date upon the occurrence of a regulatory capital treatment event, as defined in the certificate of designation, at a redemption price equal to the liquidation price per share and liquidation price per depositary share plus any declared and unpaid dividends, without accumulation of any undeclared dividends.

⁽²⁾ On the redemption date, or any dividend payment date thereafter, the preferred stock and corresponding depositary shares may be redeemed by us, in whole or in part, at the liquidation price per share and liquidation price per depositary share plus any declared and unpaid dividends, without accumulation of any undeclared dividends.

⁽³⁾ The dividend rate for the floating rate period of the Series D preferred stock that begins on March 15, 2024 and all subsequent floating rate periods will transition to a new, fixed rate in accordance with the LIBOR Act and the contractual terms of the Series D preferred stock.

⁽⁴⁾ The dividend rate for the floating rate period of the Series G preferred stock that begins on March 15, 2026 and all subsequent floating rate periods will remain at the current fixed rate in accordance with the LIBOR Act and the contractual terms of the Series G preferred stock.

In January 2024, we issued 1.5 million depositary shares, each representing 1/100th ownership interest in shares of fixed-to-floating rate, non-cumulative perpetual preferred stock, Series I, without par value per share, with a liquidation preference of \$100,000 per share (equivalent to \$1,000 per depositary share), in a public offering. The aggregate proceeds, net of underwriting discounts, commissions and other issuance costs, were approximately \$1.5 billion. Dividends on the Series I Preferred Stock will be payable quarterly at an initial rate of 6.700% per annum commencing on June 15, 2024, with the first dividend payable on a pro-rata basis. Our preferred stock dividends, including the declaration, timing and amount thereof, are subject to consideration and approval by the Board at the relevant times.

In addition, on February 8, 2024, we announced that we will redeem on March 15, 2024 an aggregate \$1.0 billion, or all 7,500 outstanding shares, of our non-cumulative perpetual preferred stock, Series D (represented by 30,000,000 depository shares), for a cash redemption price of \$100,000 per share (equivalent to \$25 per depository share), plus all declared and unpaid dividends and all 2,500 of the outstanding shares of our non-cumulative perpetual preferred stock, Series F (represented by 250,000 depository shares), for a cash redemption price of \$100,000 per share (equivalent to \$1,000 per depositary share) plus all declared and unpaid dividends. Cash dividends on the Series D and F Preferred Stock, of approximately \$1,475 and \$2,336, respectively, per share, or approximately \$0.37 and \$23.36, respectively per depository share have been declared for the period from December 15, 2023 up to but not including March 15, 2024 (together, the "March Dividends"). The March Dividends will be paid separately to the holders of record of the Series D Preferred Stock and the Series F Preferred Stock as of February 29, 2024 in the customary manner. Accordingly, there will not be any declared and unpaid dividends included in the Series D and Series F redemption price.

The following table presents the dividends declared for each of the series of preferred stock issued and outstanding for the periods indicated:

					Years En	ded	Dece	mber 31,			
			2023							2022	
(Dollars in millions, except per share amounts)	Dec	vidends lared per Share	Dividends Declared per Depositary Share		Total			Dividends eclared per Share	I	Dividends Declared per Depositary Share	Total
Preferred Stock:											
Series D	\$	5,900	\$ 1.48	\$		44	\$	5,900	\$	1.48	\$ 44
Series F		8,935	89.35			23		5,208		52.08	13
Series G		5,350	1.34			27		5,352		1.32	27
Series H		5,625	56.25			28		5,625		56.25	28
Total				\$	1	22					\$ 112

TABLE 45: PREFERRED STOCK DIVIDENDS

In January 2024, we declared dividends on our series D, F, G, and H preferred stock of approximately \$1,475, \$2,336, \$1,338, and \$2,069, respectively, per share, or approximately \$0.37, \$23.36, \$0.33, and \$20.69, respectively, per depositary share. These dividends total approximately \$11 million, \$6 million, \$7 million, and \$10 million on our series D, F, G, and H preferred stock, respectively, which will be paid in March 2024.

Common Stock

On January 19, 2024, we announced a new common share repurchase program, approved by our Board and superseding all prior programs, authorizing the purchase of up to \$5.0 billion of our common stock beginning in the first quarter of 2024. This new program has no set expiration date and is not expected to be executed in full during 2024.

In January 2023, our Board approved a common share repurchase program authorizing the purchase of up to \$4.5 billion of our common stock through December 31, 2023 (the 2023 Program). We repurchased \$3.8 billion of our common stock during 2023 under the 2023 Program.

In 2022, we repurchased \$1.5 billion of our common stock under the 2021 program authorizing the purchase of up to \$3.0 billion of our common stock through the end of 2022.

The table below presents the activity under our common share repurchase program for the period indicated:

TABLE 46: SHARES REPURCHASED

		Year Ended December 31,										
			2023			2022						
	Shares Acquired (In millions)	Acquired Average Cost				Shares Acquired (In millions)	Average Cost per Share		Total Acquired (In millions)			
2023 Program	49.2	\$	77.22	\$	3,800		\$		\$	_		
2021 Program	_		—		—	19.5		76.81		1,500		

The table below presents the dividends declared on common stock for the periods indicated:

TABLE 47: COMMON STOCK DIVIDENDS

				Years Ended	December	31,				
		20)23			20	022			
	Dividends Declared per Share (In					ds Declared r Share	Total (In millions)			
Common Stock	\$	2.64	\$	837	\$	2.40	\$	871		

Federal and state banking regulations place certain restrictions on dividends paid by subsidiary banks to the parent holding company. In addition, banking regulators have the authority to prohibit bank holding companies from paying dividends. For information concerning limitations on dividends from our subsidiary banks, refer to "Related Stockholder Matters" included under Item 5, Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities, and to Note 15 to the consolidated financial statements in this Form 10-K. Our common stock dividends, including the declaration, timing and amount thereof, are subject to consideration and approval by the Board at the relevant times.

Stock purchases under our common share repurchase program may be made using various types of transactions, including open market purchases, accelerated share repurchases or other transactions off the market, and may be made under Rule 10b5-1 trading programs. The timing and amount of any stock purchases and the type of transaction may not be ratable over the duration of the program, may vary from reporting period to reporting period and will depend on several factors, including our capital position and our financial performance, investment opportunities, market conditions, the nature and timing of implementation of revisions to the Basel III framework and the amount of common stock issued as part of employee compensation programs. The common share repurchase program does not have specific price targets and may be suspended at any time.

OFF-BALANCE SHEET ARRANGEMENTS

On behalf of clients enrolled in our securities lending program, we lend securities to banks, broker/dealers and other institutions. In most circumstances, we indemnify our clients for the fair market value of those securities against a failure of the borrower to return such securities. Though these transactions are collateralized, the substantial volume of these activities necessitates detailed credit-based underwriting and monitoring processes. The aggregate amount of indemnified securities on loan totaled \$279.92 billion and \$348.92 billion as of December 31, 2023 and 2022, respectively. We require the borrower to provide collateral in an amount in excess of 100% of the fair market value of the securities borrowed. We hold the collateral received in connection with these securities lending services as agent, and the collateral is not recorded in our consolidated statement of condition. We revalue the securities on loan and the collateral daily to determine if additional collateral is necessary or if excess collateral is required to be returned to the borrower. We held, as agent, cash and securities totaling \$293.86 billion and \$366.90 billion as collateral for indemnified securities on loan as of December 31, 2023 and 2022, respectively.

The cash collateral held by us as agent is invested on behalf of our clients. In certain cases, the cash collateral is invested in third-party repurchase agreements, for which we indemnify the client against loss of the principal invested. We require the counterparty to the indemnified repurchase agreement to provide collateral in an amount in excess of 100% of the amount of the repurchase agreement. In our role as agent, the indemnified repurchase agreements and the related collateral held by us are not recorded in our consolidated statement of condition. Of the collateral of \$293.86 billion and \$366.90 billion, referenced above, \$59.03 billion and \$54.11 billion was invested in indemnified repurchase agreements as of December 31, 2023 and 2022, respectively. We or our agents held \$63.11 billion and \$57.90 billion as collateral for indemnified investments in repurchase agreements as of December 31, 2023 and 2022, respectively.

Additional information about our securities finance activities and other off-balance sheet arrangements is provided in Notes 10, 12 and 14 to the consolidated financial statements in this Form 10-K.

SIGNIFICANT ACCOUNTING ESTIMATES

Our consolidated financial statements are prepared in conformity with U.S. GAAP, and we apply accounting policies that affect the determination of amounts reported in the consolidated financial statements.

Certain of our accounting policies, by their nature, require management to make judgments, involving significant estimates and assumptions, about the effects of matters that are inherently uncertain. These estimates and assumptions are based on information available as of the date of the consolidated financial statements, and changes in this information over time could materially affect the amounts of assets, liabilities, equity, revenue and expenses reported in subsequent consolidated financial statements.

Based on the sensitivity of reported financial statement amounts to the underlying estimates and assumptions, the more significant accounting policies identified by management are:

- Recurring fair value measurements;
- Allowance for credit losses;
- Impairment of goodwill and other intangible assets; and
- Contingencies.

These policies require the most subjective or complex judgments, and underlying estimates and assumptions could be most subject to revision as new information becomes available. An understanding of the judgments, estimates and assumptions underlying these accounting policies is essential to the understanding of our reported results of operations and financial condition.

The following is a discussion of the abovementioned significant accounting estimates. Additional information on our significant accounting policies, including references to applicable footnotes, is provided in Note 1 to the consolidated financial statements in this Form 10-K.

Fair Value Measurements

We carry certain of our financial assets and liabilities at fair value in our consolidated financial statements on a recurring basis, including trading account assets and liabilities, AFS debt securities, certain equity securities and various types of derivative financial instruments.

Changes in the fair value of these financial assets and liabilities are recorded either as components of our consolidated statement of income or as components of other comprehensive income within shareholders' equity in our consolidated statement of condition. In addition to those financial assets and liabilities that we carry at fair value in our consolidated financial statements on a recurring basis, we estimate the fair values of other financial assets and liabilities that we carry at amortized cost in our consolidated statement of condition, and we disclose these fair value estimates in the notes to our consolidated financial statements. We estimate the fair values of these financial assets and liabilities using the definition of fair value described below.

U.S. GAAP defines fair value as the price that would be received to sell an asset or paid to transfer a liability in the principal or most advantageous market for an asset or liability in an orderly transaction between market participants on the measurement date. When we measure fair value for our financial assets and liabilities, we consider the principal or the most advantageous market in which we would transact; we also consider assumptions that market participants would use when pricing the asset or liability. When possible, we look to active and observable markets to measure the fair value of identical, or similar, financial assets and liabilities. When identical financial assets and liabilities are not traded in active markets, we look to marketobservable data for similar assets and liabilities. In some instances, certain assets and liabilities are not actively traded in observable markets; as a result, we use alternate valuation techniques to measure their fair value.

We categorize the financial assets and liabilities that we carry at fair value in our consolidated statement of condition on a recurring basis based on U.S. GAAP's prescribed three-level valuation hierarchy. The hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (level 1) and the lowest priority to valuation methods using significant unobservable inputs (level 3).

With respect to derivative instruments, we evaluate the fair value impact of the credit risk of our counterparties. We consider such factors as the market-based probability of default by our counterparties, and our current and expected potential future net exposures by remaining maturities. in determining appropriate the measurements of fair value.

Additional information with respect to the assets and liabilities carried by us at fair value on a recurring basis is provided in Note 2 to the consolidated financial statements in this Form 10-K.

Allowance for Credit Losses

We record an allowance for credit losses related to certain on-balance sheet credit exposures, including our financial assets held at amortized cost, as well as certain off-balance sheet credit exposures, including unfunded commitments and letters of credit.

Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. In future periods, factors and forecasts then prevailing may result in significant changes in the allowance for credit losses in those future periods. We estimate credit losses over the contractual life of the financial asset while factoring in prepayment activity where supported by data over a three year reasonable and supportable forecast period. We utilize baseline, upside and downside scenarios that are applied based on a probability weighting, in order to better reflect management's expectation of expected credit losses given existing market conditions and the changes in the economic environment. The multiple scenarios are based on a three year horizon (or less depending on contractual maturity) and then revert linearly over a two year period to a ten-year historical average thereafter. The contractual term excludes expected extensions, renewals and modifications, but includes prepayment assumptions where applicable.

Our allowance for credit losses is sensitive to a number of inputs, including macroeconomic forecast assumptions and credit rating migrations during the period. Our macroeconomic forecasts used in determining the December 31, 2023 allowance for credit losses consisted of three scenarios reflecting contractions in GDP and rising unemployment of varying severity, with the baseline scenario generally in line with market consensus of economic forecasts for GDP and unemployment. We placed the most weight on our baseline scenario, with the remaining weighting split equally between the upside and downside scenarios.

Keeping all other factors constant, we estimate that if we had applied 100% weighting to the downside scenario, the allowance for credit losses as of December 31, 2023 would have been approximately \$58 million higher. This estimate is intended to reflect the sensitivity of the allowance for credit losses to changes in our scenario weights and is not intended to be indicative of future changes in the allowance for credit losses.

Additional information about our allowance for credit losses is provided in Notes 3 and 4 to the consolidated financial statements in this Form 10-K.

Goodwill and Other Intangible Assets

Goodwill represents the excess of the cost of an acquisition over the fair value of the net tangible and

other intangible assets acquired at the acquisition date. Other intangible assets represent purchased intangible primarily long-lived assets. client relationships, core deposit intangible assets and technology that can be distinguished from goodwill because of contractual rights or because the asset can be exchanged on its own or in combination with a related contract, asset or liability. Other intangible assets are initially measured at their acquisition date fair value, the determination of which requires management judgment. Goodwill is not amortized, while other intangible assets are amortized over their estimated useful lives.

Management reviews goodwill for impairment annually or more frequently if circumstances arise or events occur that indicate an impairment of the carrying amount may exist. We begin our review by first assessing qualitative factors to determine whether it is more likely than not that the fair value of a reporting unit is less than its carrying amount. Events that may indicate impairment include: significant or adverse changes in the business, economic or political climate; an adverse action or regulator; assessment by а unanticipated competition; and a more-likely-than-not expectation that we will sell or otherwise dispose of a business to which the goodwill or other intangible assets relate. If we conclude from the qualitative assessment of goodwill impairment that it is more likely than not that a reporting unit's fair value is greater than its carrying amount, quantitative tests are not required. However, if we determine it is more likely than not that a reporting unit's fair value is less than its carrying amount, then we complete a quantitative assessment to determine if there is goodwill impairment. We may elect to bypass the qualitative assessment and complete a quantitative assessment in any given vear.

In 2023, due to the passage of time since the last quantitative test, we elected to bypass the qualitative assessment and we assessed goodwill for impairment using a quantitative approach. We determined there was no goodwill impairment in 2023.

Other intangible assets are supported by the future cash flows that are directly associated with and expected to arise as a direct result of the use of the intangible asset, less any costs associated with the intangible asset's eventual disposition. We evaluate other intangible assets for impairment at the lowest level for which there are identifiable cash flows that are largely independent of the cash flows from other groups of assets using the following process. First, we routinely assess whether impairment indicators When impairment indicators are present. are identified as being present, we compare the estimated future net undiscounted cash flows of the

intangible asset with its carrying value. If the future net undiscounted cash flows are greater than the carrying value, then there is no impairment, but if the intangible asset's net undiscounted cash flows are less than its carrying value, we are required to calculate impairment. An impairment is recognized by writing the intangible asset down to its fair value. We evaluate intangible assets for indicators of impairment on a quarterly basis. There were no impairments taken on other intangible assets in 2023.

Additional information about goodwill and other intangible assets, including information by line of business, is provided in Note 5 to the consolidated financial statements in this Form 10-K.

Contingencies

Information on significant estimates and judgments related with establishing litigation reserves is discussed in Note 13 of the consolidated financial statements in this Form 10-K.

RECENT ACCOUNTING DEVELOPMENTS

Information with respect to recent accounting developments is provided in Note 1 to the consolidated financial statements in this Form 10-K.

OTHER MATTERS

Closures of Silicon Valley Bank and Signature Bank and Related FDIC Matters

On March 12 and 13, 2023, following the closures of Silicon Valley Bank (SVB) and Signature Bank and the appointment of the FDIC as the receiver for those banks, the FDIC announced that, under the systemic risk exception set forth in the Federal Deposit Insurance Act (FDIA), all insured and uninsured deposits of those banks were transferred to the respective bridge banks for SVB and Signature Bank. The FDIC also announced that, as required by the FDIA, any losses to the Deposit Insurance Fund ("DIF") to support uninsured depositors would be recovered by a special assessment.

On November 29, 2023, the FDIC published in the Federal Register a final rule to implement a special assessment to recover the loss to the DIF arising from the protection of uninsured depositors following the closure of SVB and Signature Bank. The FDIC has determined that the current total special assessment for those purposes is \$16.3 billion, which is approximately equal to the FDIC's estimate of losses to the DIF attributable to the protection of uninsured depositors at SVB and Signature Bank. The FDIC will determine the exact amount of losses incurred when it terminates the receiverships of these two banks, and the amount of the special assessment will be adjusted as the loss estimates change. For IDIs such as State Street Bank, the special assessment will be applied at a quarterly rate of 3.36 basis points multiplied by the IDI's estimated

uninsured deposits, reported as of December 31, 2022 and adjusted to exclude the first \$5 billion in estimated uninsured deposits from the IDI. The FDIC will collect the special assessment over eight quarterly assessment periods, although the collection period may change due to updates to the estimated loss pursuant to the systemic risk determination or if assessments collected change due to corrective amendments to the amount of uninsured deposits reported for the December 31, 2022 reporting period. The final rule is effective on April 1, 2024, with the first collection for the special assessment period of 2024 (i.e., January 1 through March 31, 2024), with a payment date of June 28, 2024.

In the fourth quarter of 2023, we recognized a pre-tax expense within Other Expenses of approximately \$387 million, reflecting the current full amount of State Street Bank's allocation of the special assessment consistent with the calculation methodology noted above. The total expense for the special assessment remains subject to any actions by the FDIC, as described above, to cease collection early, extend the collection period, or impose a final additional shortfall special assessment.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The information provided under "Market Risk Management" in "Financial Condition" in our Management's Discussion and Analysis in this Form 10-K, is incorporated by reference herein.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

Additional information about restrictions on the transfer of funds from State Street Bank to the Parent Company is provided under "Related Stockholder Matters" in Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities, and under "Capital" in "Financial Condition" in our Management's Discussion and Analysis in this Form 10-K.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of State Street Corporation

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of condition of State Street Corporation (the Corporation) as of December 31, 2023 and 2022, the related consolidated statements of income, comprehensive income, changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2023, and the related notes (collectively referred to as the "consolidated financial statements"). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Corporation at 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 U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Corporation's internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated February 15, 2024 expressed an unqualified opinion thereon.

Basis for Opinion

These consolidated financial statements are the responsibility of the Corporation's management. Our responsibility is to express an opinion on the Corporation's consolidated 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 Corporation 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 consolidated 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 consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our 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 the critical audit matter does not alter in any way our opinion on the consolidated 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 account or disclosures to which it relates.

Servicing Fee Revenue

Description of the Matter Revenue recognized by the Corporation as servicing fees was \$4.9 billion for the year ended December 31, 2023. As disclosed in Notes 24 and 25 of the consolidated financial statements, servicing fee revenue involves revenue streams from various products which include custody, accounting, regulatory reporting, investor services, investment book of record, record keeping, and client reporting. The Corporation's servicing fee revenue involves a significant volume of contracts and transactions and is sourced from multiple systems and processes across different business teams and geographies.

Auditing servicing fee revenue was complex and involved significant audit effort due to the non-standard nature of the Corporation's contracts, the volume of contracts, and the number of different processes used to recognize revenue.

How We Addressed the Matter in Our Audit We identified and obtained an understanding of the processes used by the Corporation to recognize revenue transactions. We evaluated the design and tested the operating effectiveness of controls over the Corporation's processes for recognizing servicing fee revenue, including, among others, controls over the review of client contracts, the calculations of the key drivers of revenue (e.g., assets under custody) and the flow of this information from the business teams to the department accruing revenue.

Among other procedures, to test servicing fee revenue, we selected and analyzed a sample of client contracts to determine whether terms that may have an impact on revenue recognition, including performance obligations and specified fees, were identified and properly considered in the evaluation of the accounting for the contracts. In addition, we reperformed the calculation of revenue for a sample of revenue transactions. We also agreed the amounts recognized to source documents and tested the mathematical accuracy of the recorded revenue. We obtained third party confirmation of the client balance due for a sample of servicing fees receivable.

/s/ Ernst & Young LLP

We have served as the Corporation's auditor since 1972.

Boston, Massachusetts February 15, 2024

STATE STREET CORPORATION CONSOLIDATED STATEMENT OF INCOME

	Years Ended December 31,								
(Dollars in millions, except per share amounts)	 2023		2022		2021				
Fee revenue:									
Servicing fees	\$ 4,922	\$	5,087	\$	5,531				
Management fees	1,876		1,939		2,053				
Foreign exchange trading services	1,265		1,376		1,211				
Securities finance	426		416		416				
Software and processing fees	811		789		738				
Other fee revenue	180		(1)		63				
Total fee revenue	9,480		9,606		10,012				
Net interest income:									
Interest income	9,180		4,088		1,908				
Interest expense	6,421		1,544		3				
Net interest income	2,759		2,544		1,905				
Other income:									
Gains (losses) from sales of available-for-sale securities, net	(294)		(2)		57				
Other income	_		_		53				
Total other income	(294)		(2)		110				
Total revenue	11,945		12,148		12,027				
Provision for credit losses	46		20		(33)				
Expenses:									
Compensation and employee benefits	4,744		4,428		4,554				
Information systems and communications	1,703		1,630		1,661				
Transaction processing services	957		971		1,024				
Occupancy	426		394		444				
Acquisition and restructuring costs	(15)		65		65				
Amortization of other intangible assets	239		238		245				
Other	1,529		1,075		896				
Total expenses	 9,583		8,801		8,889				
Income before income tax expense	2,316		3,327		3,171				
Income tax expense	372		553		478				
Net income	\$ 1,944	\$	2,774	\$	2,693				
Net income available to common shareholders	\$ 1,821	\$	2,660	\$	2,572				
Earnings per common share:									
Basic	\$ 5.65	\$	7.28	\$	7.30				
Diluted	5.58		7.19		7.19				
Average common shares outstanding (in thousands):									
Basic	322,337		365,214		352,565				
Diluted	326,568		370,109		357,962				
Cash dividends declared per common share	\$ 2.64	\$	2.40	\$	2.18				

STATE STREET CORPORATION CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

	Years Ended December 31,							
(In millions)		2023	2022			2021		
Net income	\$	1,944	\$	2,774	\$	2,693		
Other comprehensive income (loss), net of related taxes:								
Foreign currency translation, net of related taxes of (\$19), \$47 and \$86, respectively		261		(441)		(413)		
Net unrealized gains (losses) on investment securities, net of reclassification adjustment and net of related taxes of \$335, (\$650) and (\$338), respectively		870		(1,767)		(896)		
Net unrealized gains (losses) on cash flow hedges, net of related taxes of 85 , (133) and (24), respectively		228		(357)		(59)		
Net unrealized gains (losses) on retirement plans, net of related taxes of \$0, (\$1) and \$16, respectively		(2)		(13)		48		
Other comprehensive income (loss)		1,357		(2,578)		(1,320)		
Total comprehensive income	\$	3,301	\$	196	\$	1,373		

STATE STREET CORPORATION CONSOLIDATED STATEMENT OF CONDITION

CONSOLIDATED STATEMENT OF CO	ONDITIO	N			
	Decem	ber 31, 2023	December 31, 202		
(Dollars in millions, except per share amounts) Assets:		· · ·			
Cash and due from banks	\$	4,047	\$	3,970	
Interest-bearing deposits with banks		87,665		101,593	
Securities purchased under resale agreements		6,692		5,215	
Trading account assets		773		650	
Investment securities available-for-sale (less allowance for credit losses of 0 and $2)$		44,526		40,579	
Investment securities held-to-maturity (less allowance for credit losses of \$1 and \$0) (fair value of \$51,503 and \$57,913)		57,117		64,700	
Loans (less allowance for credit losses on loans of \$135 and \$97)		36,496		32,053	
Premises and equipment (net of accumulated depreciation of $6,062$ and $5,745$)		2,399		2,315	
Accrued interest and fees receivable		3,806		3,434	
Goodwill		7,611		7,495	
Other intangible assets		1,320		1,544	
Other assets		44,806		37,902	
Total assets	\$	297,258	\$	301,450	
Liabilities:					
Deposits:					
Non-interest-bearing	\$	32,569	\$	46,755	
Interest-bearing - U.S.		121,738		111,384	
Interest-bearing - non-U.S.		66,663		77,325	
Total deposits		220,970		235,464	
Securities sold under repurchase agreements		1,867		1,177	
Federal funds purchased		1,000			
Other short-term borrowings		2,660		2,097	
Accrued expenses and other liabilities		28,123		22,525	
Long-term debt Total liabilities		18,839 273,459		14,996 276,259	
Commitments, guarantees and contingencies (Notes 12 and 13)		275,459		270,239	
Shareholders' equity:					
Preferred stock, no par, 3,500,000 shares authorized:					
Series D, 7,500 shares issued and outstanding		742		742	
Series F, 2,500 shares issued and outstanding		247		247	
Series G, 5,000 shares issued and outstanding		493		493	
Series H, 5,000 shares issued and outstanding		494		494	
Common stock, \$1 par, 750,000,000 shares authorized:					
503,879,642 and 503,879,642 shares issued, and 301,944,043 and 349,024,167 shares outstanding		504		504	
Surplus		10,741		10,730	
Retained earnings		27,957		27,028	
Accumulated other comprehensive income (loss)		(2,354)		(3,711)	
Treasury stock, at cost (201,935,599 and 154,855,475 shares)		(15,025)		(11,336)	
Total shareholders' equity		23,799		25,191	
Total liabilities and shareholders' equity	\$	297,258	\$	301,450	

STATE STREET CORPORATION CONSOLIDATED STATEMENT OF CHANGES IN SHAREHOLDERS' EQUITY

		Common Stock						Treasury	Stock		
(Dollars in millions, except per share amounts, shares in thousands)	eferred Stock	Shares	An	nount	Surplus	Retained Earnings	С	Accumulated — Other omprehensive ncome (Loss)	Shares	Amount	Total
Balance at December 31, 2020	\$ 2,471	503,880	\$	504	\$ 10,205	\$ 23,442	\$	187	150,723	\$ (10,609)	\$ 26,200
Net income						2,693					2,693
Other comprehensive (loss)								(1,320)			(1,320)
Common stock issued					516				(21,724)	1,384	1,900
Preferred stock redeemed	(495)					(5)					(500)
Cash dividends declared:											
Common stock - \$2.18 per share						(779)					(779)
Preferred stock						(114)					(114)
Common stock acquired									11,250	(900)	(900)
Common stock awards exercised					48				(2,350)	116	164
Other					18	1			(2)		19
Balance at December 31, 2021	\$ 1,976	503,880	\$	504	\$ 10,787	\$ 25,238	\$	(1,133)	137,897	\$ (10,009)	\$ 27,363
Net income						2,774					2,774
Other comprehensive (loss)								(2,578)			(2,578)
Cash dividends declared:											
Common stock - \$2.40 per share						(871)					(871)
Preferred stock						(112)					(112)
Common stock acquired									19,524	(1,500)	(1,500)
Common stock awards exercised					(43)				(2,565)	172	129
Other					(14)	(1)			(1)	1	(14)
Balance at December 31, 2022	\$ 1,976	503,880	\$	504	\$ 10,730	\$ 27,028	\$	(3,711)	154,855	\$ (11,336)	\$ 25,191
Net income						1,944					1,944
Other comprehensive (loss)								1,357			1,357
Cash dividends declared:											
Common stock - \$2.64 per share						(837)					(837)
Preferred stock						(122)					(122)
Common stock acquired									49,212	(3,837)	(3,837)
Common stock awards exercised					11				(2,133)	148	159
Other						(56)			2	_	(56)
Balance at December 31, 2023	\$ 1,976	503,880	\$	504	\$ 10,741	\$ 27,957	\$	(2,354)	201,936	\$ (15,025)	\$ 23,799

STATE STREET CORPORATION CONSOLIDATED STATEMENT OF CASH FLOWS

	Years Ended December 31,								
(In millions)		2023		2022	,	2021			
Operating Activities:									
Net income	\$	1,944	\$	2,774	\$	2,693			
Adjustments to reconcile net income to net cash provided by operating activities:									
Deferred income tax (benefit)		(184)		(62)		(162)			
Amortization of other intangible assets		239		238		245			
Other non-cash adjustments for depreciation, amortization and accretion, net		643		918		1,312			
Losses (gains) related to investment securities, net		294		2		(57)			
Provision for credit losses		46		20		(33)			
Change in trading account assets, net		(123)		108		57			
Change in accrued interest and fees receivable, net		(359)		(156)		(173)			
Change in collateral deposits, net		(2,246)		7,821		(7,662)			
Change in unrealized losses (gains) on foreign exchange derivatives, net		2,146		(1,125)		(3,448)			
Change in other assets, net		(1,839)		421		691			
Change in accrued expenses and other liabilities, net		(128)		557		(574)			
Other, net		257		438		401			
Net cash provided by (used in) operating activities		690		11,954		(6,710)			
Investing Activities:				,					
Net decrease (increase) in interest-bearing deposits with banks		13,928		4,765		10,602			
Net (increase) decrease in securities purchased under resale agreements		(1,477)		(2,203)		94			
Proceeds from sales of available-for-sale securities		4,917		4,590		12,822			
Proceeds from maturities of available-for-sale securities		15,703		17,254		23,484			
Purchases of available-for-sale securities		(23,089)		(18,029)		(53,750)			
Proceeds from maturities of held-to-maturity securities under the MMLF program		(10,000)		(10,020)		3,299			
Proceeds from maturities of held-to-maturity securities		9,474		9,817		15,586			
Purchases of held-to-maturity securities		(1,582)		(8,564)		(8,583)			
Sale of loans		506		(0,304)		(0,003)			
Net (increase) in loans		(4,746)		(1,667)		(4,779)			
Business acquisitions, net of cash acquired		(4,740)		(1,007)		(4,779)			
Divestitures		(01)		_		(340)			
Purchases of equity investments and other long-term assets		(136)		(250)		(216)			
		. ,		(230)		(811)			
Purchases of premises and equipment, net Other, net		(816) 117		(734)		(811) 241			
		12,738		6,816		(2,172)			
Net cash provided by (used in) investing activities		12,730		0,010		(2,172)			
Financing Activities:		2 920		1 672		(262)			
Net increase (decrease) in time deposits		2,820		1,673		(363)			
Net (decrease) increase in all other deposits		(17,311)		(21,244)		15,611			
Net increase (decrease) in securities sold under repurchase agreements		690		(398)		(1,838)			
Net (decrease) increase in short-term borrowings under money market liquidity facility						(3,302)			
Net increase (decrease) in other short-term borrowings		563		1,969		(557)			
Net increase (decrease) in federal funds purchased		1,000							
Proceeds from issuance of long-term debt, net of issuance costs		6,221		3,731		1,343			
Payments for long-term debt and obligations under finance leases		(2,545)		(1,567)		(1,443)			
Payments for redemption of preferred stock		_				(500)			
Proceeds from issuance of common stock, net of issuance costs						1,900			
Repurchases of common stock		(3,781)		(1,500)		(900)			
Repurchases of common stock for employee tax withholding		(95)		(123)		(39)			
Payments for cash dividends		(970)		(972)		(866)			
Other, net		57							
Net cash (used in) provided by financing activities		(13,351)		(18,431)		9,046			
Net increase		77		339		164			
Cash and due from banks at beginning of period		3,970		3,631		3,467			
Cash and due from banks at end of period	\$	4,047	\$	3,970	\$	3,631			
Supplemental disclosure:									
Interest paid	\$	6,184	\$	1,354	\$	37			
Income taxes paid, net		423		436		559			

Note 1. Summary of Significant Accounting Policies

Basis of Presentation

The accounting and financial reporting policies of State Street Corporation conform to U.S. GAAP. State Street Corporation, the Parent Company, is a financial holding company headquartered in Boston, Massachusetts. Unless otherwise indicated or unless the context requires otherwise, all references in these notes to consolidated financial statements to "State Street," "we," "us," "our" or similar references mean State Street Corporation and its subsidiaries on a consolidated basis, including our principal banking subsidiary, State Street Bank.

We have two lines of business:

Investment Servicing, through State Street Investment Services, State Street Global Markets[®], State Street Alpha[®], and State Street Digital[®], we provide investment services for institutional clients, including mutual funds, collective investment funds and other investment pools, corporate and public retirement plans, insurance companies, investment managers, foundations and endowments worldwide. Products under the Investment Servicing line of business include: back office products such as custody, accounting, regulatory reporting, investor services, performance and analytics; middle office products such as investment book of record, transaction management, loans, cash, derivatives collateral services, record keeping, client and reporting and investment analytics; investment manager and alternative investment manager operations outsourcing; performance, risk and compliance analytics; financial data management to support institutional investors; foreign exchange, brokerage and other trading services; securities finance, including prime services products; and deposit and short-term investment facilities ...

Investment Management, provides a broad range of investment management strategies and products for our clients through State Street Global Advisors. Our investment management strategies and products for equity, fixed income and cash assets, including core and enhanced indexing, multi-asset strategies, active quantitative and fundamental active capabilities and alternative investment strategies, span the risk/reward spectrum of these investment products. In addition, we provide a breadth of services and solutions, including ESG investing, defined benefit and defined contribution products, and Global Fiduciary Solutions. State Street Global Advisors is also a provider of ETFs, including the SPDR[®] ETF brand.

Consolidation

Our consolidated financial statements include the accounts of the Parent Company and its majority-

and wholly-owned and otherwise controlled subsidiaries, including State Street Bank. All material inter-company transactions and balances have been eliminated. Certain previously reported amounts have been reclassified to conform to current-year presentation.

We consolidate subsidiaries in which we exercise control. Investments in unconsolidated subsidiaries, recorded in other assets, generally are accounted for under the equity method of accounting if we have the ability to exercise significant influence over the operations of the investee. For investments accounted for under the equity method, our share of income or loss is recorded in other fee revenue in our consolidated statement of income. Investments not meeting the criteria for equity-method treatment are measured at fair value through earnings, except for investments where a fair market value is not readily available, which are accounted for under the cost method of accounting.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions in the application of certain of our significant accounting policies that may materially affect the reported amounts of assets, liabilities, equity, revenue and expenses. As a result of unanticipated events or circumstances, actual results could differ from those estimates.

Foreign Currency Translation

The assets and liabilities of our operations with functional currencies other than the U.S. dollar are translated at month-end exchange rates, and revenue and expenses are translated at rates that approximate average monthly exchange rates. Gains or losses from the translation of the net assets of subsidiaries with functional currencies other than the U.S. dollar, net of related taxes, are recorded in AOCI, a component of shareholders' equity.

Cash and Cash Equivalents

For purposes of the consolidated statement of cash flows, cash and cash equivalents are defined as cash and due from banks.

Sanctions programs or government intervention may inhibit our ability to access cash and due from banks in certain accounts. For example, as of December 31, 2023 and 2022, we held such accounts in Russia, inclusive of \$1.5 billion and \$767 million, respectively, with our subcustodian, which is an affiliate of a large multinational bank, and with western European-based clearing agencies, for a total of approximately \$1.9 billion and \$1.3 billion, respectively. Cash and due from banks is evaluated as part of our allowance for credit losses.

Interest-Bearing Deposits with Banks

Interest-bearing deposits with banks generally consist of highly liquid, short-term investments maintained at the Federal Reserve Bank and other non-U.S. central banks with original maturities at the time of purchase of one month or less.

Securities Purchased Under Resale Agreements and Securities Sold Under Repurchase Agreements

Securities purchased under resale agreements sold under repurchase agreements are and accounted for as collateralized financing transactions, and are recorded in our consolidated statement of condition at the amounts at which the securities will be subsequently resold or repurchased, plus accrued interest. Our policy is to take possession or control of securities underlying resale agreements either directly or through agent banks, allowing borrowers the right of collateral substitution and/or short-notice termination. We revalue these securities daily to determine if additional collateral is necessary from the borrower to protect us against credit exposure. We can use these securities as collateral for repurchase agreements.

For securities sold under repurchase agreements collateralized by our investment securities portfolio, the dollar value of the securities remains in investment securities in our consolidated statement of condition. Where a master netting agreement exists or when both parties are members of a common clearing organization, resale and repurchase agreements are recorded on a net basis when specific netting criteria are met.

Fee and Net Interest Income

The majority of fees from investment servicing, investment management, securities finance, trading services and certain types of software and processing fees are recorded in our consolidated statement of income based on the consideration specified in contracts with our customers, and excludes taxes collected from customers subsequently remitted to governmental authorities. We recognize revenue as the services are performed or at a point in time depending on the nature of the services provided. Payments made to third party service providers are generally recognized on a gross basis when we control those services and are deemed to be the principal. Additional information about revenue from contracts with customers is provided in Note 25. Interest income on interest-earning assets and interest expense on interest-bearing liabilities are recorded in our consolidated statement of income as components of NII, and are generally based on the effective yield of the related financial asset or liability.

Other Significant Policies

The following table identifies our other significant accounting policies and the note and page where a detailed description of each policy can be found:

Fair Value	Note	2	Page	134
Investment Securities	Note	3	Page	140
Loans and Allowance for Credit Losses	Note	4	Page	146
Goodwill and Other Intangible Assets	Note	5	Page	151
Derivative Financial Instruments	Note	10	Page	155
Offsetting Arrangements	Note	11	Page	159
Contingencies	Note	13	Page	163
Variable Interest Entities	Note	14	Page	165
Equity-Based Compensation	Note	18	Page	171
Income Taxes	Note	22	Page	175
Earnings Per Common Share	Note	23	Page	177
Revenue from Contracts with Customers	Note	25	Page	179

Recent Accounting Developments

In January 2023, we adopted ASU 2022-01, Derivatives and Hedging (Topic 815): Fair Value Hedging – Portfolio Layer Method; as well as ASU 2022-02, Financial Instruments – Credit Losses (Topic 326): Troubled Debt Restructurings and Vintage Disclosures. There were no material impacts to our financial statements as a result of either of these adoptions.

In March 2023, the Financial Accounting Standards Board (FASB) issued ASU 2023-02, Investments - Equity Method and Joint Ventures (Topic 323): Accounting for Investments in Tax Credit Structures Using the Proportional Amortization Method, which expands the use of the proportional amortization method to other types of tax credit investments, regardless of the tax credit program from which the income tax credits are received. We adopted the new standard in the second guarter of 2023, effective January 1, 2023, for renewable energy production tax credit investments under the modified retrospective approach. The proportional amortization method better reflects the economics of the investments by amortizing the cost of the investments in proportion to the tax benefits received, and simplifies the presentation of the amortization by recognizing it through Income tax expense. The impact of adoption resulted in a decrease in accrued expenses and other liabilities, a decrease in other assets and was not material to retained earnings.

Relevant standards that were recently issued but not yet adopted as of December 31, 2023

Standard	Description	Effective Date	Effects on the financial statements or other significant matters
Income Taxes (Topic 740): Improvements	The amendments related to the rate reconciliation and income taxes paid disclosures and require disclosures of (1) consistent categories and greater disaggregation of information in the rate reconciliation and (2) income taxes paid disaggregated by jurisdiction. Additional amendments require (1) disclosures of pretax income (or loss) and income tax expense (or benefit) to be consistent with U.S. Securities and Exchange Commission regulations, and (2) remove disclosures that no longer are considered cost beneficial or relevant.	period ending December 31, 2025	We are currently evaluating the disclosure impact of the new standard.
Segment Reporting (Topic 280): Improvements to	The amendments enhance segment reporting by expanding the breadth and frequency of segment disclosures, including disclosure of (1) significant segment expenses, (2) other segment items, (3) the chief operating decision maker's title and position and (4) how the chief operating decision maker uses the reported information to assess segment performance and how to allocate resources. The amendments also require these disclosures to be included in interim reporting.	period ending December 31, 2024 and for interim reporting in 2025	new standard.

Additionally, we continue to evaluate other accounting standards that were recently issued, but not yet adopted as of December 31, 2023; none are expected to have a material impact to our financial statements.

Note 2. Fair Value

Fair Value Measurements

We carry trading account assets and liabilities, AFS debt securities, certain equity securities and various types of derivative financial instruments, at fair value in our consolidated statement of condition on a recurring basis. Changes in the fair values of these financial assets and liabilities are recorded either as components of our consolidated statement of income or as components of AOCI within shareholders' equity in our consolidated statement of condition.

We measure fair value for the above-described financial assets and liabilities in conformity with U.S. GAAP that governs the measurement of the fair value of financial instruments. Management believes that its valuation techniques and underlying assumptions used to measure fair value conform to the provisions of U.S. GAAP. We categorize the financial assets and liabilities that we carry at fair value based on a prescribed three-level valuation hierarchy. The hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (level 1) and the lowest priority to valuation methods using significant unobservable inputs (level 3). If the inputs used to measure a financial asset or liability cross different levels of the hierarchy, categorization is based on the lowest-level input that is significant to the fair-value measurement. Management's assessment of the significance of a particular input to the overall fair-value measurement of a financial asset or liability requires judgment, and considers factors specific to that asset or liability. The three levels of the valuation hierarchy are described below.

Level 1. Financial assets and liabilities with values based on unadjusted quoted prices for identical assets or liabilities in an active market. Our level 1 financial assets and liabilities primarily include positions in U.S. government securities and highly liquid U.S. and non-U.S. government fixed-income securities. Our level 1 financial assets also include actively traded exchange- traded equity securities.

Level 2. Financial assets and liabilities with values based on quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the asset or liability. Level 2 inputs include the following:

- Quoted prices for similar assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in non-active markets;
- Pricing models whose inputs are observable for substantially the full term of the asset or liability; and
- Pricing models whose inputs are derived principally from, or corroborated by, observable market information through correlation or other means for substantially the full term of the asset or liability.

Our level 2 financial assets and liabilities primarily include non-U.S. debt securities carried in trading account assets and various types of fixed-income AFS investment securities, as well as various types of foreign exchange and interest rate derivative instruments.

Fair value for our AFS investment securities categorized in level 2 is measured primarily using information obtained from independent third parties. This third-party information is subject to review by management as part of a validation process, which includes obtaining an understanding of the underlying assumptions and the level of market participant information used to support those assumptions. In addition, management compares significant assumptions used by third parties to available market information. Such information may include known trades or, to the extent that trading activity is limited, comparisons to market research information pertaining to credit expectations, execution prices and the timing of cash flows and, where information is available, back-testing.

Derivative instruments categorized in level 2 predominantly represent foreign exchange contracts used in our trading activities, for which fair value is measured using discounted cash-flow techniques, with inputs consisting of observable spot and forward points, as well as observable interest rate curves. With respect to derivative instruments, we evaluate the impact on valuation of the credit risk of our counterparties. We consider factors such as the likelihood of default by our counterparties, our current and potential future net exposures and remaining maturities in determining the fair value. Valuation adjustments associated with derivative instruments were not material to those instruments for the years ended December 31, 2023 and 2022.

Level 3. Financial assets and liabilities with values based on prices or valuation techniques that require inputs that are both unobservable in the market and significant to the overall measurement of fair value. These inputs reflect management's judgment about the assumptions that a market participant would use in pricing the financial asset or liability, and are based on the best available information, some of which may be internally developed. The following provides a more detailed discussion of our financial assets and liabilities that we may categorize in level 3 and the related valuation methodology:

The fair value of certain foreign exchange contracts, primarily options, is measured using an option-pricing model. Because of a limited number of observable transactions, certain model inputs are not observable, such as implied volatility surface, but are derived from observable market information.

Our level 3 financial assets and liabilities are similar in structure and profile to our level 1 and level 2 financial instruments, but they trade in less liquid markets, and the measurement of their fair value is therefore less observable.

The following tables present information with respect to our financial assets and liabilities carried at fair value in our consolidated statement of condition on a recurring basis as of the dates indicated:

	Fair Value Measurements on a Recurring Basis As of December 31, 2023											
(In millions)	Quoted M Prices in Marke (Leve	Active ets	Pricing Met with Signif Observa Market Inj (Level 2	hods icant ble outs	Pricing Metl with Signifi Unobserva Market Inp (Level 3	nods cant ible uts	Impact of Netting ⁽¹⁾	Carr in Co Sta	otal Net ying Value onsolidated itement of ondition			
Assets:												
Trading account assets:												
U.S. government securities	\$	36	\$	—	\$	—		\$	36			
Non-U.S. government securities		-		138		-			138			
Other				599		_			599			
Total trading account assets		36		737		_			773			
Available-for-sale investment securities:												
U.S. Treasury and federal agencies:												
Direct obligations	\$	8,301		—		—			8,301			
Mortgage-backed securities			-	10,755		_			10,755			
Total U.S. Treasury and federal agencies		8,301		10,755					19,056			
Non-U.S. debt securities:												
Mortgage-backed securities		—		1,857		—			1,857			
Asset-backed securities		-		2,137		-			2,137			
Non-U.S. sovereign, supranational and non-U.S. agency		_		15,100		_			15,100			
Other		_		2,735					2,735			
Total non-U.S. debt securities			;	21,829					21,829			
Asset-backed securities:									,•_•			
Student loans		_		114		_			114			
Collateralized loan obligations		_		2,527		_			2,527			
Non-agency CMBS and RMBS ⁽²⁾		_		249		_			249			
Other		_		90		_			9(
Total asset-backed securities				2,980		_			2,980			
State and political subdivisions		_		355		_			355			
Other U.S. debt securities		_		306		_			306			
Total available-for-sale investment securities		8,301		36,225					44,526			
Other assets:									,•=			
Derivative instruments:												
Foreign exchange contracts		_		19,690		4	\$ (14,387)		5,307			
Interest rate contracts		_		13		_	(13)					
Total derivative instruments				19,703		4	(14,400)		5,307			
Other		11		640		_			651			
Total assets carried at fair value	\$	8,348	\$		\$	4	\$ (14,400)	\$	51,257			
Liabilities:					<u> </u>							
Accrued expenses and other liabilities:												
Derivative instruments:												
Foreign exchange contracts	\$	1	\$	19,414	\$	1	\$ (11,909)	\$	7,507			
Interest rate contracts	•	4		_		_			4			
Other derivative contracts		_		182		_	_		182			
Total derivative instruments		5		19,596		1	(11,909)		7,693			
Total liabilities carried at fair value	¢	5		19,596	\$	1	\$ (11,909)		7,693			

⁽¹⁾ Represents counterparty netting against level 2 financial assets and liabilities where a legally enforceable master netting agreement exists between us and the counterparty. Netting also reflects asset and liability reductions of \$3.90 billion and \$1.41 billion, respectively, for cash collateral received from and provided to derivative counterparties.

⁽²⁾ Consists entirely of non-agency CMBS.

	Fair Value Measurements on a Recurring Basis											
		As o	f December 31, 2022									
(In millions)	Quoted Market Prices in Active Markets (Level 1)	Pricing Methods with Significant Observable Market Inputs (Level 2)	Pricing Methods with Significant Unobservable Market Inputs (Level 3)	Impact of Netting ⁽¹⁾	Total Net Carrying Value in Consolidated Statement of Condition							
Assets:												
Trading account assets:												
U.S. government securities	\$ 40	\$ —	\$ —		\$ 40							
Non-U.S. government securities		142	-		142							
Other		468			468							
Total trading account assets	40	610			650							
Available-for-sale investment securities:												
U.S. Treasury and federal agencies:												
Direct obligations	7,981	—	—		7,981							
Mortgage-backed securities		8,509			8,509							
Total U.S. Treasury and federal agencies	7,981	8,509			16,490							
Non-U.S. debt securities:												
Mortgage-backed securities		1,623	—		1,623							
Asset-backed securities		1,669	-		1,669							
Non-U.S. sovereign, supranational and non-U.S. agency	_	14,089	_		14,089							
Other	_	2,091	_		2,091							
Total non-U.S. debt securities		19,472			19,472							
Asset-backed securities:		· · · · ·										
Student loans	_	115	_		115							
Collateralized loan obligations	_	2,355	_		2,355							
Non-agency CMBS and RMBS ⁽²⁾	_	231	_		231							
Other		88	_		88							
Total asset-backed securities		2,789			2,789							
State and political subdivisions		823			823							
Other U.S. debt securities		1,005	_		1,005							
Total available-for-sale investment securities	7,981	32,598	_		40,579							
Other assets:												
Derivative instruments:												
Foreign exchange contracts	9	26,173	4	\$ (18,522)	7,664							
Interest rate contracts		_	_	_								
Total derivative instruments	9	26,173	4	(18,522)	7,664							
Other	6	600	_	_	606							
Total assets carried at fair value	\$ 8,036	\$ 59,981	\$ 4	\$ (18,522)	\$ 49,499							
Liabilities:												
Accrued expenses and other liabilities:												
Trading account liabilities:												
Derivative instruments:												
Foreign exchange contracts	\$ 2	\$ 25,745	\$ 2	\$ (17,951)	\$ 7,798							
Interest rate contracts	1	_	_	_	1							
Other derivative contracts		216			216							
Total derivative instruments	3	25,961	2	(17,951)	8,015							
Total liabilities carried at fair value	\$ 3	\$ 25,961	\$ 2	\$ (17,951)	\$ 8,015							

⁽¹⁾ Represents counterparty netting against level 2 financial assets and liabilities where a legally enforceable master netting agreement exists between us and the counterparty. Netting also reflects asset and liability reductions of \$3.30 billion and \$2.73 billion, respectively, for cash collateral received from and provided to derivative counterparties.

⁽²⁾ Consists entirely of non-agency CMBS.

Financial Instruments Not Carried at Fair Value

Estimates of fair value for financial instruments not carried at fair value in our consolidated statement of condition are generally subjective in nature, and are determined as of a specific point in time based on the characteristics of the financial instruments and relevant market information. Disclosure of fair value estimates is not required by U.S. GAAP for certain items, such as lease financing, equity- method investments, obligations for pension and other post-retirement plans, premises and equipment, other intangible assets and income-tax assets and liabilities. Accordingly, aggregate fair-value estimates presented do not purport to represent, and should not be considered representative of, our underlying "market" or franchise value. In addition, because of potential differences in methodologies and assumptions used to estimate fair values, our estimates of fair value should not be compared to those of other financial institutions.

We use the following methods to estimate the fair values of our financial instruments:

- For financial instruments that have quoted market prices, those quoted prices are used to estimate fair value;
- For financial instruments that have no defined maturity, have a remaining maturity of 180 days or less, or reprice frequently to a market rate, we assume that the fair value of these instruments approximates their reported value, after taking into consideration any applicable credit risk; and
- For financial instruments for which no quoted market prices are available, fair value is estimated using information obtained from independent third parties, or by discounting the expected cash flows using an estimated current market interest rate for the financial instrument.

The generally short duration of certain of our assets and liabilities results in a significant number of financial instruments for which fair value equals or closely approximates the amount recorded in our consolidated statement of condition. These financial instruments are reported in the following captions in our consolidated statement of condition: cash and due from banks; interest-bearing deposits with banks; securities purchased under resale agreements; accrued interest and fees receivable; deposits; securities sold under repurchase agreements; federal funds purchased; and other short-term borrowings.

In addition, due to the relatively short duration of certain of our loans, we consider fair value for these loans to approximate their reported value. The fair value of other types of loans, such as leveraged loans, commercial real estate loans, purchased receivables and municipal loans is estimated using information obtained from independent third parties or by discounting expected future cash flows using current rates at which similar loans would be made to borrowers with similar credit ratings for the same remaining maturities. Commitments to lend have no reported value because their terms are at prevailing market rates.

The following tables present the reported amounts and estimated fair values of the financial assets and liabilities not carried at fair value, as they would be categorized within the fair value hierarchy, as of the dates indicated:

				Fair Value Hierarchy						
(In millions)	Reported Amount	Es	timated Fair Value		Quoted Market Prices in Active Markets (Level 1)	e Observable Market		Pricing Methods with Significant Unobservable Marke Inputs (Level 3)		
December 31, 2023										
Financial Assets:										
Cash and due from banks	\$ 4,047	\$	4,047	\$	4,047	\$	_	\$	—	
Interest-bearing deposits with banks	87,665		87,665		—		87,665		—	
Securities purchased under resale agreements	6,692		6,692		_		6,692		_	
Investment securities held-to-maturity	57,117		51,503		8,409		43,094		_	
Net loans	36,496		36,335		_		34,308		2,027	
Other ⁽¹⁾	6,866		6,866		_		6,866		_	
Financial Liabilities:										
Deposits:										
Non-interest-bearing	\$ 32,569	\$	32,569	\$	_	\$	32,569	\$	_	
Interest-bearing - U.S.	121,738		121,738		_		121,738		_	
Interest-bearing - non-U.S.	66,663		66,663		_		66,663		_	
Securities sold under repurchase agreements	1,867		1,867		_		1,867		_	
Federal funds purchased	1,000		1,000		—		1,000		—	
Other short-term borrowings	2,660		2,660		—		2,660		—	
Long-term debt	18,839		18,417		_		18,216		201	
Other ⁽¹⁾	6,866		6,866		_		6,866		_	

(1) Represents a portion of underlying client assets related to our prime services business, which clients have allowed us to transfer and re-pledge.

Pricing Methods with Pricing Methods wi
Quoted Market Significant Significant rices in Active Observable Market Unobservable Mark arkets (Level 1) Inputs (Level 2) Inputs (Level 3)
3,970 \$ — \$
— 101,593
— 5,215
11,336 46,577
— 29,679 2,1
— 3,626
— \$ 46,755 \$
— 111,384
— 77,325
— 1,177
— 2,097
— 14,102 1

⁽¹⁾ Includes \$5 million of loans classified as held-for-sale that were measured at fair value in level 2 as of December 31, 2022.

(2) Represents a portion of underlying client assets related to our prime services business, which clients have allowed us to transfer and re-pledge.

Note 3. Investment Securities

Investment securities held by us are classified as either trading account assets, AFS, HTM or equity securities held at fair value at the time of purchase and reassessed periodically, based on management's intent.

Generally, trading assets are debt and equity securities purchased in connection with our trading activities and, as such, are expected to be sold in the near term. Our trading activities typically involve active and frequent buying and selling with the objective of generating profits on short-term movements. AFS investment securities are those securities that we intend to hold for an indefinite period of time. AFS investment securities include securities utilized as part of our asset and liability management activities that may be sold in response to changes in interest rates, prepayment risk, liquidity needs or other factors. HTM securities are debt securities that management has the intent and the ability to hold to maturity.

Trading assets are carried at fair value. Both realized and unrealized gains and losses on trading assets are recorded in other fee revenue in our consolidated statement of income. AFS securities are carried at fair value, with any allowance for credit losses recorded through the consolidated statement of income and after-tax net unrealized gains and losses are recorded in AOCI. Gains or losses realized on sales of AFS investment securities are computed using the specific identification method and are recorded in gains (losses) related to investment securities, net, in our consolidated statement of income. HTM investment securities are carried at cost, adjusted for amortization of premiums and accretion of discounts, with any allowance for credit losses recorded through the consolidated statement of income.

The following table presents the amortized cost, fair value and associated unrealized gains and losses of AFS and HTM investment securities as of the dates indicated:

			De	cembe	er 31	, 2023			December 31, 2022									
	Ar	nortized		Gr Unre	oss alize	ed		Fair	Ar	nortized			ross ealized			Fair		
(In millions)		Cost	Gains		Losses		Value			Cost	G	ains	L(osses		Value		
Available-for-sale:																		
U.S. Treasury and federal agencies:																		
Direct obligations	\$	8,427	\$	39	\$	165	\$	8,301	\$	8,232	\$	10	\$	261	\$	7,981		
Mortgage-backed securities ⁽¹⁾		10,870		49		164		10,755		8,767		2		260		8,509		
Total U.S. Treasury and federal agencies		19,297		88		329		19,056		16,999		12		521		16,490		
Non-U.S. debt securities:																		
Mortgage-backed securities		1,861		3		7		1,857		1,642		—		19		1,623		
Asset-backed securities ⁽²⁾		2,148		2		13		2,137		1,696		—		27		1,669		
Non-U.S. sovereign, supranational and non-U.S. agency		15,159		73		132		15,100		14,512		1		424		14,089		
Other ⁽³⁾		2,733		39		37		2,735		2,255		_		164		2,091		
Total non-U.S. debt securities		21,901		117		189		21,829		20,105		1		634		19,472		
Asset-backed securities:			-		-													
Student loans ⁽⁴⁾		113		1		_		114		116		_		1		115		
Collateralized loan obligations ⁽⁵⁾		2,530		3		6		2,527		2,394		_		39		2,355		
Non-agency CMBS and RMBS ⁽⁶⁾		252		_		3		249		237		_		6		231		
Other		90		_		_		90		90		_		2		88		
Total asset-backed securities		2,985		4		9		2,980		2,837		_		48		2,789		
State and political subdivisions		356		_		1	_	355		839		1		17	_	823		
Other U.S. debt securities ⁽⁷⁾		314		_		8		306		1,078		_		73		1,005		
Total available-for-sale securities ⁽⁸⁾⁽⁹⁾	\$	44,853	\$	209	\$	536	\$	44,526	\$	41,858	\$	14	\$	1,293	\$	40,579		
Held-to-maturity:		<u> </u>	_		_		-	,					_	,	-	,		
U.S. Treasury and federal agencies:																		
Direct obligations	\$	8,584	\$		\$	163	\$	8,421	\$	11,693	\$	_	\$	341	\$	11,352		
Mortgage-backed securities ⁽¹⁰⁾		39,472		7		5,271		34,208		42,307	•	3		6,030		36,280		
Total U.S. Treasury and federal agencies		48.056		7		5.434		42.629		54,000		3		6,371		47,632		
Non-U.S. debt securities:								,						- , -	-	,		
Non-U.S. sovereign, supranational and non-U.S. agency		5,757		8		153		5,612		6,603		_		304		6,299		
Total non-U.S. debt securities		5.757		8		153	-	5.612		6.603				304	_	6,299		
Asset-backed securities:		0,101				100		0,012		0,000				00 P		0,200		
Student loans ⁽⁴⁾		3,298		2		62		3,238		3,955		1		134		3,822		
Non-agency CMBS and RMBS ⁽¹¹⁾		5,290		18				3,230 24		3,933 142		18		-0-		160		
Total asset-backed securities		3,304		20		62		3,262		4,097		19		134		3,982		
Total held-to-maturity securities ⁽⁸⁾⁽¹²⁾	¢		\$	35	\$	5,649	\$	<u> </u>	\$	<u> </u>	\$	22	\$	6,809	\$			
Total neid-to-maturity securities	\$	57,117	þ	33	ð	5,649	ð	51,503	þ	64,700	þ	22	þ	0,009	ð	57,913		

(1) As of December 31, 2023 and 2022, the total fair value included \$5.54 billion and \$6.78 billion, respectively, of agency CMBS and \$5.21 billion and \$1.73 billion, respectively, of agency MBS.

(2) As of December 31, 2023 and 2022, the fair value includes non-U.S. collateralized loan obligations of \$1.02 billion and \$0.86 billion, respectively.

⁽³⁾ As of December 31, 2023 and 2022, the fair value includes non-U.S. corporate bonds of \$2.36 billion and \$1.14 billion, respectively.

(4) Primarily comprised of securities guaranteed by the federal government with respect to at least 97% of defaulted principal and accrued interest on the underlying loans.

⁽⁵⁾ Excludes collateralized loan obligations in loan form. Refer to Note 4 for additional information.

⁽⁶⁾ Consists entirely of non-agency CMBS as of both December 31, 2023 and 2022.

⁽⁷⁾ As of December 31, 2023 and 2022, the fair value of U.S. corporate bonds was \$0.31 billion and \$1.01 billion, respectively.

(8) An immaterial amount of accrued interest related to HTM and AFS investment securities was excluded from the amortized cost basis for the period ended December 31, 2023.

(9) As of December 31, 2023, we had no allowance for credit losses on AFS investment securities. As of December 31, 2022, we had an allowance for credit losses on AFS investment securities of \$2 million.

(10) As of December 31, 2023 and 2022, the total amortized cost included \$5.23 billion and \$4.99 billion of agency CMBS, respectively.

(¹¹) Consists entirely of non-agency RMBS as of December 31, 2023. As of December 31, 2022, the total amortized cost included \$133 million of non-agency CMBS and \$9 million of non-agency RMBS.

(12) As of December 31, 2023, we had an allowance for credit losses on HTM investment securities of \$1 million. As of December 31, 2022, we had no allowance for credit losses on HTM investment securities.

Aggregate investment securities with carrying values of approximately \$71.30 billion and \$70.52 billion as of December 31, 2023 and 2022, respectively, were designated as pledged for public and trust deposits, short-term borrowings and for other purposes as provided by law.

In 2022 and 2021, \$23.56 billion and \$1.25 billion, respectively, of investment securities previously classified as AFS were transferred to HTM. These transfers reflect our intent to hold these securities until their maturity. These securities were transferred at fair value, which included a net unrealized loss of \$1.26 billion and net unrealized gain \$12 million as of December 31, 2022 and 2021, respectively, which will remain in AOCI and be amortized into net interest income over the remaining life of the security (ranging from approximately 1 to 37 years). The amortization of amounts retained in AOCI will offset the effect on net interest income of the amortization of the premium or discount resulting from transferring securities at fair value.

In 2023, 2022 and 2021, proceeds from sales of AFS securities was approximately \$4.92 billion, \$4.59 billion and \$12.82 billion, respectively, resulting in a pre-tax loss of approximately \$294 million and \$2 million in 2023 and 2022, respectively, and a pre-tax gain of approximately \$57 million in 2021. The pre-tax loss in 2023 was primarily driven by sales of non-U.S. sovereign and agency, corporate and municipal bonds as part of an investment portfolio repositioning in the third quarter of 2023.

The following tables present the aggregate fair values of AFS investment securities that have been in a continuous unrealized loss position for less than 12 months, and those that have been in a continuous unrealized loss position for 12 months or longer, as of the dates indicated:

	As of December 31, 2023													
		Less than	12 m	onths	or longer	Total								
(In millions)		Fair Value	U	Gross nrealized Losses	Fair Value		Gross Unrealized Losses		Fair /alue	Unre	ross ealized sses			
Available-for-sale:														
U.S. Treasury and federal agencies:														
Direct obligations	\$	333	\$	2	\$	5,416	\$ 163	\$	5,749	\$	165			
Mortgage-backed securities		961		6		6,512	158		7,473		164			
Total U.S. Treasury and federal agencies		1,294		8		11,928	321		13,222		329			
Non-U.S. debt securities:														
Mortgage-backed securities		424		1		719	6		1,143		7			
Asset-backed securities		358		—		1,052	13		1,410		13			
Non-U.S. sovereign, supranational and non-U.S. agency		3,972		7		5,788	125		9,760		132			
Other		50		_		893	37		943		37			
Total non-U.S. debt securities		4,804		8		8,452	181		13,256		189			
Asset-backed securities:														
Collateralized loan obligations		183		_		1,605	6		1,788		6			
Non-agency CMBS and RMBS		35		_		180	3		215		3			
Total asset-backed securities		218		_		1,785	9		2,003		9			
State and political subdivisions		64		_	_	104	1		168		1			
Other U.S. debt securities		3		_		303	8		306		8			
Total	\$	6,383	\$	16	\$	22,572	\$ 520	\$	28,955	\$	536			

					As of Decer	nber 3	1, 2022				
	Less than	onths	nger	Total							
(In millions)	Fair Value		Gross nrealized Losses	Fair Value		Gross Unrealized Losses			Fair Value	Uni	Gross realized osses
Available-for-sale:											
U.S. Treasury and federal agencies:											
Direct obligations	\$ 1,337	\$	15	\$	5,745	\$	246	\$	7,082	\$	261
Mortgage-backed securities	 5,524		130		2,815		130		8,339		260
Total U.S. Treasury and federal agencies	6,861		145		8,560		376		15,421		521
Non-U.S. debt securities:											
Mortgage-backed securities	1,278		15		272		4		1,550		19
Asset-backed securities	859		11		765		16		1,624		27
Non-U.S. sovereign, supranational and non-U.S. agency	6,750		108		5,800		316		12,550		424
Other	 771		27		1,233		137		2,004		164
Total non-U.S. debt securities	9,658		161		8,070		473		17,728		634
Asset-backed securities:											
Student loans	89		1		_		—		89		1
Collateralized loan obligations	1,577		27		710		12		2,287		39
Non-agency CMBS and RMBS	193		6		3		—		196		6
Other	88		2				—		88		2
Total asset-backed securities	 1,947		36		713		12		2,660		48
State and political subdivisions	669		12		42		5		711		17
Other U.S. debt securities	 294		15		708		58		1,002		73
Total	\$ 19,429	\$	368	\$	18,093	\$	924	\$	37,522	\$	1,293

The following table presents the amortized cost and the fair value of contractual maturities of debt investment securities as of December 31, 2023. The maturities of certain ABS, MBS and collateralized mortgage obligations are based on expected principal payments. Actual maturities may differ from these expected maturities since certain borrowers have the right to prepay obligations with or without prepayment penalties.

		As of Decemi										ember 31, 2023											
(In millions)		Under	1 Ye	ear		1 to 5	to 5 Years			6 to 10	irs		Over 10) Ye	ars								
		nortized Cost		Fair Value	An	nortized Cost		Fair Value		ortized Cost		Fair Value	Amortized Cost		Fair Value				,	Fair Value			
Available-for-sale:							_																
U.S. Treasury and federal agencies:																							
Direct obligations	\$	279	\$	279	\$	7,519	\$	7,385	\$	629	\$	637	\$	—	\$	—	\$	8,427	\$	8,301			
Mortgage-backed securities		40		39		1,732		1,718		3,865		3,797		5,233		5,201		10,870		10,755			
Total U.S. Treasury and federal agencies		319		318		9,251		9,103		4,494		4,434		5,233		5,201		19,297		19,056			
Non-U.S. debt securities:																							
Mortgage-backed securities		244		243		262		262		_		_		1,355		1,352		1,861		1,857			
Asset-backed securities		343		339		561		558		652		649		592		591		2,148		2,137			
Non-U.S. sovereign, supranational and non-U.S. agency		5,501		5,472		7,311		7,291		2,347		2,337		_		_		15,159		15,100			
Other		339		335		2,171		2,169		223		231		_		_		2,733		2,735			
Total non-U.S. debt securities		6,427		6,389		10,305		10,280		3,222		3,217		1,947		1,943		21,901		21,829			
Asset-backed securities:																							
Student loans		31		32		—		—		16		16		66		66		113		114			
Collateralized loan obligations		80		80		325		323		1,425		1,422		700		702		2,530		2,527			
Non-agency CMBS and RMBS		_		_		20		20		_		_		232		229		252		249			
Other		_		_		90		90						_				90		90			
Total asset-backed securities		111		112		435		433		1,441		1,438		998		997		2,985		2,980			
State and political subdivisions		95		93		129		128		132		134		_		_		356		355			
Other U.S. debt securities		232		228		82		78										314		306			
Total	\$	7,184	\$	7,140	\$	20,202	\$	20,022	\$	9,289	\$	9,223	\$	8,178	\$	8,141	\$	44,853	\$	44,526			
Held-to-maturity: U.S. Treasury and																							
federal agencies: Direct obligations	\$	3,277	\$	3,260	\$	5,272	\$	5,127	\$	24	\$	23	\$	11	\$	11	\$	8,584	\$	8,421			
Mortgage-backed securities	Ψ	130	Ψ	117	Ψ	727	Ψ	679	Ψ	4,359	Ψ	3,714	Ψ	34,256	Ψ	29,698	Ψ	39,472	Ψ	34,208			
Total U.S. Treasury and federal agencies		3,407		3,377		5,999		5,806		4,383		3,737		34,267		29,709		48,056		42,629			
Non-U.S. debt securities:			_				_																
Non-U.S. sovereign, supranational and non-U.S. agency		1,971		1,941		3,262		3,167		524		504		_		_		5,757		5,612			
Total non-U.S. debt securities		1,971		1,941		3,262		3,167		524		504						5,757		5,612			
Asset-backed securities:																							
Student loans		225		219		317		315		500		493		2,256		2,211		3,298		3,238			
Non-agency CMBS and RMBS		1		8		_		_		_		_		5		16		6		24			
Total asset-backed securities		226		227		317		315		500		493		2,261		2,227		3,304		3,262			
Total	\$	5,604	\$	5,545	\$	9,578	\$	9,288	\$	5,407	\$	4,734	\$	36,528	\$	31,936	\$	57,117	\$	51,503			

Interest income related to debt securities is recognized in our consolidated statement of income using the effective interest method, or on a basis approximating a level rate of return over the contractual or estimated life of the security. The level rate of return considers any non-refundable fees or costs, as well as purchase premiums or discounts, adjusted as prepayments occur, resulting in amortization or accretion, accordingly.

Allowance for Credit Losses on Debt Securities and Impairment of AFS Securities

An allowance for credit losses is recognized on HTM securities upon acquisition of the security, and on AFS securities when the fair value and expected future cash flows of the investment securities are less than their amortized cost basis. Our assessment of impairment involves an evaluation of economic and security-specific factors. Such factors are based on derived management, estimates. by which contemplate current market conditions and securityspecific performance. To the extent that market than conditions are worse management's expectations or due to idiosyncratic bond the credit-related component of performance. impairment, in particular, could increase and would be recorded in the provision for credit losses.

We conduct quarterly reviews of HTM and AFS securities on a collective (pool) basis when similar risk characteristics exist to determine whether an allowance for credit losses should be recognized. HTM securities are evaluated for expected credit loss utilizing a probability of default methodology, or discounted cash flows assessed against the amortized cost of the investment security excluding accrued interest.

We monitor the credit quality of the HTM investment securities using a variety of methods, including both external and internal credit ratings.

With respect to certain classes of debt securities, primarily U.S. Treasuries and agency securities (mainly issued by U.S. Government entities and agencies, as well as Group of Seven sovereigns), we consider the history of credit losses, current conditions and reasonable and supportable forecasts, which may indicate that the expectation that nonpayment of the amortized cost basis is or continues to be zero. Therefore, for those securities, we do not record expected credit losses.

Our allowance for credit losses on HTM investment securities was approximately \$1 million as of December 31, 2023. As of December 31, 2022, we had no allowance for credit losses on HTM investment securities.

We have elected to not record an allowance on accrued interest for HTM securities. Accrued interest on these securities is reversed against interest income when payment on a security is delinquent for greater than 90 days from the date of payment.

An AFS security is impaired when the current fair value of an individual security is below its amortized cost basis. An allowance for credit losses on impaired AFS securities is recorded when the present value of expected future cash flows of the investment security is less than its amortized cost basis, limited to the amount by which the security's amortized cost basis exceeds the fair value. Investment securities will be written down to fair value through the consolidated statement of income when management intends to sell (or may be required to sell) the securities before they recover in value.

Our review of AFS investment securities for credit impairment generally includes:

- the identification and evaluation of securities that have indications of potential impairment, such as issuer-specific concerns, including deteriorating financial condition or bankruptcy;
- the analysis of expected future cash flows of securities, based on quantitative and qualitative factors;
- the analysis of the collectability of those future cash flows, including information about past events, current conditions, and reasonable and supportable forecasts;
- the analysis of the underlying collateral for MBS and ABS;
- the analysis of individual impaired securities, including the anticipated recovery period and the magnitude of the overall price decline;
- evaluation of factors or triggers that could cause individual securities to be deemed impaired and those that would not support impairment; and
- documentation of the results of these analyses.

As of December 31, 2023, we had no allowance for credit losses on AFS investment securities. Our allowance for credit losses on AFS investment securities was approximately \$2 million as of December 31, 2022.

Substantially all of our investment securities portfolio is composed of debt securities. A critical component of our assessment of impairment of these debt securities is the identification of credit-impaired securities for which management does not expect to receive cash flows sufficient to recover the entire amortized cost basis of the security.

As of December 31, 2023, 99% of our HTM and AFS investment portfolio is publicly rated investment grade.

After a review of the investment portfolio, taking into consideration then-current economic conditions, adverse situations that might affect our ability to fully collect principal and interest, the timing of future payments, the credit quality and performance of the collateral underlying MBS and ABS and other relevant factors, management considered the aggregate decline in fair value of the investment securities portfolio and the resulting gross pre-tax unrealized losses of \$6.19 billion and \$8.10 billion related to 1,704 and 2,094 securities as of December 31, 2023 and 2022, respectively, to be primarily related to changes in interest rates, and not the result of any material changes in the credit characteristics of the securities. The unrealized loss has not been of December 31, recognized as 2023, as management did not have the intent to sell, nor was it more likely than not that we would be required to sell these securities before the expected recovery of their amortized cost basis.

Note 4. Loans and Allowance for Credit Losses

Loans are generally recorded at their principal amount outstanding, net of the allowance for credit losses, unearned income, and any net unamortized deferred loan origination fees. Loans that are classified as held-for-sale are measured at lower of cost or fair value on an individual basis.

Interest income related to loans is recognized in our consolidated statement of income using the interest method, or on a basis approximating a level rate of return over the term of the loan. Fees received for providing loan commitments and letters of credit that we anticipate will result in loans typically are deferred and amortized to interest income over the term of the related loan, beginning with the initial borrowing. Fees on commitments and letters of credit are amortized to software and processing fees over the commitment period when funding is not known or expected. The following table presents our recorded investment in loans, by segment, as of the dates indicated:

(In millions) Domestic ⁽¹⁾ :	Decem	ber 31, 2023	December 31, 2022
Commercial and financial:			
Fund Finance ⁽²⁾	\$	13,697	\$ 12,154
Leveraged loans		2,412	2,431
Overdrafts		1,225	1,707
Collateralized loan obligations in loan form		150	100
Other ⁽³⁾		2,512	1,871
Commercial real estate		3,069	2,985
Total domestic		23,065	21,248
Foreign ⁽¹⁾ :			
Commercial and financial:			
Fund Finance ⁽²⁾		4,956	3,949
Leveraged loans		1,194	1,118
Overdrafts		1,047	1,094
Collateralized loan obligations in loan form		6,369	4,741
Total foreign		13,566	10,902
Total loans ⁽²⁾		36,631	32,150
Allowance for credit losses		(135)	(97)
Loans, net of allowance	\$	36,496	\$ 32,053

 $^{\left(1\right)}$ Domestic and foreign categorization is based on the borrower's country of domicile.

⁽²⁾ Fund finance loans include primarily \$9.69 billion private equity capital call finance loans, \$6.63 billion loans to real money funds and \$1.05 billion loans to business development companies as of December 31, 2023, compared to \$7.57 billion private equity capital call finance loans, \$6.61 billion loans to real money funds and \$1.11 billion loans to business development companies as of December 31, 2022.

⁽³⁾ Includes \$2.23 billion securities finance loans, \$276 million loans to municipalities and \$5 million other loans as of December 31, 2023 and \$1.51 billion securities finance loans, \$321 million loans to municipalities and \$42 million other loans as of December 31, 2022.

We segregate our loans into two segments: commercial and financial loans and commercial real estate loans. We further classify commercial and financial loans as fund finance loans, leveraged loans, collateralized loan obligations in loan form, overdrafts and other loans. Fund finance loans are composed of revolving credit lines providing liquidity and leverage to mutual fund and private equity fund clients. These classifications reflect their risk characteristics, their initial measurement attributes and the methods we use to monitor and assess credit risk.

Certain loans are pledged as collateral for access to the Federal Reserve's discount window. As of December 31, 2023 and 2022, the loans pledged as collateral totaled \$13.00 billion and \$10.17 billion, respectively.

We generally place loans on non-accrual status once principal or interest payments are 90 days contractually past due, or earlier if management determines that full collection is not probable. Loans 90 days past due, but considered both well-secured and in the process of collection, may be excluded from non-accrual status. When we place a loan on non-accrual status, the accrual of interest is discontinued and previously recorded but unpaid interest is reversed and generally charged against interest income. For loans on non-accrual status, income is recognized on a cash basis after recovery of principal, if and when interest payments are received. Loans may be removed from non-accrual status when repayment is reasonably assured and performance under the terms of the loan has been demonstrated. As of December 31, 2023, we had three loans totaling \$70 million on non-accrual status, and as of December 31, 2022, we had no loans on non-accrual status.

In 2023, we purchased \$1.68 billion of collateralized loan obligations in loan form, which were all investment grade as of December 31, 2023.

We sold \$519 million of loans in 2023. We recorded a charge-off against the allowance for these loans of \$17 million in 2023.

Allowance for Credit Losses

We recognize an allowance for credit losses in accordance with ASC 326 for financial assets held at amortized cost and off-balance sheet commitments. The allowance for credit losses is reviewed on a regular basis, and any provision for credit losses is recorded to reflect the amount necessary to maintain the allowance for expected credit losses at a level which represents what management does not expect to recover due to expected credit losses. For additional discussion on the allowance for credit losses for investment securities, please refer to Note 3.

When the allowance is recorded, a provision for credit loss expense is recognized in net income. The allowance for credit losses for financial assets (excluding investment securities, as discussed in Note 3) represents the portion of the amortized cost basis, including accrued interest for financial assets held at amortized cost, which management does not expect to recover due to expected credit losses and is presented on the statement of condition as an offset to the amortized cost basis. The accrued interest balance is presented separately on the statement of condition within accrued interest and fees receivable. The allowance for off-balance sheet commitments is presented within other liabilities. Loans are charged off to the allowance for credit losses in the reporting period in which either an event occurs that confirms the existence of a loss on a loan, including a sale of a

loan below its carrying value, or a portion of a loan is determined to be uncollectible.

The allowance for credit losses may be determined using various methods, including discounted cash flow methods, loss-rate methods, probability-of-default methods, and other quantitative or qualitative methods as determined by us. The method used to estimate expected credit losses may vary depending on the type of financial asset, our ability to predict the timing of cash flows, and the information available to us.

The allowance for credit losses as reported in our consolidated statement of condition is adjusted by the provision for credit losses, which is reported in earnings, and reduced by the charge-off of principal amounts, net of recoveries.

We measure expected credit losses of financial assets on a collective (pool) basis when similar risk characteristics exist. Each reporting period, we assess whether the assets in the pool continue to display similar risk characteristics.

For a financial asset that does not share risk characteristics with other assets, expected credit losses are measured separately using one or more of the methods noted above. As of December 31, 2023, we had 3 loans for \$38 million in the commercial and financial segment and 4 loans for \$271 million in the commercial real estate segment that no longer met the similar risk characteristics of their collective pool. As of December 31, 2023, \$48 million of our allowance for credit losses related to these loans.

When the asset is collateral dependent, which means when the borrower is experiencing financial difficulty and repayment is expected to be provided substantially through the operation or sale of the collateral, expected credit losses are measured as the difference between the amortized cost basis of the asset and the fair value of the collateral, adjusted for the estimated costs to sell.

Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. In future periods, factors and forecasts then prevailing may result in significant changes in the allowance for credit losses in those future periods.

We estimate credit losses over the contractual life of the financial asset, while factoring in prepayment activity, where supported by data, over a three year reasonable and supportable forecast period. We utilize a baseline, upside and downside scenario which are applied based on a probability weighting, in order to better reflect management's expectation of expected credit losses given existing market conditions and the changes in the economic environment. The multiple scenarios are based on a three year horizon (or less depending on contractual maturity) and then revert linearly over a two year period to a ten-year historical average thereafter. The contractual term excludes expected extensions, renewals and modifications, but includes prepayment assumptions where applicable.

As part of our allowance methodology, we establish qualitative reserves to address any risks inherent in our portfolio that are not addressed through our quantitative reserve assessment. These factors may relate to, among other things, legislation changes or new regulation, credit concentration, loan markets, scenario weighting and overall model limitations. The qualitative adjustments are applied to our portfolio of financial instruments under the existing governance structure and are inherently judgmental.

Credit Quality

Credit quality for financial assets held at amortized cost is continuously monitored by management and is reflected within the allowance for credit losses.

We use an internal risk-rating system to assess our risk of credit loss for each loan. This risk-rating process incorporates the use of risk-rating tools in conjunction with management judgment. Qualitative and quantitative inputs are captured in a systematic manner, and following a formal review and approval process, an internal credit rating based on our credit scale is assigned.

When computing allowance levels, credit loss assumptions are estimated using models that categorize asset pools based on loss history, delinquency status and other credit trends and risk characteristics, including current conditions and reasonable and supportable forecasts about the future. Determining the appropriateness of the allowance is complex and requires judgment by management about the effect of matters that are inherently uncertain. In future periods evaluations of the overall asset portfolio, in light of the factors and forecasts then prevailing, may result in significant changes in the allowance and credit loss expense in those future periods.

Credit quality is assessed and monitored by evaluating various attributes in order to enable timely

detection of any concerns with the customer's credit rating. The results of those evaluations are utilized in underwriting new loans and transactions with counterparties and in our process for estimation of expected credit losses.

In assessing the risk rating assigned to each individual loan, among the factors considered are the borrower's debt capacity, collateral coverage, payment history and delinguency experience. financial flexibility and earnings strength, the expected amounts and source of repayment, the level and nature of contingencies, if any, and the industry and geography in which the borrower operates. These factors are based on an evaluation of historical and current information, and involve subjective assessment and interpretation. Credit counterparties are evaluated and risk-rated on an individual basis at least annually. Management considers the ratings to be current as of December 31, 2023.

Our internal risk rating methodology assigns risk ratings to counterparties ranging from Investment Grade, Speculative, Special Mention, Substandard, Doubtful and Loss.

- Investment Grade: Counterparties with strong credit quality and low expected credit risk and probability of default. Approximately 87% of our loans were rated as investment grade as of December 31, 2023 with external credit ratings, or equivalent, of "BBB-" or better.
- Speculative: Counterparties that have the ability to repay but face significant uncertainties, such as adverse business or financial circumstances that could affect credit risk or economic downturns. Loans to counterparties rated as speculative account for approximately 11% of our loans as of December 31, 2023, and are concentrated in leveraged loans. Approximately 92% of those leveraged loans have an external credit rating, or equivalent, of "BB" or "B" as of December 31, 2023.
- Special Mention: Counterparties with potential weaknesses that, if uncorrected, may result in deterioration of repayment prospects.
- Substandard: Counterparties with welldefined weakness that jeopardizes repayment with the possibility we will sustain some loss.
- Doubtful: Counterparties with well-defined weakness which make collection or liquidation in full highly questionable and improbable.
- Loss: Counterparties which are uncollectible or have little value.

The following tables present our recorded loans to counterparties by risk rating, as noted above, as of the dates indicated:

December 31, 2023							
(In millions)	Commerci	al and Financial	Commercia	al Real Estate	Total Loans		
Investment grade	\$	29,737	\$	2,287	\$	32,024	
Speculative		3,546		449		3,995	
Special mention		242		62		304	
Substandard		14		224		238	
Doubtful		23		47		70	
Total ⁽¹⁾	\$	33,562	\$	3,069	\$	36,631	
December 31, 2022							
(In millions)	Commerci	al and Financial	Commercia	al Real Estate	To	tal Loans	
Investment grade	\$	24,667	\$	2,509	\$	27,176	
Speculative		4,103		388		4,491	
Special mention		291		88		379	
						99	
Substandard		99		_		99	

⁽¹⁾ Loans Include \$2.27 billion and \$2.80 billion of overdrafts as of December 31, 2023 and 2022, respectively. Overdrafts are short-term in nature and do not present a significant credit risk to us. As of December 31, 2023, \$2.15 billion overdrafts were investment grade and \$0.12 billion overdrafts were speculative.
⁽²⁾ Total does not include \$5 million of loans classified as held-for-sale as of December 31, 2022.

Financial assets held at amortized cost that are not loans are disaggregated based on product type. This includes our fees receivable balance, which have had no history of credit losses, and are evaluated collectively as a pool.

Securities purchased under a resale agreement and securities-financing within our principal business utilize the collateral maintenance provisions included within ASC 326. An allowance for credit losses is recognized for any remaining exposure based on counterparty type.

The allowance for credit losses for off-balance sheet credit exposures, recorded in accrued expenses and other liabilities in our consolidated statement of condition, represents management's estimate of credit losses primarily in outstanding letters and lines of credit and other credit-enhancement facilities provided to our clients and outstanding as of the balance sheet date. The allowance is evaluated quarterly by management. Factors considered in evaluating the appropriate level of this allowance are similar to those considered with respect to the allowance for credit losses on financial assets held at amortized cost. Provisions to maintain the allowance at a level considered by us to be appropriate to absorb estimated credit losses in outstanding facilities are recorded in the provision for credit losses in our consolidated statement of income.

The following table presents the amortized cost basis, by year of origination and credit quality indicator as of December 31, 2023. For origination years before the fifth annual period, we present the aggregate amortized cost basis of loans. For purchased loans, the date of issuance is used to determine the year of origination, not the date of acquisition. For modified, extended or renewed lending arrangements, we evaluate whether a credit event has occurred which would consider the loan to be a new arrangement.

(In millions)	2023	2022	2021	2020	2019	I	Prior	Re	evolving Loans	-	Fotal ⁽¹⁾
Domestic loans:											
Commercial and financial:											
Risk Rating:											
Investment grade	\$ 1,399	\$ 120	\$ 199	\$ 8	\$ 272	\$	5	\$	15,476	\$	17,479
Speculative	615	285	747	149	291		141		81		2,309
Special mention	—	4	164	—	16		—		—		184
Doubtful	 5	 _	 18	 _	 _		_		_		23
Total commercial and financing	\$ 2,019	\$ 409	\$ 1,128	\$ 157	\$ 579	\$	146	\$	15,557	\$	19,995
Commercial real estate:											
Risk Rating:											
Investment grade	\$ 216	\$ 500	\$ 498	\$ 100	\$ 375	\$	598	\$	_	\$	2,287
Speculative	_	20	31	50	49		299		_		449
Special mention	_	_	_	_	22		40		—		62
Substandard	_	_	_	_	95		129		_		224
Doubtful	_	_	_	_	_		47		_		47
Total commercial real estate	\$ 216	\$ 520	\$ 529	\$ 150	\$ 541	\$	1,113	\$	_	\$	3,069
Non-U.S. loans:											
Commercial and financial:											
Risk Rating:											
Investment grade	\$ 2,943	\$ 1,956	\$ 2,518	\$ _	\$ _	\$	_	\$	4,841	\$	12,258
Speculative	394	135	481	88	109		18		12		1,237
Special mention	_	_	29	29	_		_		_		58
Substandard	_	_	_	_	_		14		_		14
Total commercial and financing	\$ 3,337	\$ 2,091	\$ 3,028	\$ 117	\$ 109	\$	32	\$	4,853	\$	13,567
Total loans	\$ 5,572	\$ 3.020	\$ 4.685	\$ 424	\$ 1.229	\$	1,291	\$	20,410	\$	36,631

⁽¹⁾ Any reserve associated with accrued interest is not material. As of December 31, 2023, accrued interest receivable of \$318 million included in the amortized cost basis of loans has been excluded from the amortized cost basis within this table.

The following table presents the amortized cost basis, by year of origination and credit quality indicator as of December 31, 2022:

(In millions)		2022		2021		2020	 2019	 2018	F	Prior	Re	evolving Loans	1	Fotal ⁽¹⁾
Domestic loans:														
Commercial and financial:														
Risk Rating:														
Investment grade	\$	1,577	\$	185	\$	72	\$ 300	\$ 	\$	9	\$	12,843	\$	14,986
Speculative		523		859		168	461	236		151		545		2,943
Special mention		—		120			105	19				—		244
Substandard	_		_		_	5	 42	 31		7				85
Total commercial and financing	\$	2,100	\$	1,164	\$	245	\$ 908	\$ 286	\$	167	\$	13,388	\$	18,258
Commercial real estate: Risk Rating:														
Investment grade	\$	519	\$	612	\$	100	\$ 330	\$ 511	\$	436	\$	_	\$	2,508
Speculative		_		_		49	163	111		65		_		388
Special mention		_		—		_	49	40		—		_		89
Total commercial real estate	\$	519	\$	612	\$	149	\$ 542	\$ 662	\$	501	\$		\$	2,985
Non-U.S. loans: Commercial and financial: Risk Rating:														
Investment grade	\$	2,986	\$	2,799	\$	_	\$ _	\$ _	\$	_	\$	3,897	\$	9,682
Speculative		234		529		100	181	107		_		9		1,160
Special mention		_		_		18	5	23		_		_		46
Substandard		_		_			_	14		_		_		14
Total commercial and financing	\$	3,220	\$	3,328	\$	118	\$ 186	\$ 144	\$	_	\$	3,906	\$	10,902
Total loans ⁽²⁾	\$	5,839	\$	5,104	\$	512	\$ 1,636	\$ 1,092	\$	668	\$	17,294	\$	32,145

⁽¹⁾ Any reserve associated with accrued interest is not material. As of December 31, 2022, accrued interest receivable of \$200 million included in the amortized cost basis of loans has been excluded from the amortized cost basis within this table.

⁽²⁾ Total does not include \$5 million of loans classified as held-for-sale as of December 31, 2022.

The following tables present the activity in the allowance for credit losses by portfolio and class for the years ended December 31, 2023 and 2022:

		Year End December 31, 2023														
	Com	mercial	and	Financial												
(In millions)		eraged ans		Other Loans ⁽¹⁾		ommercial Real Estate		ailable-for- sale ecurities	:	Held-to- Maturity Securities	-	ff-Balance Sheet mmitments		All Other		Total
Allowance for credit losses:																
Beginning balance	\$	73	\$	5	\$	19	\$	2	\$	_	\$	23	\$	(1)	\$	121
Charge-offs ⁽²⁾		(17)		_		_		_		_		—		—		(17)
Provision		16		(1)		41		(2)		1		(9)		_		46
Ending balance	\$	72	\$	4	\$	60	\$		\$	1	\$	14	\$	(1)	\$	150

⁽¹⁾ Includes \$3 million allowance for credit losses on Fund Finance loans and \$1 million on other loans.

⁽²⁾ Related to the sale of leveraged loans in 2023.

		Year Ended December 31, 2022														
	Con	nmercial	and	Financial												
(In millions)		eraged oans		Other Loans ⁽¹⁾		mmercial al Estate		vailable-for- sale securities	Ň	Held-to- Maturity ecurities	-	ff-Balance Sheet mmitments		All Other		Total
Allowance for credit losses:																
Beginning balance	\$	61	\$	12	\$	14	\$	2	\$	_	\$	19	\$	_	\$	108
Charge-offs ⁽²⁾		(6)		_		_		_		_		_		(1)		(7)
Provision		18		(7)		5		_		_		4		_		20
Ending balance	\$	73	\$	5	\$	19	\$	2	\$	_	\$	23	\$	(1)	\$	121

⁽¹⁾ Includes \$3 million allowance for credit losses on Fund Finance loans and \$2 million on other loans.

⁽²⁾ Related to the sale of leveraged loans in 2022.

Loans are reviewed on a regular basis, and any provisions for credit losses that are recorded reflect management's estimate of the amount necessary to maintain the allowance for loan losses at a level considered appropriate to absorb expected credit losses in the loan portfolio. In 2023, we recorded a \$46 million provision for credit losses, compared to \$20 million in 2022, primarily reflecting an increase in loan loss reserves associated with commercial real estate. Allowance estimates remain subject to continued model and economic uncertainty and management may use qualitative adjustments in the allowance estimates. If future data and forecasts deviate relative to the forecasts utilized to determine our allowance for credit losses as of December 31, 2023, or if credit risk migration is higher or lower than forecasted for reasons independent of the economic forecast, our allowance for credit losses will also change.

Note 5. Goodwill and Other Intangible Assets

Goodwill represents the excess of the cost of an acquisition over the fair value of the net tangible and other intangible assets acquired. Other intangible assets represent purchased long-lived intangible assets, primarily client relationships, that can be distinguished from goodwill because of contractual rights or because the asset can be exchanged on its own or in combination with a related contract, asset or liability. Goodwill is not amortized, but is reviewed for impairment annually or more frequently if circumstances arise or events occur that indicate an impairment of the carrying amount may exist. Other intangible assets, which are subject to evaluation for impairment, are mainly related to client relationships, which are amortized on a straight-line basis over periods ranging from five to twenty years, technology assets, which are amortized on a straight-line basis over periods ranging from three to ten years, and core deposit intangible assets, which are amortized on a straight-line basis over periods ranging from sixteen to twenty-two years, with such amortization recorded in other expenses in our consolidated statement of income.

Impairment of goodwill is deemed to exist if the carrying value of a reporting unit, including its allocation of goodwill and other intangible assets, exceeds its estimated fair value. Impairment of other intangible assets is deemed to exist if the balance of the other intangible asset exceeds the cumulative expected undiscounted net cash inflows related to the asset over its remaining estimated useful life. If these reviews determine that goodwill or other intangible assets are impaired, the value of the goodwill or the other intangible asset is written down through a charge to other expenses in our consolidated statement of income. There were no impairments to goodwill or other intangible assets in 2023, 2022 and 2021.

The following table presents changes in the carrying amount of goodwill during the periods indicated:

(In millions)	vestment ervicing	 estment agement	Total
Goodwill:			
Ending balance December 31, 2021	\$ 7,354	\$ 267	\$ 7,621
Acquisitions	3	_	3
Foreign currency translation	 (125)	 (4)	 (129)
Ending balance December 31, 2022	\$ 7,232	\$ 263	\$ 7,495
Acquisitions ⁽¹⁾	44	_	44
Foreign currency translation	 70	 2	 72
Ending balance December 31, 2023	\$ 7,346	\$ 265	\$ 7,611

 $^{\left(1\right)}$ Investment Servicing includes the impact of the consolidation of one of our operations joint ventures in India.

The following table presents changes in the net carrying amount of other intangible assets during the periods indicated:

(In millions)	estment ervicing	estment agement	Total
Other intangible assets:			
Ending balance December 31, 2021	\$ 1,746	\$ 70	\$ 1,816
Amortization	(217)	(21)	(238)
Foreign currency translation	 (34)	 _	 (34)
Ending balance December 31, 2022	\$ 1,495	\$ 49	\$ 1,544
Amortization	(217)	(22)	(239)
Foreign currency translation	15	 —	 15
Ending balance December 31, 2023	\$ 1,293	\$ 27	\$ 1,320

The following tables present the gross carrying amount, accumulated amortization and net carrying amount of other intangible assets by type as of the dates indicated:

December 31, 2023 (In millions)	Gro	oss Carrying Amount	Accumulated Amortization			et Carrying Amount
Other intangible assets:						
Client relationships	\$	2,761	\$	(1,808)	\$	953
Technology		402		(216)		186
Core deposits		690		(516)		174
Other		85		(78)		7
Total	\$	3,938	\$	(2,618)	\$	1,320

December 31, 2022 (In millions)	Gr	oss Carrying Amount	Accumulated Amortization		et Carrying Amount
Other intangible assets:					
Client relationships	\$	2,728	\$ (1,626)	\$	1,102
Technology		402	(178)		224
Core deposits		683	(477)		206
Other		84	(72)		12
Total	\$	3,897	\$ (2,353)	\$	1,544

Amortization expense related to other intangible assets was \$239 million, \$238 million and \$245 million in 2023, 2022 and 2021, respectively.

Expected future amortization expense for other intangible assets recorded as of December 31, 2023 is as follows:

(In millions)	Future Amortization						
Years Ended December 31,							
2024	\$	241					
2025		215					
2026		204					
2027		170					
2028		121					

Note 6. Other Assets

The following table presents the components of other assets as of the dates indicated:

(In millions)	ember 31, 2023	ember 31, 2022
Securities borrowed ⁽¹⁾	\$ 23,131	\$ 16,489
Derivative instruments, net	5,307	7,664
Bank-owned life insurance	3,742	3,649
Collateral, net	2,983	1,833
Investments in joint ventures and other unconsolidated entities ⁽²⁾	2,981	3,245
Receivable for securities settlement	1,082	383
Deferred tax assets, net of valuation allowance ⁽³⁾	1,034	1,127
Right-of-use assets	805	500
Accounts receivable	611	404
Prepaid expenses	598	558
Income taxes receivable	246	235
Deposits with clearing organizations	58	62
Other ⁽⁴⁾	 2,228	 1,753
Total	\$ 44,806	\$ 37,902

⁽¹⁾ Refer to Note 11, for further information on the impact of collateral on our financial statement presentation of securities borrowing and securities lending transactions.

(2) Includes equity securities without readily determinable fair values that are accounted for under the ASC 321 measurement alternative of \$183 million and \$179 million as of December 31, 2023 and 2022, respectively. For the year ended December 31, 2023, \$5 million of impairments were recognized in other fee revenue related to such equity securities.

 $^{\rm (3)}$ Deferred tax assets and liabilities recorded in our consolidated statement of condition are netted within the same tax jurisdiction.

 $^{(4)}$ Includes advances of \$1.15 billion and \$1.20 billion as of December 31, 2023 and 2022, respectively.

Note 7. Deposits

We had \$5.80 billion and \$2.98 billion of time deposits outstanding, of which \$0.06 billion and \$0.10 billion were non-U.S. time deposits as of December 31, 2023 and 2022, respectively. Time deposits included amounts in excess of the FDIC insurance limits, or other uninsured accounts not subject to any country specific deposit insurance limits, of \$5.79 billion and \$2.97 billion as of December 31, 2023 and 2022, respectively. As of December 31, 2023, uninsured time deposits of \$4.13 billion were scheduled to mature in less than three months, \$1.66 billion in three to six months, and nil in six to twelve months. Demand deposit overdrafts of \$2.27 billion and \$2.80 billion were included as loan balances at December 31, 2023 and 2022, respectively.

Note 8. Short-Term Borrowings

Our short-term borrowings include federal funds purchased, securities sold under repurchase agreements, short-term borrowings associated with our tax-exempt investment program and other short-term borrowings.

Collectively, short-term borrowings had weighted-average interest rates of 1.52% and 0.83% in 2023 and 2022, respectively.

The following tables present information with respect to the amounts outstanding and weighted-average interest rates of the primary components of our short-term borrowings as of and for the years ended December 31:

(Dollars in millions)	Securities Sold Under Repurchase Agreements Federal Fund											nds Purchased		
	2023			2022	2021		2023			2022		2021		
Balance as of December 31	\$	1,867	\$	1,177	\$	1,575	\$	1,000	\$		\$	_		
Maximum outstanding as of any month-end		4,690		11,517		1,575		1,000		—		_		
Average outstanding during the year		3,904		3,633		667		65		_		—		
Weighted-average interest rate as of year-end		.08 %		2.31 %		.00 %		2.03 %		.00 %		.00 %		
Weighted-average interest rate during the year		.87		.39		(.00)		4.82		_		—		

		Ir	-Exempt ent Progra	am			Other	
(Dollars in millions)	2	2023	2022		2021	 2023	2022	2021
Balance as of December 31	\$	_	\$ _	\$	_	\$ 2,500	\$ 2,000	\$ _
Maximum outstanding as of any month-end		_	_		616	4,500	8,525	_
Average outstanding during the year		_	_		523	784	696	315
Weighted-average interest rate as of year-end		— %	— %		— %	3.43 %	4.18 %	.00 %
Weighted-average interest rate for the year		—	_		.31	5.15	.01	_

Obligations to repurchase securities sold are recorded as a liability in our consolidated statement of condition. Applicable securities with a fair value of \$1.72 billion underlying the repurchase agreements remained in our investment securities portfolio as of December 31, 2023.

The following table presents information about these securities and the carrying value of the related repurchase agreements, including accrued interest, as of December 31, 2023.

		Repurchase Agreements ⁽¹⁾				
(In millions)	Amortized Cost		Fair Value		Amortized Cost	
Term maturity ⁽²⁾	\$	1,407	\$	1,360	\$	1,360
Overnight maturity		364		359		507
Total	\$	1,771	\$	1,719	\$	1,867

⁽¹⁾ Collateralized by investment securities.

⁽²⁾ Maturity is greater than 90 days.

We maintain an agreement with a clearing organization (FICC) that enables us to net securities purchased under resale agreements and sold under repurchase agreements with counterparties that are also members of the clearing organization when specific netting criteria are met. The impact of this netting was \$140.36 billion on average in 2023 compared to \$71.02 billion in 2022, primarily due to higher FICC repo volumes.

State Street Bank currently maintains a line of credit of CAD \$1.40 billion, or approximately \$1.06 billion, as of December 31, 2023, to support its Canadian securities processing operations. The line of credit has no stated termination date and is cancellable by either party with prior notice. As of both December 31, 2023 and 2022, there was no balance outstanding on this line of credit.

Note 9. Long-Term Debt

Dollars in millions)					As of Dec	ember 31,
Issuance Date	Maturity Date	Coupon Rate	Seniority	Interest Due Dates	2023	2022
arent Company and No	n-Banking Subsidiary Issu	ances				
August 18, 2015	August 18, 2025 ⁽³⁾	3.550 %	Senior notes	2/18; 8/18 ⁽¹⁾	\$ 1,265	\$ 1,256
August 3, 2023	August 3, 2026	5.272 %	Senior notes	2/3; 8/3 ⁽¹⁾	1,211	-
May 18, 2023	May 18, 2026	5.104 %	Fixed-to-floating rate senior notes	5/18; 11/18	998	-
May 18, 2023	May 18, 2034	5.159 %	Fixed-to-floating rate senior notes	5/18; 11/18	995	-
November 21, 2023	November 21, 2029	5.684 %	Fixed-to-floating rate senior notes	5/21; 11/21	995	-
December 15, 2014	December 16, 2024 ⁽³⁾	3.300 %	Senior notes	6/16; 12/16 ⁽¹⁾	977	962
November 1, 2019	November 1, 2025	2.354 %	Fixed-to-floating rate senior notes	5/1; 11/1 ⁽¹⁾	972	951
March 3, 2021	March 3, 2031 ⁽²⁾⁽³⁾	2.200 %	Senior subordinated notes	3/3; 9/3	845	844
January 24, 2020	January 24, 2030 ⁽³⁾	2.400 %	Senior notes	1/24, 7/24 ⁽¹⁾	790	797
January 26, 2023	January 26, 2034	4.821 %	Fixed-to-floating rate senior notes	1/26, 7/26 ⁽¹⁾	731	-
May 19, 2016	May 19, 2026 ⁽³⁾	2.650 %	Senior notes	5/19; 11/19 ⁽¹⁾	719	709
August 4, 2022	August 4, 2033	4.164 %	Fixed-to-floating rate senior notes	2/4; 8/4 ⁽¹⁾	687	677
February 7, 2022	February 7, 2028	2.203 %	Fixed-to-floating rate senior notes	2/7; 8/7 ⁽¹⁾	605	589
December 3, 2018	December 3, 2029	4.141 %	Fixed-to-floating rate senior notes	6/3; 12/3 ⁽¹⁾	556	564
November 1, 2019	November 1, 2034 ⁽²⁾	3.031 %	Fixed-to-floating rate senior subordinated notes	5/1; 11/1 ⁽¹⁾	528	532
April 30, 2007	June 15, 2047	Floating-rate	Junior subordinated debentures	3/15; 6/15; 9/15; 12/15	500	500
November 4, 2022	November 4, 2026	5.751 %	Fixed-to-floating rate senior notes	5/4; 11/4 ⁽¹⁾	497	498
March 30, 2020	March 30, 2031	3.152 %	Fixed-to-floating rate senior notes	3/30, 9/30	498	498
November 4, 2022	November 4, 2028	5.820 %	Fixed-to-floating rate senior notes	5/4; 11/4 ⁽¹⁾	497	497
May 13, 2022	May 13, 2033	4.421 %	Fixed-to-floating rate senior notes	5/13; 11/13	497	497
November 21, 2023	November 21, 2034 ⁽²⁾	6.123 %	Fixed-to-floating rate senior subordinated notes	5/21; 11/21	497	-
November 18, 2021	November 18, 2027	1.684 %	Fixed-to-floating rate senior notes	5/18; 11/18 ⁽¹⁾	496	497
January 26, 2023	January 26, 2026	4.857 %	Fixed-to-floating rate senior notes	1/26, 7/26 ⁽¹⁾	496	_
March 30, 2020	March 30, 2026	2.901 %	Fixed-to-floating rate senior notes	3/30; 9/30 ⁽¹⁾	485	473
February 7, 2022	February 7, 2033	2.623 %	Fixed-to-floating rate senior notes	2/7; 8/7 ⁽¹⁾	476	466
August 3, 2023	August 3, 2026	Floating-rate	Senior notes	2/3; 5/3; 8/3; 11/3	299	-
February 7, 2022	February 6, 2026	1.746 %	Fixed-to-floating rate senior notes	2/6; 8/6 ⁽¹⁾	290	280
June 21, 1996	June 15, 2026 ⁽³⁾	7.350 %	Senior notes	6/15; 12/15	150	150
May 15, 1998	May 15, 2028	Floating-rate	Junior subordinated debentures	2/15; 5/15; 8/15; 11/15	100	100
May 15, 2013	May 15, 2023 ⁽²⁾	3.100 %	Subordinated notes	5/15; 11/15 ⁽¹⁾	_	1,006
November 19, 2013	November 20, 2023	3.700 %	Senior notes	5/20; 11/20 ⁽¹⁾	_	988
December 3, 2018	December 3, 2024 ⁽⁴⁾	3.776 %	Fixed-to-floating rate senior notes	6/3; 12/3 ⁽¹⁾	_	492

Long-term finance leases and equipment financing	 187	176
Total long-term debt	\$ 18,839	\$ 14,996

⁽¹⁾ We have entered into interest rate swap agreements, recorded as fair value hedges, to modify our interest expense on these senior and subordinated notes from a fixed rate to a floating rate. As of December 31, 2023 and 2022, the carrying value of long-term debt associated with these fair value hedges was \$184 million and \$282 million, respectively. Refer to Note 10 for additional information about fair value hedges.

⁽²⁾ The subordinated notes qualify for inclusion in tier 2 regulatory capital under current federal regulatory capital guidelines.

⁽³⁾ We may not redeem notes prior to their maturity.

⁽⁴⁾ We redeemed the notes prior to original maturity date.

Parent Company and Banking Subsidiaries

As of December 31, 2023 and 2022, long-term finance leases related to information technology equipment was \$130 million and \$176 million, respectively. Refer to Note 20 for additional information.

Note 10. Derivative Financial Instruments

We use derivative financial instruments to support our clients' needs and to manage our interest rate, currency and other market risks. These financial instruments consist of FX contracts such as forwards, futures and options contracts; interest rate contracts such as interest rate swaps (cross currency and single currency) and futures; and other derivative contracts. Derivative instruments used for risk management purposes that are highly effective in offsetting the risk being hedged are generally designated as hedging instruments in hedge accounting relationships, while others are economic hedges and not designated in hedge accounting relationships. Derivatives in hedge accounting relationships are disclosed according to the type of hedge, such as, fair value, cash flow, or net investment. Derivatives designated as hedging instruments in hedge accounting relationships are carried at fair value with change in fair value recognized in the consolidated statement of income comprehensive income or other (OCI), as appropriate. Derivatives not designated in hedge accounting relationships include those derivatives entered into to support client needs and derivatives used to manage interest rate, currency and other market risks associated with certain assets and liabilities. Such derivatives are carried at fair value with changes in fair value recognized in the consolidated statement of income.

Derivatives Not Designated as Hedging Instruments

We provide foreign exchange forward contracts and options in support of our client needs, and also act as a dealer in the currency markets. As part of our trading activities, we assume positions in both the foreign exchange and interest rate markets by buying and selling cash instruments and using derivative financial instruments, including foreign exchange forward contracts, foreign exchange and interest rate options, interest rate forward contracts, and interest rate futures. The entire change in the fair value of derivatives utilized in our trading activities are recorded in foreign exchange trading services revenue. We also utilize derivatives in our asset-andliability management activities and manage other market risks. The entire change in fair value of such derivatives are recorded in net interest income and other fee revenue, respectively.

We enter into stable value wrap derivative contracts with unaffiliated stable value funds that allow a stable value fund to provide book value coverage to its participants. These derivatives contracts qualify as guarantees as described in Note 12. We grant deferred cash awards to certain of our employees as part of our employee incentive compensation plans. We account for these awards as derivative financial instruments, as the underlying referenced shares are not equity instruments of ours. The fair value of these derivatives is referenced to the value of units in State Street-sponsored investment funds or funds sponsored by other unrelated entities. We re-measure these derivatives to fair value quarterly, and record the change in value in compensation and employee benefits expenses in our consolidated statement of income.

Derivatives Designated as Hedging Instruments

In connection with our asset-and-liability management activities, we use derivative financial instruments to manage our interest rate risk and foreign currency risk for certain assets and liabilities. At both the inception of the hedge and on an ongoing basis, we formally assess and document the effectiveness of a derivative designated in a hedging relationship and the likelihood that the derivative will be an effective hedge in future periods. We discontinue hedge accounting prospectively when we determine that the derivative is no longer highly effective in offsetting changes in fair value or cash flows of the underlying risk being hedged, the derivative expires, terminates or is sold, or management discontinues the hedge designation.

The risk management objective of a highly effective hedging strategy that gualifies for hedge accounting must be formally documented. The hedge documentation includes the derivative hedging instrument, the asset or liability or forecasted transaction, type of risk being hedged and method for assessing hedge effectiveness of the derivative prospectively and retrospectively. We use quantitative including regression methods analysis and cumulative dollar offset method, comparing the change in the fair value of the derivative to the change in fair value or the cash flows of the hedged item. We may also utilize gualitative methods such as matching critical terms and evaluation of any changes in those critical terms. Effectiveness is assessed and documented quarterly and if determined that the derivative is not highly effective at hedging the designated risk hedge accounting is discontinued.

Fair Value Hedges

Derivatives designated as fair value hedges are utilized to mitigate the risk of changes in the fair values of recognized assets and liabilities, including long-term debt and AFS securities. We use interest rate contracts in this manner to manage our exposure to changes in the fair value of hedged items caused by changes in interest rates.

Changes in the fair value of the derivative and changes in fair value of the hedged item due to changes in the hedged risk are recognized in earnings in the same line item. If a hedge is terminated, but the hedged item was not derecognized, all remaining adjustments to the carrying amount of the hedged item are amortized over a period that is consistent with the amortization of other discounts or premiums associated with the hedged item.

Cash Flow Hedges

Derivatives designated as cash flow hedges are utilized to offset the variability of cash flows of recognized assets, liabilities or forecasted transactions. We have entered into FX contracts to hedge the change in cash flows attributable to FX movements in foreign currency denominated investment securities. Additionally, we have entered into interest rate swap agreements to hedge the forecasted cash flows associated with EURIBOR indexed floating-rate loans and Interest Rate on Reserve Balances (IORB) indexed floating-rate cash deposits held across the Federal Reserve Bank system. The interest rate swaps synthetically convert the loan interest receipts from a variable-rate to a fixed-rate, thereby mitigating the risk attributable to changes in the EURIBOR and IORB.

Changes in fair value of the derivatives designated as cash flow hedges are initially recorded in AOCI and then reclassified into earnings in the same period or periods during which the hedged forecasted transaction affects earnings and are presented in the same income statement line item as the earnings effect of the hedged item. If the hedge relationship is terminated, the change in fair value on the derivative recorded in AOCI is reclassified into earnings consistent with the timing of the hedged item. For hedge relationships that are discontinued because a forecasted transaction is not expected to occur according to the original hedge terms, any related derivative values recorded in AOCI are immediately recognized in earnings. The net loss associated with cash flow hedges expected to be reclassified from AOCI within 12 months of December 31, 2023 is approximately \$191 million. The maximum length of time over which forecasted cash flows are hedged is 5 years.

Net Investment Hedges

Derivatives categorized as net investment hedges are entered into to protect the net investment in our foreign operations against adverse changes in exchange rates. We use FX forward contracts to convert the foreign currency risk to U.S. dollars to mitigate our exposure to fluctuations in FX rates. The changes in fair value of the FX forward contracts are recorded, net of taxes, in the foreign currency translation component of OCI.

The following table presents the aggregate contractual, or notional, amounts of derivative financial instruments including those entered into for trading and asset-and-liability management activities as of the dates indicated:

(In millions)	December 31, 2023	December 31, 2022
Derivatives not designated as hedging instruments:		
Interest rate contracts:		
Futures	\$ 12,668	\$ 8,683
Foreign exchange contracts:		
Forward, swap and spot	2,528,115	2,267,221
Options purchased	851	607
Options written	544	445
Futures	197	1,550
Other:		
Futures	125	_
Stable value contracts ⁽¹⁾	28,704	31,391
Deferred value awards ⁽²⁾	289	300
Derivatives designated as hedging instruments:		
Interest rate contracts:		
Swap agreements	20,333	22,566
Foreign exchange contracts:		
Forward and swap	9,777	8,213

⁽¹⁾ The notional value of the stable value contracts represents our maximum exposure. However, exposure to various stable value contracts is generally contractually limited to substantially lower amounts than the notional values.

Notional amounts are provided here as an indication of the volume of our derivative activity and serve as a reference to calculate the fair values of the derivative.

⁽²⁾ Represents grants of deferred value awards to employees; refer to discussion in this note under "Derivatives Not Designated as Hedging Instruments."

The following table presents the fair value of derivative financial instruments, excluding the impact of master netting agreements, recorded in our consolidated statement of condition as of the dates indicated. Fair value measurement for derivatives is further discussed in Note 2, and the impact of master netting agreements is provided in Note 11.

	Derivativ	e Assets ⁽¹⁾	Derivative	Liabilities ⁽²⁾		
(In millions)	December 31, 2023	December 31, 2022	December 31, 2023	December 31, 2022		
Derivatives not designated as hedging instruments:						
Foreign exchange contracts	\$ 19,498	\$ 26,081	\$ 19,153	\$ 25,407		
Other derivative contracts			182	216		
Total	\$ 19,498	\$ 26,081	\$ 19,335	\$ 25,623		
Derivatives designated as hedging instruments:						
Foreign exchange contracts	\$ 196	\$ 105	\$ 263	\$ 342		
Interest rate contracts	13		4	1		
Total	\$ 209	\$ 105	\$ 267	\$ 343		

⁽¹⁾ Derivative assets are included within other assets in our consolidated statement of condition.

⁽²⁾ Derivative liabilities are included within other liabilities in our consolidated statement of condition.

The following table presents the impact of our use of derivative financial instruments on our consolidated statement of income for the periods indicated:

			Yea	rs Ended Decembe	r 31,
			2023	2022	2021
(In millions)	Location of Gain (Loss) on Derivative in Consolidated Statement of Income	Ar		(Loss) on Derivativ dated Statement of	
Derivatives not designated as hedging instruments:					
Foreign exchange contracts	Foreign exchange trading services revenue	\$	803	\$ 938	\$ 811
Foreign exchange contracts	Interest expense		(54)	(20)	68
Interest rate contracts	Foreign exchange trading services revenue		(2)	3	3
Other Derivative contracts	Other fee revenue		(3)	—	_
Interest rate contracts	Other fee revenue		_	1	_
Other derivative contracts ⁽¹⁾	Compensation and employee benefits		(121)	(89)	(332)
Total		\$	623	\$ 833	\$ 550

⁽¹⁾ Amount in 2021 reflects a deferred compensation expense acceleration of \$147 million associated with an amendment of certain outstanding cash settled deferred incentive compensation awards.

The following tables show the carrying amount and associated cumulative basis adjustments related to the application of hedge accounting that is included in the carrying amount of hedged assets and liabilities in fair value hedging relationships:

	December 31, 2023										
		Cumulative Fair Value Hed (Decreasing) the									
(In millions)		mount of Hedged s/Liabilities		Active	De-designated ⁽¹⁾						
Long-term debt	\$	12,463	\$	(340)	\$	156					
Available-for-sale securities ⁽²⁾⁽³⁾		11,260		3							
				December 31, 2022							
			c	Cumulative Fair Value Hedg (Decreasing) the							
(In millions)		mount of Hedged s/Liabilities		Active		De-designated ⁽¹⁾					
Long-term debt	\$	12,513	\$	(644)	\$	362					
Available-for-sale securities ⁽²⁾⁽³⁾		9,801		(675)		8					

⁽¹⁾ Represents hedged items no longer designated in qualifying fair value hedging relationships for which an associated basis adjustment exists at the balance sheet date.

⁽³⁾ Carrying amount represents amortized cost.

⁽²⁾ Included in these amounts is the amortized cost of the financial assets designated in under the portfolio layer hedging relationships (hedged item is the hedged layer of a closed portfolio of financial assets expected to remain outstanding at the end of the hedging relationship). At December 31, 2023 and 2022, the amortized cost of the closed portfolios used in these hedging relationships was \$685 million and \$207 million, respectively, of which \$400 million and \$64 million, respectively, was designated under the portfolio layer hedging relationship. At December 31, 2023 and 2022, the cumulative adjustment associated with these hedging relationships was \$68 million, respectively.

As of December 31, 2023 and 2022, the total notional amount of the interest rate swaps of fair value hedges was \$19.43 billion and \$20.32 billion, respectively.

The following tables present the impact of our use of derivative financial instruments on our consolidated statement of income for the periods indicated:

			_	Yea	rs Er	nded E	Decei	mbei	31,					Y	'ears E	nded	Decen	nber 31,
				202	23	202	2	20)21					2	2023	202	22	2021
(In millions)	Gain (Deriv Cons	ation of Loss) on vative in olidated nt of Incon	ne	Amount of Gain (Loss) on Derivative I Recognized in Consolidated Statement of Income		Hedged Item in (Lo Fair Value Hedg Hedging Cons		ation of Gain (Loss) on dged Item in onsolidated nent of Income			(Lo Item C	nount ss) on Reco onsol ment	jed d in l					
Derivatives designated as fair value hedges:																		
Interest rate contracts	Net intere	st income	:	\$ ([,]	164)	\$ 6	676	\$	14	Available-for- sale securities	Net intere	est inco	ome	\$	164	\$ (676)	\$ (19)
Interest rate contracts	Net intere	st income		2	202	(1,1	60)		(76)	Long-term debt	Net intere	est inco	ome		(202)	1,	160	75
Total			:	\$	38	\$ (4	84)	\$	(62)					\$	(38)	\$ 4	184	\$ 56
(In millions)		2023 Amoun Other Co	t of G	ain	202: or (Le	oss) R	ecog	202 gnize	d in	Location of 0 (Loss) Recla from Accum Other Compre Income into I	ssified ulated hensive	Amo	2023 ount of Ga Accumula	ain		2 ss) Re r Com	classi prehe	2021 ified from
Derivatives designated as flow hedges:	cash .	Other Co	inpre	nena	Sivei	nconie	e on	Den	valive		lincome						ine	
Interest rate contracts		\$	14	\$		(598)	\$		(78)	Net interest inco	me	\$	(210)) {	5	(43)	\$	84
Foreign exchange contracts			91			156			91	Net interest inco	me		2			92		11
Total derivatives designated flow hedges	as cash	\$	105	\$		(442)	\$		13			\$	(208)) {	6	49	\$	95
Derivatives designated as investment hedges:	net																	
Foreign exchange contracts		\$	(89)	\$		291	\$		272			\$	_	ę	6	_	\$	_
Total derivatives designated investment hedges	as net		(89)			291			272							_		_
Total	-	\$	16	\$		(151)	\$		285			\$	(208)	9	5	49	\$	95

Derivatives Netting and Credit Contingencies

Netting

Derivatives receivable and payable as well as cash collateral from the same counterparty are netted in the consolidated statement of condition for those counterparties with whom we have legally binding master netting agreements in place. In addition to cash collateral received and transferred presented on a net basis, we also receive and transfer collateral in the form of securities, which mitigate credit risk but are not eligible for netting. Additional information on netting is provided in Note 11.

Credit Contingencies

Certain of our derivatives are subject to master netting agreements with our derivative counterparties containing credit risk-related contingent features, which requires us to maintain an investment grade credit rating with the various credit rating agencies. If our rating falls below investment grade, we would be in violation of the provisions, and counterparties to the derivatives could request immediate payment or demand full overnight collateralization on derivatives instruments in liability positions. The aggregate fair value of all derivatives with credit contingent features and in a net liability position as of December 31, 2023 totaled approximately \$3.06 billion, against which we provided \$1.15 billion of collateral in the normal course of business. If our credit related contingent features underlying these agreements were triggered as of December 31, 2023, the maximum additional collateral we would be required to post to our counterparties is approximately \$1.91 billion.

Note 11. Offsetting Arrangements

Certain of our transactions are subject to master netting agreements that allow us to net receivables and payables by contract and settlement type. For those legally enforceable contracts, we net receivables and payables with the same counterparty on our statement of condition.

In addition to netting receivables and payables with our derivatives counterparty where a legal and enforceable netting arrangement exists, we also net related cash collateral received and transferred up to the fair value exposure amount.

With respect to our securities financing arrangements, we net balances outstanding on our consolidated statement of condition for those transactions that met the netting requirements and were transacted under a legally enforceable netting arrangement with the counterparty.

Securities received as collateral under securities financing or derivatives transactions can be transferred as collateral in many instances. The securities received as proceeds under secured lending transactions are recorded at a value that approximates fair value in other assets in our consolidated statement of condition with a related liability to return the collateral, if we have the right to transfer or re-pledge the collateral.

As of December 31, 2023 and 2022, the value of securities received as collateral from third parties where we are permitted to transfer or re-pledge the securities totaled \$10.67 billion and \$8.14 billion, respectively, and the fair value of the portion that had been transferred or re-pledged as of the same dates was \$6.41 billion and \$3.63 billion, respectively.

The following tables present information about the offsetting of assets related to derivative contracts and secured financing transactions, as of the dates indicated:

Assets:	December 31, 2023												
						Gross Amounts Not Offset in Statement of Condition							
(In millions)	of R			Gross Amounts Offset in Statement of Condition ⁽³⁾		ssets Presented in Statement of Condition		Cash and Securities Received ⁽⁴⁾	Net	t Amount ⁽⁵⁾			
Derivatives:													
Foreign exchange contracts	\$	19,694	\$	(10,496)	\$	9,198	\$	_	\$	9,198			
Interest rate contracts ⁽⁶⁾		13		_		13		_		13			
Cash collateral and securities netting		NA		(3,904)		(3,904)		(1,069)		(4,973)			
Total derivatives		19,707		(14,400)		5,307		(1,069)		4,238			
Other financial instruments:													
Resale agreements and securities borrowing ⁽⁷⁾⁽⁸⁾		230,384		(200,561)		29,823		(28,016)		1,807			
Total derivatives and other financial instruments	\$	250,091	\$	(214,961)	\$	35,130	\$	(29,085)	\$	6,045			

Assets:	December 31, 2022											
		Gross Amounts Not Offset Statement of Condition										
(In millions)	of Re	of Recognized Offse		Gross Amounts Offset in Statement of Condition ⁽³⁾		ssets Presented in Statement of Condition		Cash and Securities Received ⁽⁴⁾	Net Amount ⁽⁵			
Derivatives:												
Foreign exchange contracts	\$	26,186	\$	(15,224)	\$	10,962	\$	_	\$	10,962		
Interest rate contracts ⁽⁶⁾		_		_		_		_		_		
Cash collateral and securities netting		NA		(3,298)		(3,298)		(1,717)		(5,015)		
Total derivatives		26,186		(18,522)		7,664		(1,717)		5,947		
Other financial instruments:												
Resale agreements and securities borrowing ⁽⁷⁾⁽⁸⁾		125,797		(104,093)		21,704		(20,960)		744		
Total derivatives and other financial instruments	\$	151,983	\$	(122,615)	\$	29,368	\$	(22,677)	\$	6,691		

⁽¹⁾ Amounts include all transactions regardless of whether or not they are subject to an enforceable netting arrangement.

⁽²⁾ Refer to Note 1 and Note 2 for additional information about the measurement basis of derivative instruments.

⁽³⁾ Amounts subject to netting arrangements which have been determined to be legally enforceable and eligible for netting in the consolidated statement of condition.

⁽⁴⁾ Includes securities in connection with our securities borrowing transactions.

⁽⁵⁾ Includes amounts secured by collateral not determined to be subject to enforceable netting arrangements.

⁽⁶⁾ Variation margin payments presented as settlements rather than collateral.

⁽⁷⁾ Included in the \$29.82 billion as of December 31, 2023 were \$6.69 billion of resale agreements and \$23.13 billion of collateral provided related to securities borrowing. Included in the \$21.70 billion as of December 31, 2022 were \$5.21 billion of resale agreements and \$16.49 billion of collateral provided related to securities borrowing. Resale agreements and collateral provided related to securities borrowing were recorded in securities purchased under resale agreements and other assets, respectively, in our consolidated statement of condition. Refer to Note 12 for additional information with respect to principal securities finance transactions.

⁽⁸⁾ Offsetting of resale agreements primarily relates to our involvement in FICC, where we settle transactions on a net basis for payment and delivery through the Fedwire system.

NA Not applicable

The following tables present information about the offsetting of liabilities related to derivative contracts and secured financing transactions, as of the dates indicated:

Liabilities:	December 31, 2023												
							Gross Amounts Not Offset in Statement of Condition						
(In millions)	Rec	Amounts of cognized vilities ⁽¹⁾⁽²⁾	Offset	ss Amounts in Statement of ondition ⁽³⁾	Lial	Net Amounts of bilities Presented in tement of Condition		Cash and Securities Received ⁽⁴⁾	N	et Amount ⁽⁵⁾			
Derivatives:													
Foreign exchange contracts	\$	19,416	\$	(10,496)	\$	8,920	\$	_	\$	8,920			
Interest rate contracts ⁽⁶⁾		4		_		4		_		4			
Other derivative contracts		182		_		182		_		182			
Cash collateral and securities netting		NA		(1,413)		(1,413)		(633)		(2,046)			
Total derivatives		19,602		(11,909)		7,693		(633)		7,060			
Other financial instruments:													
Repurchase agreements and securities lending ⁽⁷⁾⁽⁸⁾		214,362		(200,561)		13,801		(13,306)		495			
Total derivatives and other financial instruments	\$	233,964	\$	(212,470)	\$	21,494	\$	(13,939)	\$	7,555			

Liabilities:	December 31, 2022										
	Gros	s Amounts of	Gro	oss Amounts Offset		Gross Amounts M Statement of C					
(In millions)	R	cognized bilities ⁽¹⁾⁽²⁾		in Statement of Condition ⁽³⁾	Liabilities Presented in Statement of Condition			sh and Securities Received ⁽⁴⁾	Net Amount ⁽⁵⁾		
Derivatives:											
Foreign exchange contracts	\$	25,749	\$	(15,224)	\$	10,525	\$	_	\$	10,525	
Interest rate contracts ⁽⁶⁾		1		_		1		_		1	
Other derivative contracts		216		_		216		_		216	
Cash collateral and securities netting		NA		(2,727)		(2,727)		(908)		(3,635)	
Total derivatives		25,966		(17,951)		8,015		(908)		7,107	
Other financial instruments:											
Repurchase agreements and securities lending ⁽⁷⁾⁽⁸⁾		111,653		(104,093)		7,560		(6,433)		1,127	
Total derivatives and other financial instruments	\$	137,619	\$	(122,044)	\$	15,575	\$	(7,341)	\$	8,234	

⁽¹⁾ Amounts include all transactions regardless of whether or not they are subject to an enforceable netting arrangement.

⁽²⁾ Refer to Note 1 and Note 2 for additional information about the measurement basis of derivative instruments.

⁽³⁾ Amounts subject to netting arrangements which have been determined to be legally enforceable and eligible for netting in the consolidated statement of condition.

⁽⁴⁾ Includes securities provided in connection with our securities lending transactions.

⁽⁵⁾ Includes amounts secured by collateral not determined to be subject to enforceable netting arrangements.

⁽⁶⁾ Variation margin payments presented as settlements rather than collateral.

⁽⁷⁾ Included in the \$13.80 billion as of December 31, 2023 were \$1.87 billion of repurchase agreements and \$11.93 billion of collateral received related to securities lending transactions. Included in the \$7.56 billion as of December 31, 2022 were \$1.18 billion of repurchase agreements and \$6.38 billion of collateral received related to securities lending transactions. Repurchase agreements and collateral received related to securities lending were recorded in securities sold under repurchase agreements and accrued expenses and other liabilities, respectively, in our consolidated statement of condition. Refer to Note 12 for additional information with respect to principal securities finance transactions.

⁽⁸⁾ Offsetting of repurchase agreements primarily relates to our involvement in FICC, where we settle transactions on a net basis for payment and delivery through the Fedwire system.

NA Not applicable

The securities transferred under resale and repurchase agreements typically are U.S. Treasury, agency and agency MBS. In our principal securities borrowing and lending arrangements, the securities transferred are predominantly equity securities and some corporate debt securities. The fair value of the securities transferred may increase in value to an amount greater than the amount received under our repurchase and securities lending arrangements, which exposes us to counterparty risk. We require the review of the price of the underlying securities in relation to the carrying value of the repurchase agreements and securities lending arrangements on a daily basis and when appropriate, adjust the cash or security to be obtained or returned to counterparties that is reflective of the required collateral levels.

The following table summarizes our repurchase agreements and securities lending transactions by category of collateral pledged and remaining maturity of these agreements as of the periods indicated:

	 As of December 31, 2023									As of December 31, 2022								
(In millions)	vernight and ntinuous		to 30 ays)-90 ays	tř	reater nan 90 Days	Total		Overnight and ontinuous		o to 30 Days	-	0-90 Jays	th	reater an 90 Days	Total	
Repurchase agreements:																		
U.S. Treasury and agency securities	\$ 196,212	\$	_	\$	185	\$	1,360	\$ 197,757	\$	100,899	\$	_	\$	200	\$	_	\$ 101,099	
Non-US sovereign debt	 _		_		_		_			702		—		_		—	702	
Total	 196,212				185		1,360	197,757		101,601		_		200			101,801	
Securities lending transactions:																		
US Treasury and agency securities	6		_		_		_	6		44		_		_		_	44	
Corporate debt securities	278		_		3		_	281		67		—		—		_	67	
Equity securities	7,128		20		13		2,291	9,452		4,509		_		_		1,606	6,115	
Other ⁽¹⁾	 6,866		_		_		_	6,866		3,626		—		_		—	3,626	
Total	14,278		20		16		2,291	16,605		8,246		_		_		1,606	9,852	
Gross amount of recognized liabilities for repurchase agreements and securities lending	\$ 210,490	\$	20	\$	201	\$	3,651	\$ 214,362	\$	109,847	\$		\$	200	\$	1,606	\$ 111,653	

(1) Represents a security interest in underlying client assets related to our prime services business, which assets clients have allowed us to transfer and re-pledge.

Note 12. Commitments and Guarantees

The following table presents the aggregate gross contractual amounts of our off-balance sheet commitments and guarantees, as of the dates indicated:

(In millions)	De	ecember 31, 2023	De	ecember 31, 2022
Commitments:				
Unfunded credit facilities	\$	34,197	\$	31,208
Guarantees ⁽¹⁾ :				
Indemnified securities financing	\$	279,916	\$	348,924
Standby letters of credit	\$	1,510	\$	2,125

⁽¹⁾ The potential losses associated with these guarantees equal the gross contractual amounts and do not consider the value of any collateral or reflect any participations to independent third parties.

Unfunded Credit Facilities

Unfunded credit facilities consist primarily of liquidity facilities provided to our fund and municipal counterparties, as well as commitments to purchase commercial real estate and leveraged loans that have not yet settled.

As of December 31, 2023, approximately 75% of our unfunded commitments to extend credit expire within one year. Since many of these commitments are expected to expire or renew without being drawn upon, the gross contractual amounts do not necessarily represent our future cash requirements.

Indemnified Securities Financing

On behalf of our clients, we lend their securities, as agent, to brokers and other institutions. In most circumstances, we indemnify our clients for the fair market value of those securities against a failure of the borrower to return such securities. We require the borrowers to maintain collateral in an amount in excess of 100% of the fair market value of the securities borrowed. Securities on loan and the collateral are revalued daily to determine if additional collateral is necessary or if excess collateral is required to be returned to the borrower. Collateral received in connection with our securities lending services is held by us as agent and is not recorded in our consolidated statement of condition.

The cash collateral held by us as agent is invested on behalf of our clients. In certain cases, the cash collateral is invested in third-party repurchase agreements, for which we indemnify the client against the loss of the principal invested. We require the to the indemnified repurchase counterparty agreement to provide collateral in an amount in excess of 100% of the amount of the repurchase agreement. In our role as agent, the indemnified repurchase agreements and the related collateral held by us are not recorded in our consolidated statement of condition.

The following table summarizes the aggregate fair values of indemnified securities financing and related collateral, as well as collateral invested in indemnified repurchase agreements, as of the dates indicated:

(In millions)	Dec	ember 31, 2023	Dec	ember 31, 2022
Fair value of indemnified securities financing	\$	279,916	\$	348,924
Fair value of cash and securities held by us, as agent, as collateral for indemnified securities financing		293,855		366,895
Fair value of collateral for indemnified securities financing invested in indemnified repurchase agreements		59,028		54,114
Fair value of cash and securities held by us or our agents as collateral for investments in indemnified repurchase agreements		63,105		57,903

In certain cases, we participate in securities finance transactions as a principal. As a principal, we borrow securities from the lending client and then lend such securities to the subsequent borrower, either our client or a broker/dealer. Our right to receive and obligation to return collateral in connection with our securities lending transactions are recorded in other assets and other liabilities, respectively, in our consolidated statement of condition. As of December 31, 2023 and 2022, we had approximately \$23.13 billion and \$16.49 billion, respectively, of collateral provided and approximately \$11.93 billion and \$6.38 billion, respectively, of collateral received from clients in connection with our participation in principal securities finance transactions.

Stable Value Protection

Stable value funds wrapped by us are high quality diversified portfolios of short intermediate duration fixed-income investments. Stable value contracts are derivative contracts that also qualify as guarantees. The notional amount under non-hedging derivatives, provided in Note 10, generally represents our maximum exposure under these derivatives contracts. However, exposure to various stable value contracts is contractually limited to substantially lower amounts than the notional values, which represent the total assets of the stable value funds.

Standby Letters of Credit

Standby letters of credit provide credit enhancement to our municipal clients to support the issuance of capital markets financing.

FICC Guarantee

As a sponsoring member in the FICC member program, we provide a guarantee to FICC in the event a customer fails to perform its obligations under a transaction. In order to minimize the risk associated with this guarantee, sponsored members acting as buyers generally grant a security interest in the subject securities received under and held on their behalf by State Street.

Additionally, as a member of certain industry clearing and settlement exchanges, we may be required to pay a pro rata share of the losses incurred by the organization and provide liquidity support in the event of the default of another member to the extent that the defaulting member's clearing fund obligation and the prescribed loss allocation is depleted. It is difficult to estimate our maximum possible exposure under the membership agreements, since this would require an assessment of future claims that may be made against us that have not yet occurred. At both December 31, 2023 and 2022, we did not record any liabilities under these arrangements.

For additional information on our repurchase and reverse repurchase agreements, please refer to Note 11 to the consolidated financial statements in this Form 10-K.

Note 13. Contingencies

Legal and Regulatory Matters

In the ordinary course of business, we and our subsidiaries are involved in disputes, litigation, and governmental or regulatory inquiries and investigations, both pending and threatened. These matters, if resolved adversely against us or settled, may result in monetary awards or payments, fines and penalties or require changes in our business practices. The resolution or settlement of these matters is inherently difficult to predict. Based on our assessment of these pending matters, we do not believe that the amount of any judgment, settlement or other action arising from any pending matter is likely to have a material adverse effect on our consolidated financial condition. However, an adverse outcome or development in certain of the matters described below could have a material adverse effect on our consolidated results of operations for the period in which such matter is resolved, or an accrual is determined to be required, on our consolidated financial condition, or on our reputation.

We evaluate our needs for accruals of loss contingencies related to legal and regulatory proceedings on a case-by-case basis. When we have a liability that we deem probable, and we deem the amount of such liability can be reasonably estimated as of the date of our consolidated financial statements, we accrue our estimate of the amount of loss. We also consider a loss probable and establish an accrual when we make, or intend to make, an offer of settlement. Once established, an accrual is subject to subsequent adjustment as a result of additional information. The resolution of legal and regulatory proceedings and the amount of reasonably estimable loss (or range thereof) are inherently difficult to predict, especially in the early stages of proceedings. Even if a loss is probable, an amount (or range) of loss might not be reasonably estimated until the later stages of the proceeding due to many factors such as the presence of complex or novel legal theories, the discretion of governmental authorities in seeking sanctions or negotiating resolutions in civil and criminal matters, the pace and timing of discovery and other assessments of facts and the procedural posture of the matter (collectively, "factors influencing reasonable estimates").

As of December 31, 2023, our aggregate accruals for loss contingencies for legal, regulatory and related matters totaled approximately \$20 million, including potential fines by government agencies and civil litigation with respect to the matters specifically discussed below. To the extent that we have established accruals in our consolidated statement of condition for probable loss contingencies, such accruals may not be sufficient to cover our ultimate financial exposure associated with any settlements or judgments. Any such ultimate financial exposure, or proceedings to which we may become subject in the future, could have a material adverse effect on our businesses, on our future consolidated financial statements or on our reputation.

As of December 31, 2023, for those matters for which we have accrued probable loss contingencies (including the Invoicing Matter described below) and for other matters for which loss is reasonably possible (but not probable) in future periods, and for which we are able to estimate a range of reasonably possible loss, our estimate of the aggregate reasonably possible loss (in excess of any accrued amounts) ranges up to approximately \$40 million. Our estimate with respect to the aggregate reasonably possible loss is based upon currently available information and is subject to significant judgment and a variety of assumptions and known and unknown uncertainties, which may change quickly and significantly from time to time, particularly if and as we engage with applicable governmental agencies or plaintiffs in connection with a proceeding. Also, the matters underlying the reasonably possible loss will change from time to time. As a result, actual results may vary significantly from the current estimate.

In certain pending matters, it is not currently feasible to reasonably estimate the amount or a range of reasonably possible loss, and such losses, which may be significant, are not included in the estimate of reasonably possible loss discussed above. This is due to, among other factors, the factors influencing reasonable estimates described above. An adverse outcome in one or more of the matters for which we have not estimated the amount

or a range of reasonably possible loss, individually or in the aggregate, could have a material adverse effect on our businesses, on our future consolidated financial statements or on our reputation. Given that our actual losses from any legal or regulatory proceeding for which we have provided an estimate of the reasonably possible loss could significantly exceed such estimate, and given that we cannot estimate reasonably possible loss for all legal and regulatory proceedings as to which we may be subject now or in the future, no conclusion as to our ultimate exposure from current pending or potential legal or regulatory proceedings should be drawn from the current estimate of reasonably possible loss.

The following discussion provides information with respect to significant legal, governmental and regulatory matters.

Invoicing Matter

In 2015, we determined that we had incorrectly invoiced clients for certain expenses. We have reimbursed most of our affected customers for those expenses, and we have implemented enhancements to our billing processes. In connection with our enhancements to our billing processes, we continue to review historical billing practices and may from time to time identify additional remediation. In 2017, we identified an additional area of incorrect expense billing associated with mailing services in our retirement services business. We currently expect the cumulative total of our payments to customers for these invoicing errors, including the error in the retirement services business, to be at least \$350 million, all of which has been paid or is accrued. However, we may identify additional remediation costs.

We resolved potential criminal claims that arose from these matters by entering into a deferred prosecution agreement with the office of the United States Attorney for the District of Massachusetts and paying a \$115 million penalty in May 2021. In June 2019, we reached an agreement with the SEC to settle its claims that we violated the recordkeeping provisions of Section 34(b) of the Investment Company Act of 1940 and caused violations of Section 31(a) of the Investment Company Act and Rules 31a-1(a) and 31a-1(b) thereunder in connection with our overcharges of customers which are registered investment companies. In reaching this settlement, we neither admitted nor denied the claims contained in the SEC's order, and agreed to pay a civil monetary penalty of \$40 million. Also in June we reached an agreement with 2019, the Massachusetts Attorney General's office to resolve its claims related to this matter. In reaching this settlement, we neither admitted nor denied the claims in the order, and agreed to pay a civil monetary penalty of \$5.5 million. The SEC and Massachusetts Attorney General's office settlements both recognize that the payment of \$48.8 million in disgorgement and interest is satisfied by our direct reimbursements of our customers. We paid fines to resolve claims of the Securities Divisions of the Secretaries of the State of Massachusetts and New Hampshire. The costs associated with the settlements discussed above were within our related and previously established accruals for loss contingencies.

We have not resolved certain claims that may be made by the U.S. Department of Labor. We do not know whether any such claims will be brought, and there can be no assurance that any settlement of any such claims will be reached on financial terms acceptable to us or at all. The aggregate amount of penalties that may potentially be imposed upon us in connection with the resolution of any such matters is not currently known.

Gomes, et al. v. State Street Corp.

Eight participants in our Salary Savings Program filed a purported class action complaint in May 2021 on behalf of participants and beneficiaries who participated in the Program and invested in our proprietary investment fund options between May 2015 and the present. The complaint names the Plan Sponsor as well as the committees overseeing the Plan and their respective members as defendants, and alleges breach of fiduciary duty and violations of other duties owed to retirement plan participants under the Employee Retirement Income and Security Act. We have agreed, subject to court approval, to resolve this matter and pay a cost that is within our established accruals for loss contingencies.

Edmar Financial Company, LLC et al v. Currenex, Inc. et al

In August 2021, two former Currenex clients filed a putative civil class action lawsuit in the Southern District of New York alleging antitrust violations, fraud and a civil Racketeer Influenced and Corrupt Organization Act violation against Currenex, State Street and others.

German Tax Matter

In connection with a routine audit including the period 2013-2015, German tax authorities have questioned whether State Street should have withheld and be secondarily liable for certain taxes on dividends paid on securities of German issuers held as collateral over dividend record dates in client lending transactions with counterparties outside of Germany.

Income Taxes

In determining our provision for income taxes, we make certain judgments and interpretations with respect to tax laws in jurisdictions in which we have

business operations. Because of the complex nature of these laws, in the normal course of our business, we are subject to challenges from U.S. and non-U.S. income tax authorities regarding the amount of income taxes due. These challenges may result in adjustments to the timing or amount of taxable income or deductions or the allocation of taxable income among tax jurisdictions. We recognize a tax benefit when it is more likely than not that our position will result in a tax deduction or credit. Unrecognized tax benefits of approximately \$237 million as of December 31, 2023 decreased from \$285 million as of December 31, 2022.

We are presently under audit by a number of tax authorities. The earliest tax year open to examination in jurisdictions where we have material operations is 2015. Management believes that we have sufficiently accrued liabilities as of December 31, 2023 for potential tax exposures.

Note 14. Variable Interest Entities

We are involved, in the normal course of our business, with various types of special purpose entities, some of which meet the definition of VIEs. When evaluating a VIE for consolidation, we must determine whether or not we have a variable interest in the entity. Variable interests are investments or other interests that absorb portions of an entity's expected losses or receive portions of the entity's expected returns. If it is determined that we do not have a variable interest in the VIE, no further analysis is required and we do not consolidate the VIE. If we hold a variable interest in a VIE, we are required by U.S. GAAP to consolidate that VIE when we have a controlling financial interest in the VIE and therefore are deemed to be the primary beneficiary. We are determined to have a controlling financial interest in a VIE when we have both the power to direct the activities of the VIE that most significantly impact the VIE's economic performance and the obligation to absorb losses or the right to receive benefits of the VIE that could potentially be significant to that VIE. This determination is evaluated periodically as facts and circumstances change.

Asset-Backed Investment Securities

We invest in various forms of ABS, which we carry in our investment securities portfolio. These ABS meet the U.S. GAAP definition of asset securitization entities, which are considered to be VIEs. We are not considered to be the primary beneficiary of these VIEs since we do not have control over their activities. Additional information about our ABS is provided in Note 3.

Interests in Investment Funds

In the normal course of business, we manage various types of investment funds through State Street Global Advisors in which our clients are investors, including State Street Global Advisors commingled investment vehicles and other similar investment structures. The majority of our AUM are contained within such funds. The services we provide to these funds generate management fee revenue. From time to time, we may invest cash in the funds in order for the funds to establish a performance history for newly-launched strategies, referred to as seed capital, or for other purposes.

With respect to our interests in funds that meet the definition of a VIE, a primary beneficiary assessment is performed to determine if we have a controlling financial interest. As part of our assessment, we consider all the facts and regarding circumstances the terms and characteristics of the variable interest(s), the design and characteristics of the fund and the other involvements of the enterprise with the fund. If consolidation of certain funds is required, we retain the specialized investment company accounting rules followed by the underlying funds. When we no longer control these funds due to a reduced ownership interest or other reasons, the funds are deconsolidated and accounted for under another accounting method if we continue to maintain investments in the funds.

As of both December 31, 2023 and 2022, we had no consolidated funds. As of December 31, 2023 and 2022, we managed certain funds, considered VIEs, in which we held a variable interest but for which we were not deemed to be the primary beneficiary. Our potential maximum loss exposure related to these unconsolidated funds totaled \$18 million and \$15 million as of December 31, 2023 and 2022, respectively, and represented the carrying value of our investments, which are recorded in other assets in our consolidated statement of condition. The amount of loss we may recognize during any period is limited to the carrying amount of our investments in the unconsolidated funds.

Our conclusion to consolidate a fund may vary from period to period, most commonly as a result of fluctuation in our ownership interest as a result of changes in the number of fund shares held by either us or by third parties. Given that the funds follow specialized investment company accounting rules which prescribe fair value, a de-consolidation generally would not result in gains or losses for us.

The net assets of any consolidated fund are solely available to settle the liabilities of the fund and to settle any investors' ownership redemption requests, including any seed capital invested in the fund by us. We are not contractually required to provide financial or any other support to any of our funds. In addition, neither creditors nor equity investors in the funds have any recourse to our general credit.

We also held investments in low-income housing, production and investment tax credit entities, considered VIEs for which we were not deemed to be the primary beneficiary. As of December 31, 2023 and 2022, our potential maximum loss exposure related to these unconsolidated entities totaled \$1.33 billion and \$1.60 billion, respectively, most of which represented the carrying value of our investments, which are recorded in other assets in our consolidated statement of condition.

State Street accounts for our low-income housing tax credit investments (LIHTC) under the proportional amortization method. Effective January 1, 2023, State Street has also elected to account for our investments in production tax credit investments under the proportional amortization method of accounting. Under the proportional amortization method, the initial cost of the investment is amortized based on a percentage of the actual income tax credits and other income tax benefits allocated in the current period versus the total estimated income tax credits and other income tax benefits expected to be received over the life of the investment. The net representing the difference benefit, between amortization of the investment balance, recognition of the income tax credits and recognition of other income tax benefits from the investment is recognized as a component of income tax expense.

As of December 31, 2023, we had investments in LIHTC and production tax credit investments of \$819 million and \$381 million, respectively, which are included in other assets in our consolidated statement of condition. Deferred contributions related to LIHTC investments were \$169 million at December 31, 2023. These deferred contributions are payable in accordance with the respective agreements and are expected to be paid through 2038. Contingent contributions related to the renewable energy production tax credit investments were \$50 million at December 31, 2023. These contributions are contingent on production and expected to be paid through 2029. The following table presents the impact of our tax credit programs for which we have elected to apply proportional amortization accounting on our consolidated statement of income for the periods indicated:

(In millions)	ar Ended ber 31, 2023
Income (loss) recorded on investments within other fee revenue	\$ 26
Income recorded in total revenue	26
Tax credits and benefits recognized in income tax expense	239
Proportional amortization recognized in income tax expense	 (182)
Net benefits included in income tax expense	 57
Net benefit attributable to tax-advantaged investments included in the consolidated statement of income	\$ 83

Note 15. Shareholders' Equity

Preferred Stock

The following table summarizes selected terms of each of the series of the preferred stock issued and outstanding as of December 31, 2023:

Preferred Stock ⁽¹⁾ :	Issuance Date	Depositary Shares Issued	Ownership Interest Per Depositary Share	Liquidation Preference Per Share	Liquidation Preference Per Depositary Share	Per Annum Dividend Rate	Dividend Payment Frequency	Carrying Value as of December 31, 2023 (In millions)	Redemption Date ⁽²⁾
Series D	February 2014	30,000,000	1/4,000th	100,000	25	5.90% to but excluding March 15, 2024, then 9.008% ⁽³⁾	Quarterly	\$ 742	March 15, 2024
Series F	May 2015	250,000	1/100th	100,000	1,000	Floating rate equal to the three- month CME term SOFR plus 3.859%, or 9.243% effective December 15, 2023	Quarterly	247	September 15, 2020
Series G	April 2016	20,000,000	1/4,000th	100,000	25	5.35% ⁽⁴⁾	Quarterly	493	March 15, 2026
Series H	September 2018	500,000	1/100th	100,000	1,000	Floating rate equal to the three- month CME term SOFR plus 2.801%, or 8.185% effective December 15, 2023	Quarterly	494	December 15, 2023

⁽¹⁾ The preferred stock and corresponding depositary shares may be redeemed at our option in whole, but not in part, prior to the redemption date upon the occurrence of a regulatory capital treatment event, as defined in the certificate of designation, at a redemption price equal to the liquidation price per share and liquidation price per depositary share plus any declared and unpaid dividends, without accumulation of any undeclared dividends.

⁽³⁾ The dividend rate for the floating rate period of the Series D preferred stock that begins on March 15, 2024 and all subsequent floating rate periods will transition to a new, fixed rate in accordance with the LIBOR Act and the contractual terms of the Series D preferred stock.

(4) The dividend rate for the floating rate period of the Series G preferred stock that begins on March 15, 2026 and all subsequent floating rate periods will remain at the current fixed rate in accordance with the LIBOR Act and the contractual terms of the Series G preferred stock.

In January 2024, we issued 1.5 million depositary shares, each representing 1/100th ownership interest in shares of fixed-to-floating rate, non-cumulative perpetual preferred stock, Series I, without par value per share, with a liquidation preference of \$100,000 per share (equivalent to \$1,000 per depositary share), in a public offering. The aggregate proceeds, net of underwriting discounts, commissions and other issuance costs, were approximately \$1.5 billion. Dividends on the Series I Preferred Stock will be payable quarterly at an initial rate of 6.700% per annum commencing on June 15, 2024, with the first dividend payable on a pro-rata basis. Our preferred stock dividends, including the declaration, timing and amount thereof, are subject to consideration and approval by the Board at the relevant times.

In addition, on February 8, 2024, we announced that we will redeem on March 15, 2024 an aggregate \$1.0 billion, or all 7,500 outstanding shares, of our non-cumulative perpetual preferred stock, Series D (represented by 30,000,000 depository shares), for a cash redemption price of \$100,000 per share (equivalent to \$25 per depository share), plus all declared and unpaid dividends and all 2,500 of the outstanding shares of our non-cumulative perpetual preferred stock, Series F (represented by 250,000 depository shares), for a cash redemption price of \$100,000 per share (equivalent to \$1,000 per depositary share) plus all declared and unpaid dividends. Cash dividends on the Series D and F Preferred Stock, of approximately \$1,475 and \$2,336, respectively, per share, or approximately \$0.37 and \$23.36, respectively per depository share have been declared for the period from December 15, 2023 up to but not including March 15, 2024 (together, the "March Dividends"). The March Dividends will be paid separately to the holders of record of the Series D Preferred Stock and the Series F Preferred Stock as

⁽²⁾ On the redemption date, or any dividend payment date thereafter, the preferred stock and corresponding depositary shares may be redeemed by us, in whole or in part, at the liquidation price per share and liquidation price per depositary share plus any declared and unpaid dividends, without accumulation of any undeclared dividends.

of February 29, 2024 in the customary manner. Accordingly, there will not be any declared and unpaid dividends included in the Series D and Series F redemption price.

The following table presents the dividends declared for each of the series of preferred stock issued and outstanding for the periods indicated:

		Years Ended December 31,													
			2023				2022								
(Dollars in millions, except per share amounts)	De	ividends clared per Share		Total			Dividends Declared per Share		Dividends Declared per Depositary Share		Total				
Preferred Stock:															
Series D	\$	5,900	\$	1.48	\$		44	\$	5,900	\$	1.48	\$	2	44	
Series F		8,935		89.35			23		5,208		52.08			13	
Series G		5,350		1.34			27		5,352		1.32		2	27	
Series H		5,625		56.25			28		5,625		56.25			28	
Total					\$	1	22					\$	1 [.]	12	

In January 2024, we declared dividends on our series D, F, G, and H preferred stock of approximately \$1,475, \$2,336, \$1,338, and \$2,069, respectively, per share, or approximately \$0.37, \$23.36, \$0.33,and \$20.69, respectively, per depositary share. These dividends total approximately \$11 million, \$6 million, \$7 million, and \$10 million on our series D, F, G, and H preferred stock, respectively, which will be paid in March 2024.

Common Stock

On January 19, 2024, we announced a new common share repurchase program, approved by our Board and superseding all prior programs, authorizing the purchase of up to \$5.0 billion of our common stock beginning in the first quarter of 2024. This new program has no set expiration date and is not expected to be executed in full during 2024.

In January 2023, our Board approved a common share repurchase program authorizing the purchase of up to \$4.5 billion of our common stock through December 31, 2023 (the 2023 Program). We repurchased \$3.8 billion of our common stock during 2023 under the 2023 Program.

In 2022, we repurchased \$1.5 billion of our common stock under the 2021 program authorizing the purchase of up to \$3.0 billion of our common stock through the end of 2022.

The table below presents the activity under our common share repurchase program for the period indicated:

					Years Ended	December 31,					
			2023					2022			
	Shares Acquired (In millions)	Av	erage Cost per Share	٦	Total Acquired (In millions)	Shares Acquired (In millions)	Av	erage Cost per Share	٦	Fotal Acquired (In millions)	
2023 Program	49.2	\$	77.22	\$	3,800		\$	_	\$	—	
2021 Program	-		_		_	19.5		76.81		1,500	

The table below presents the dividends declared on common stock for the periods indicated:

				Years Ended	Dece	ember 31,		
		202	23			202	2	
	Dividend	ds Declared per Share		Total (In millions)		Dividends Declared per Share		Total (In millions)
Common Stock	\$	2.64	\$	837	\$	2.40	\$	871

Accumulated Other Comprehensive Income (Loss)

The following table presents the after-tax components of AOCI and changes for the periods indicated, net of related taxes:

(In millions)	Net Unre Gains (L on Cash Hedg	osses) i Flow	Net Unrealiz Gains (Loss on Investm Securities	ses) ent	 et Unrealized Losses on Retirement Plans	Foreign Currency Franslation	Ga	Net Unrealized ains (Losses) on Hedges of Net nvestments in Non-U.S. Subsidiaries	Total
Balance as of December 31, 2020	\$	57	\$	846	\$ (178)	\$ (334)	\$	(204)	\$ 187
Other comprehensive income (loss) before reclassifications		11	((854)	1	(685)		272	(1,255)
Increase (decrease) due to amounts reclassified from accumulated other comprehensive income	_	(70)		(42)	 47	 _		_	 (65)
Other comprehensive income (loss)		(59)	(896)	 48	(685)		272	 (1,320)
Balance as of December 31, 2021	\$	(2)	\$	(50)	\$ (130)	\$ (1,019)	\$	68	\$ (1,133)
Other comprehensive income (loss) before reclassifications		(321)	(1,	937)	(1)	(732)		291	(2,700)
Increase (decrease) due to amounts reclassified from accumulated other comprehensive income	_	(36)		170	 (12)	 _		_	 122
Other comprehensive income (loss)		(357)	(1,	767)	 (13)	(732)		291	 (2,578)
Balance as of December 31, 2022	\$	(359)	\$ (1,	817)	\$ (143)	\$ (1,751)	\$	359	\$ (3,711)
Other comprehensive income (loss) before reclassifications		75		442	(3)	351		(90)	775
Increase (decrease) due to amounts reclassified from accumulated other comprehensive income		153		428	 1	 			 582
Other comprehensive income (loss)		228		870	(2)	351		(90)	 1,357
Balance as of December 31, 2023	\$	(131)	\$ (947)	\$ (145)	\$ (1,400)	\$	269	\$ (2,354)

(1) Includes after-tax net unamortized unrealized gains (losses) of (\$530) million, (\$749) million and \$31 million as of December 31, 2023, 2022 and 2021, respectively, related to AFS investment securities previously transferred to HTM.

The following table presents after-tax reclassifications into earnings for the periods indicated:

	Years Ended December 31,						
		2023		2022		2021	
(In millions) Investment securities:		Amounts	Rec	lassified into	Ear	nings	Affected Line Item in Consolidated Statement of Income
Net realized (gains) losses from sales of available-for-sale securities, net of related taxes of \$81, \$1 and \$(15) respectively	\$	213	\$	1	\$	(42)	Net gains (losses) from sales of available-for- sale securities
Losses reclassified from accumulated other comprehensive income into income, net of related taxes of \$81, \$96 and \$0 respectively		215		169		_	Net interest income
Cash flow hedges:							
(Gains) losses reclassified from accumulated other comprehensive income into income, net of related taxes of \$55, (\$13) and (\$25) respectively		153		(36)		(70)	Net interest income
Retirement plans:							
Amortization of actuarial losses, net of related taxes of nil, (\$1) and \$16 respectively		1		(12)		47	Compensation and employee benefits expenses
Total amounts reclassified from accumulated other comprehensive income	\$	582	\$	122	\$	(65)	

Note 16. Regulatory Capital

We are subject to various regulatory capital requirements administered by federal banking agencies. Failure to meet minimum regulatory capital requirements can initiate certain mandatory and discretionary actions by regulators that, if undertaken, could have a direct material effect on our consolidated financial condition. Under current regulatory capital adequacy guidelines, we must meet specified capital requirements that involve quantitative measures of our consolidated assets, liabilities and off-balance sheet exposures calculated in conformity with regulatory accounting practices. Our capital components and their classifications are subject to qualitative judgments by regulators about components, risk weightings and other factors.

As required by the Dodd-Frank Act, we and State Street Bank, as advanced approaches banking organizations, are subject to a "capital floor" in the calculation and assessment of regulatory capital adequacy by U.S. banking regulators. Beginning on January 1, 2015, we were required to calculate our risk-based capital ratios using both the advanced approaches and the standardized approach. As a result, from January 1, 2015 going forward, our risk-based capital ratios for regulatory assessment purposes are the lower of each ratio calculated

under the standardized approach and the advanced approaches.

As of December 31, 2023, we and State Street Bank exceeded all regulatory capital adequacy requirements to which we were subject. As of December 31, 2023, State Street Bank was categorized as "well capitalized" under the applicable regulatory capital adequacy framework, and exceeded all "well capitalized" ratio guidelines to which it was subject. Management believes that no conditions or events have occurred since December 31, 2023 that have changed the capital categorization of State Street Bank.

The following table presents the regulatory capital structure, total RWA, related regulatory capital ratios and the minimum required regulatory capital ratios for us and State Street Bank as of the dates indicated.

		State Street	Corporation		State Street Bank				
Dollars in millions)	Basel III Advanced Approaches December 31, 2023	Basel III Standardized Approach December 31, 2023	Basel III Advanced Approaches December 31, 2022	Basel III Standardized Approach December 31, 2022	Basel III Advanced Approaches December 31, 2023	Basel III Standardized Approach December 31, 2023	Basel III Advanced Approaches December 31, 2022	Basel III Standardized Approach December 31 2022	
Common shareholders' equity:									
Common stock and related surplus	\$ 11,245	\$ 11,245	\$ 11,234	\$ 11,234	\$ 13,033	\$ 13,033	\$ 13,033	\$ 13,033	
Retained earnings	27,957	27,957	27,028	27,028	14,454	14,454	16,975	16,975	
Accumulated other comprehensive income (loss)	(2,354)	(2,354)	(3,711)	(3,711)	(2,097)	(2,097)	(3,428)	(3,428)	
Treasury stock, at cost	(15,025)	(15,025)	(11,336)	(11,336)					
Total	21,823	21,823	23,215	23,215	25,390	25,390	26,580	26,580	
Regulatory capital adjustments:									
Goodwill and other intangible assets, net of associated deferred tax liabilities	(8,470)	(8,470)	(8,545)	(8,545)	(8,208)	(8,208)	(8,288)	(8,288)	
Other adjustments ⁽¹⁾	(382)	(382)	(123)	(123)	(298)	(298)	(19)	(19)	
Common equity tier 1 capital	12,971	12,971	14,547	14,547	16,884	16,884	18,273	18,273	
Preferred stock	1,976	1,976	1,976	1,976	_	_	_	_	
Tier 1 capital	14,947	14,947	16,523	16,523	16,884	16,884	18,273	18,273	
Qualifying subordinated long-term debt	1,870	1,870	1,376	1,376	536	536	542	542	
Adjusted allowance for credit losses	_	150	_	120	_	150	_	120	
Total capital	\$ 16,817	\$ 16,967	\$ 17,899	\$ 18,019	\$ 17,420	\$ 17,570	\$ 18,815	\$ 18,935	
Risk-weighted assets:									
Credit risk ⁽²⁾	\$ 61,210	\$ 109,228	\$ 61,108	\$ 105,739	\$ 54,942	\$ 107,067	\$ 54,675	\$ 104,184	
Operational risk ⁽³⁾	43,768	NA	42,763	NA	42,297	NA	42,325	NA	
Market risk	2,475	2,475	1,488	1,488	2,475	2,475	1,488	1,488	
Fotal risk-weighted assets	\$ 107,453	\$ 111,703	\$ 105,359	\$ 107,227	\$ 99,714	\$ 109,542	\$ 98,488	\$ 105,672	
Adjusted guarterly average assets	\$ 269,807	\$ 269,807	\$ 275,678	\$ 275,678	\$ 266,818	\$ 266,818	\$ 273,220	\$ 273,220	

Capital Ratios:	Requirements ⁽⁴⁾ Req	uirements ⁽⁴⁾								
Common equity tier 1 capital	8.0 %	8.0 %	12.1 %	11.6 %	13.8 %	13.6 %	16.9 %	15.4 %	18.6 %	17.3 %
Tier 1 capital	9.5	9.5	13.9	13.4	15.7	15.4	16.9	15.4	18.6	17.3
Total capital	11.5	11.5	15.7	15.2	17.0	16.8	17.5	16.0	19.1	17.9
Tier 1 leverage ⁽⁵⁾	4.0	4.0	5.5	5.5	6.0	6.0	6.3	6.3	6.7	6.7

⁽¹⁾ Other adjustments within CET1 capital primarily include AOCI hedges that are not recognized at fair value on the balance sheet, the overfunded portion of our defined benefit pension plan obligation net of associated deferred tax liabilities, disallowed deferred tax assets, and other required credit risk-based deductions.

(5) State Street Bank is required to maintain a minimum Tier 1 leverage ratio of 5% as it is the IDI subsidiary of State Street Corporation, a U.S. G-SIB.

NA Not applicable

⁽²⁾ Under the advanced approaches, credit risk RWA includes a CVA which reflects the risk of potential fair value adjustments for credit risk reflected in our valuation of OTC derivative contracts. We used a simple CVA approach in conformity with the Basel III advanced approaches.

⁽³⁾ Under the current advanced approaches rules and regulatory guidance concerning operational risk models, RWA attributable to operational risk can vary substantially from period-to-period, without direct correlation to the effects of a particular loss event on our results of operations and financial condition and impacting dates and periods that may differ from the dates and periods as of and during which the loss event is reflected in our financial statements, with the timing and categorization dependent on the processes for model updates and, if applicable, model revalidation and regulatory review and related supervisory processes. An individual loss event can have a significant effect on the output of our operational RWA under the advanced approaches depending on the severity of the loss event and its categorization among the seven Basel-defined UOMs.

⁽⁴⁾ Minimum requirements include a CCB of 2.5% and a SCB of 2.5% for the advanced approaches and the standardized approach, respectively, a G-SIB surcharge of 1.0% and a countercyclical capital buffer of 0%. On June 28, 2023, we were notified by the Federal Reserve of the results from the 2023 supervisory stress test. Our preliminary SCB calculated under the 2023 supervisory stress test was well below the 2.5% minimum, resulting in an SCB at that floor, which will be in effect from October 1, 2023 through September 30, 2024.

Note 17. Net Interest Income

The following table presents the components of interest income and interest expense, and related NII, for the periods indicated:

	Years Ended December 31,				
(In millions)	2023	2022	2021		
Interest income:					
Interest-bearing deposits with banks	\$ 2,869	\$ 842	\$ (15)		
Investment securities:					
Investment securities available-for- sale	1,744	724	572		
Investment securities held-to- maturity	1,262	979	665		
Investment securities purchased under money market liquidity facility	_		4		
Total investment securities	3,006	1,703	1,241		
Securities purchased under resale agreements	312	188	27		
Loans	1,862	972	638		
Other interest-earning assets	1,131	383	17		
Total interest income	9,180	4,088	1,908		
Interest expense:					
Interest-bearing deposits	4,991	967	(263)		
Short term borrowings under money market liquidity facility	_	_	4		
Securities sold under repurchase agreements	34	14	_		
Federal funds purchased	3	_	—		
Short-term borrowings	40	26	2		
Long-term debt	888	376	219		
Other interest-bearing liabilities	465	161	41		
Total interest expense	6,421	1,544	3		
Net interest income	\$ 2,759	\$ 2,544	\$ 1,905		

Note 18. Equity-Based Compensation

We record compensation expense for equitybased awards, such as deferred stock and performance awards, based on the closing price of our common stock on the date of grant, adjusted if appropriate, based on the eligibility of the award to receive dividends.

Compensation expense related to equity-based and cash settled stock awards with service-only conditions and terms that provide for a graded vesting schedule is recognized on a straight-line basis over the required service period for the entire award. Compensation expense related to equity-based awards with performance conditions and terms that provide for a graded vesting schedule is recognized over the requisite service period for each separately vesting tranche of the award, and is based on the probable outcome of the performance conditions at each reporting date. Compensation expense is adjusted for assumptions with respect to the estimated amount of awards that will be forfeited prior to vesting, and for employees who have met certain retirement eligibility criteria. Compensation expense for common stock awards granted to employees

meeting early retirement eligibility criteria is fully expensed on the grant date.

Dividend equivalents for certain equity-based awards are paid on stock units on a current basis prior to vesting and distribution.

The 2017 Stock Incentive Plan, or 2017 Plan, was amended and restated and approved by shareholders in May 2023 for issuance of stock and stock based awards. Awards may be made under the 2017 Plan for (i) up to 15.1 million shares of common stock plus (ii) up to an additional 28.5 million shares that were available to be issued under the 2006 Equity Incentive Plan, or 2006 Plan, or may become available for issuance under the 2006 Plan due to expiration, termination, cancellation, forfeiture or repurchase of awards granted under the 2006 Plan. As of December 31, 2023, a total of 20.8 million shares from the 2006 Plan have been added to and may be issued from the 2017 Plan. As of December 31, 2023, a cumulative total of 21.7 million shares have been awarded under the 2017 Plan, compared to cumulative totals of 18.7 million shares and 15.2 million shares as of December 31, 2022 and 2021, respectively.

The 2017 Plan allows for shares withheld in payment of the exercise price of an award or in satisfaction of tax withholding requirements, shares forfeited due to employee termination, shares expired under option awards, or shares not delivered when performance conditions have not been met, to be added back to the pool of shares available for issuance under the 2017 Plan. From inception to December 31, 2023, 5.8 million shares had been awarded under the 2017 Plan but not delivered, and have become available for re-issue. As of December 31, 2023, a total of 19.9 million shares were available for future issuance under the 2017 Plan.

For deferred stock awards granted under the Plans, no common stock is issued at the time of grant and the award does not possess dividend and voting rights. Generally, these grants vest over one to four years. Performance awards granted are earned over a performance period based on the achievement of defined goals, generally over three years. Payment for performance awards is made in shares of our common stock equal to its fair market value per share, based on the performance of certain financial ratios, after the conclusion of each performance period.

Beginning with 2012, malus-based forfeiture provisions were included in deferred stock awards granted to employees identified as "material risktakers," as defined by management. These malusbased forfeiture provisions provide for the reduction or cancellation of unvested deferred compensation,

such as deferred stock awards and performance based awards, if it is determined that a material risktaker made risk-based decisions that exposed us to inappropriate risks that resulted in a material unexpected loss at the business-unit, line-of-business or corporate level. In addition, awards granted to certain of our senior executives, as well as awards granted to individuals in certain jurisdictions, may be subject to recoupment after vesting (if applicable) and delivery to the individual in specified circumstances generally relating to fraud or willful misconduct by the individual that results in material harm to us or a material financial restatement.

Compensation expense related to deferred stock awards and performance awards, which we record as a component of compensation and employee benefits expense in our consolidated statement of income, was \$208 million, \$240 million and \$259 million for the years ended December 31, 2023, 2022 and 2021, respectively. Such expense for 2023, 2022 and 2021 excluded an expense of \$12 million, an expense of \$21 million and a release of \$5 million, respectively, associated with acceleration of expense in connection with targeted staff reductions. This expense was included in the severance-related portion of the associated restructuring or repositioning charges recorded in each respective year.

For the years ended December 31, 2023, 2022 and 2021, no stock appreciation rights were exercised. As of December 31, 2023, there was no unrecognized compensation cost related to stock appreciation rights.

	Shares (In thousands)	Weighted-Average Grant Date Fair Value
Deferred Stock Awards:		
Outstanding as of December 31, 2021	5,777	\$ 67.55
Granted	2,841	81.37
Vested	(3,035)	71.46
Forfeited	(304)	70.96
Outstanding as of December 31, 2022	5,279	72.43
Granted	2,421	79.58
Vested	(2,587)	71.54
Forfeited	(145)	76.40
Outstanding as of December 31, 2023	4,968	75.72

The total fair value of deferred stock awards vested for the years ended December 31, 2023, 2022 and 2021, based on the weighted average grant date fair value in each respective year, was \$185 million, \$217 million and \$206 million, respectively. As of December 31, 2023, total unrecognized compensation cost related to deferred stock awards, net of estimated forfeitures, was \$184 million, which is expected to be recognized over a weighted-average period of 2.4 years.

	Shares (In thousands)	Weighted-Average Grant Date Fair Value
Performance Awards:		
Outstanding as of December 31, 2021	2,589	\$ 63.54
Granted	684	81.86
Forfeited	(23)	72.91
Paid out	(954)	62.49
Outstanding as of December 31, 2022	2,296	69.43
Granted	614	79.96
Forfeited	(17)	74.59
Paid out	(687)	62.99
Outstanding as of December 31, 2023	2,206	74.33

The total fair value of performance awards vested for the years ended December 31, 2023, 2022 and 2021, based on the weighted average grant date fair value in each respective year, was \$43 million, \$60 million and \$57 million, respectively. As of December 31, 2023, total unrecognized compensation cost related to performance awards, net of estimated forfeitures, was \$16 million, which is expected to be recognized over a weighted-average period of 1.9 years.

_	Shares (In thousands)	Weighted-Average Grant Date Fair Value					
Cash Settled Restricted Stock Awards:							
Outstanding as of December 31, 2021	23	\$ 69.95					
Granted	45	85.71					
Forfeited	_	_					
Paid out	(33)	80.77					
Outstanding as of December 31, 2022	35	79.99					
Granted	24	83.80					
Forfeited	_	_					
Paid out	(32)	79.99					
Outstanding as of December 31, 2023	27	83.37					

The total fair value of cash settled restricted stock awards vested during both the years ended December 31, 2023 and 2022, based on the weighted average grant date fair value was \$3 million. As of December 31, 2023, there was no unrecognized compensation cost related to cash settled restricted stock awards.

We utilize either treasury shares or authorized but unissued shares to satisfy the issuance of common stock under our equity incentive plans. We do not have a specific policy concerning purchases of our common stock to satisfy stock issuances. We have a general policy concerning purchases of our common stock to meet issuances under our employee benefit plans, including other corporate purposes. Various factors determine the amount and timing of our purchases of our common stock, including regulatory reviews and approvals or nonobjections, our regulatory capital requirements, the number of shares we expect to issue under employee

benefit plans, market conditions (including the trading price of our common stock), and legal considerations. These factors can change at any time, and the number of shares of common stock we will purchase or when we will purchase them cannot be assured. Additional information on our common stock purchase program is provided in Note 15.

Note 19. Employee Benefits

Defined Benefit Pension and Other Post-Retirement Benefit Plans

State Street Bank and certain of its U.S. subsidiaries participate in a non-contributory, taxqualified defined benefit pension plan. The U.S. defined benefit pension plan was frozen as of December 31, 2007 and no new employees were eligible to participate after that date. We have agreed to contribute sufficient amounts as necessary to meet the benefits paid to plan participants and to fund the plan's service cost, plus interest. U.S. employee account balances earn annual interest credits until the employee begins receiving benefits. Non-U.S. employees participate in local defined benefit plans which are funded as required in each local jurisdiction. In addition to the defined benefit pension plans, we have non-qualified unfunded SERPs that provide certain officers with defined pension benefits in excess of allowable qualified plan limits. State Street Bank and certain of its U.S. subsidiaries also participate in a post-retirement plan that provides health care benefits for certain retired employees. The total expense for these tax-gualified and nonqualified plans was \$16 million, \$21 million and \$27 million in 2023, 2022 and 2021, respectively.

We recognize the funded status of our defined benefit pension plans and other post-retirement benefit plans, measured as the difference between the fair value of the plan assets and the projected benefit obligation, in the consolidated statement of position. The assets held by the defined benefit pension plans are largely made up of common, collective funds that are liquid and invest principally in equities and high-guality fixed-income U.S. investments. The majority of these assets fall within Level 2 of the fair value hierarchy. The benefit obligations associated with our primary U.S. and non-U.S. defined benefit plans, non-qualified unfunded supplemental retirement plans and post-retirement plans were \$1.16 billion, \$25 million and \$1 million, respectively, as of December 31, 2023 and \$1.08 billion, \$33 million and \$1 million, respectively, as of December 31, 2022. As the primary defined benefit plans are frozen, the benefit obligation will only vary over time as a result of changes in market interest rates, the life expectancy of the plan participants and payments made from the plans. The primary U.S. and non-U.S. defined benefit pension plans were

overfunded by \$10 million and \$28 million as of December 31, 2023 and 2022, respectively. The nonqualified supplemental retirement plans were underfunded by \$25 million and \$33 million as of December 31, 2023 and 2022, respectively. The other post-retirement benefit plans were underfunded by \$1 million and \$1 million as of December 31, 2023 and 2022, respectively. The underfunded status is included in other liabilities.

Defined Contribution Retirement Plans

We contribute to employer-sponsored U.S. and non-U.S. defined contribution plans. Our contribution to these plans was \$194 million, \$171 million and \$171 million in 2023, 2022 and 2021, respectively.

Note 20. Occupancy Expense and Information Systems and Communications Expense

Occupancy expense and information systems and communications expense include depreciation of buildings, leasehold improvements, computer hardware and software, equipment, furniture and fixtures, and amortization of lease right-of-use assets. Total depreciation and amortization expense in 2023, 2022 and 2021 was \$829 million, \$842 million and \$859 million, respectively.

In the fourth quarter of 2022, we completed a sale leaseback transaction of two owned properties in the United States. Under the transaction, land, buildings and building improvements were sold for net proceeds of \$27 million. We recognized a gain of \$11 million on the sale which is presented within Occupancy expense. The initial term of the subsequent leases is 3 years and they are recognized as operating leases.

We use our incremental borrowing rate to determine the present value of the lease payments for finance and operating leases described below. Additionally, we do not separate nonlease components such as real estate taxes and common area maintenance from base lease payments.

As of December 31, 2023, we had finance leases for information technology equipment of \$119 million recorded in premises and equipment, with the related liability of \$130 million recorded in long-term debt, in our consolidated statement of condition. As of December 31, 2022, we had finance leases related to information technology equipment of an aggregate net book value of \$167 million recorded in equipment, and the related liability of \$176 million recorded in long-term debt, in our consolidated statement of condition. In December 2022, modifications were made to our One Lincoln Street Boston lease preparing for its expiration in 2023, resulting in reclassification from a finance lease to an operating lease.

Finance lease right-of-use asset amortization is recorded in occupancy expense on a straight-line basis in our consolidated statement of income over the respective lease term. As of December 31, 2023, accumulated amortization of the finance lease rightof-use asset was \$88 million. Lease payments are recorded as a reduction of the liability, with a portion recorded as imputed interest expense. In 2023 and 2022, interest expense related to the finance lease obligation reflected in NII was \$5 million and \$6 million, respectively.

As of December 31, 2023, an aggregate net book value of \$805 million for the operating lease right-of-use assets is recorded in other assets, with the related lease liability of \$832 million recorded in accrued expenses and other liabilities in our consolidated statement of condition.

We have entered into non-cancellable operating leases for premises and equipment. Nearly all of these leases include renewal options, and only those reasonably certain of being exercised are included in the term of the lease. Costs for operating leases are recorded on a straight-line basis which includes both interest expense and right-of-use asset amortization. Operating lease costs for office space are recorded in occupancy expense. Costs related to operating leases for equipment are recorded in information systems and communications expense.

As of December 31, 2023, we have additional operating and finance leases, primarily for office space and equipment, that have not yet commenced with approximately \$145 million of undiscounted future minimum lease payments. These leases will commence in fiscal year 2024 with lease terms ranging from 6 to 12 years.

None of our leases contain residual value guarantees.

The following table presents lease costs, sublease rental income, cash flows and new leases arising from lease transactions for 2023:

	Ye	ars Ended	December 31,		
(In millions)		2023	2022		
Finance lease:					
Amortization of right-of-use assets	\$	48	\$	50	
Interest on lease liabilities		5		6	
Total finance lease expense		53		56	
Sublease income				(10)	
Net finance lease expense		53		46	
Operating lease:					
Operating lease expense		163		130	
Sublease income		(23)		(16)	
Net operating lease expense		140		114	
Net lease expense	\$	193	\$	160	
Cash paid for amounts included in the measurement of lease liabilities:					
Operating cash flows from finance leases	\$	5	\$	6	
Operating cash flows from operating leases		197		161	
Financing cash flows from finance leases		45		58	
Right-of-use assets obtained in exchange for new lease obligations:					
Operating leases	\$	461	\$	88	
Finance leases		_		99	

The following table presents future minimum lease payments under non-cancellable leases as of December 31, 2023:

(In millions)	Operating Leases		Finance Leases		Total	
2024	\$	172	\$	52	\$	224
2025		150		52		202
2026		124		31		155
2027		108		_		108
2028		93		_		93
Thereafter		357				357
Total future minimum lease payments		1,004		135		1,139
Less imputed interest		(172)		(5)		(177)
Total	\$	832	\$	130	\$	962

The following table presents details related to remaining lease terms and discount rate as of December 31, 2023 and 2022:

	December 31, 2023	December 31, 2022
Weighted-average remaining lease term (in years):		
Finance leases	2.5	3.5
Operating leases	8.5	5.0
Weighted-average discount rate:		
Finance leases	3 %	3 %
Operating leases	4 %	3 %

Note 21. Expenses

The following table presents the components of other expenses for the periods indicated:

	Years Ended December 31,					31,
(In millions)	:	2023		2022		2021
Regulatory fees and assessments ⁽¹⁾	\$	464	\$	83	\$	69
Professional services		428		375		334
Sales advertising and public relations		142		99		73
Securities processing		49		63		34
Bank operations		45		41		12
Donations		27		27		2
Other		374		387		372
Total other expenses	\$	1,529	\$	1,075	\$	896

⁽¹⁾ Includes FDIC special assessment of \$387 million related to FDIC's recovery of estimated losses to the Deposit Insurance Fund associated with the closures of Silicon Valley Bank and Signature Bank.

Acquisition and Restructuring Costs

In 2023 we released reserves previously recognized as acquisition and restructuring costs. In 2022, we recorded acquisition costs of approximately \$65 million related to the BBH Investor Services acquisition transaction that we are no longer pursuing.

Repositioning Charges

In 2023, we recorded net repositioning charges of approximately \$203 million to enable the next phase of our productivity efforts to streamline operations and technology, and improve efficiency. Expenses for 2023 included \$182 million of compensation and employee benefits expenses related to workforce rationalization and \$21 million of occupancy costs related to real estate footprint optimization.

In 2022, we recorded repositioning charges of \$78 million, consisting of \$50 million of compensation and benefits expense primarily related to streamlining the Investment Services organization, \$20 million of occupancy charges related to real estate footprint optimization and \$8 million of BBH-related repositioning charges recorded in acquisition and restructuring costs. The following table presents aggregate activity for repositioning charges for the periods indicated:

(In millions)	Re	oloyee lated osts	Real Estate Actions	Tota	al
Accrual Balance at December 31, 2020	\$	190	\$ 6	\$	196
Accruals for Beacon		(1)	—		(1)
Accruals for Repositioning Charges		(32)	29		(3)
Payments and Other Adjustments		(89)	(29)		(118)
Accrual Balance at December 31, 2021		68	6		74
Accruals for Repositioning Charges		58	20		78
Payments and Other Adjustments		(43)	(21)		(64)
Accrual Balance at December 31, 2022		83	5		88
Accruals for Repositioning Charges		182	21		203
Payments and Other Adjustments		(58)	(25)		(83)
Accrual Balance at December 31, 2023	\$	207	\$ 1	\$	208

Note 22. Income Taxes

We use an asset-and-liability approach to account for income taxes. Our objective is to recognize the amount of taxes payable or refundable for the current year through charges or credits to the current tax provision, and to recognize deferred tax assets and liabilities for future tax consequences of temporary differences between amounts reported in our consolidated financial statements and their respective tax bases. The measurement of tax assets and liabilities is based on enacted tax laws and applicable tax rates. The effects of a tax position on our consolidated financial statements are recognized when we believe it is more likely than not that the position will be sustained. A valuation allowance is established if it is considered more likely than not that all or a portion of the deferred tax assets will not be realized. Deferred tax assets and liabilities recorded in our consolidated statement of condition are netted within the same tax jurisdiction.

The following table presents the components of income tax expense (benefit) for the periods indicated:

	Years Ended December 31,					31,
(In millions)	:	2023	2022			2021
Current:						
Federal	\$	160	\$	161	\$	172
State		79		112		142
Non-U.S.		317		342		326
Total current expense		556		615		640
Deferred:						
Federal		(77)		(16)		(98)
State		(63)		(2)		(61)
Non-U.S.		(44)		(44)		(3)
Total deferred expense (benefit)		(184)		(62)		(162)
Total income tax expense (benefit)	\$	372	\$	553	\$	478

The following table presents a reconciliation of the U.S. statutory income tax rate to our effective tax rate based on income before income tax expense for the periods indicated:

	Years Ended December 31,						
	2023	2022	2021				
U.S. federal income tax rate	21.0 %	21.0 %	21.0 %				
Changes from statutory rate:							
State taxes, net of federal benefit	2.4	3.1	2.2				
Tax-exempt income	(1.5)	(1.0)	(1.1)				
Business tax credits ⁽¹⁾	(3.6)	(4.0)	(4.1)				
Foreign tax differential	(0.6)	_	0.1				
Foreign tax credit (benefits)/ limitations ⁽²⁾	(2.0)	(0.1)	(1.9)				
Change in Valuation Allowance	(0.2)	(2.0)	_				
Other, net	0.6	(0.4)	(1.1)				
Effective tax rate	16.1 %	16.6 %	15.1 %				

 $^{(1)}$ Business tax credits include research, low-income housing, production and investment tax credits.

⁽²⁾ Foreign tax credit (benefits)/limitations includes the period expense for global intangible low-taxed income (GILTI).

Undistributed indefinitely reinvested earnings of subsidiaries amounted certain foreign to approximately \$7.2 billion at December 31, 2023. As a result, no provision has been recorded for state and local or foreign withholding income taxes. If a distribution were to occur, we would be subject to state, local and to foreign withholding tax. It is expected that any distribution will be exempt from federal income tax. Although the foreign withholding tax is generally creditable against U.S. federal income tax, certain credit utilization limitations may result in a net cost.

The following table presents significant components of our gross deferred tax assets and gross deferred tax liabilities as of the dates indicated:

	December 31,			
(In millions)		2023	2022	
Deferred tax assets:				
Other amortizable assets	\$	265	\$	267
Tax credit carryforwards		673		530
Lease obligations		236		198
Deferred compensation		104		127
Restructuring charges and other reserves		224		118
NOL and other carryforwards		167		152
Pension plan		24		18
Foreign currency translation		51		74
Unrealized losses on investment securities, net		352		750
Total deferred tax assets		2,096		2,234
Valuation allowance for deferred tax assets		(200)		(160)
Deferred tax assets, net of valuation allowance	\$	1,896	\$	2,074
Deferred tax liabilities:				
Fixed and intangible assets	\$	574	\$	597
Investment basis differences		40		188
Right-of-use Assets		214		163
Other		68		21
Total deferred tax liabilities	\$	896	\$	969

The table below summarizes the deferred tax assets, carryforwards and related valuation allowances recognized as of December 31, 2023:

(In millions)	Deferred Tax Asset		luation owance	Expiration
Other amortizable assets	\$	265	\$ (104)	None, 2024
Tax credits		673	—	2041-2043
NOLs - Non-U.S.		144	(76)	2026-2042, None
NOLs - U.S.		20	(17)	2024-2042, None
Other carryforwards		3	(3)	None

Management considers the valuation allowance adequate to reduce the total deferred tax assets to an aggregate amount that will more likely than not be realized. Management has determined that a valuation allowance is not required for the remaining deferred tax assets because it is more likely than not that there will be sufficient taxable income of the appropriate nature within the carryforward periods to realize these assets.

At December 31, 2023, 2022 and 2021, the gross unrecognized tax benefits, excluding interest, were \$237 million, \$285 million and \$252 million, respectively. Of this, the amounts that would reduce the effective tax rate, if recognized, are \$197 million, \$272 million and \$243 million, respectively. The reduction in the effective tax rate includes the federal benefit for unrecognized state tax benefits.

The following table presents activity related to unrecognized tax benefits as of the dates indicated:

	December 31,						
(In millions)	2023		2022		2	2021	
Beginning balance	\$	285	\$	252	\$	308	
Decrease related to agreements with tax authorities		(32)		(4)		(130)	
Increase related to tax positions taken during current year		39		48		50	
Increase/(Decrease) related to tax positions taken during prior years		(34)		8		42	
Decreases related to a lapse of the applicable statute of limitations		(21)		(19)		(18)	
Ending balance	\$	237	\$	285	\$	252	

It is reasonably possible that of the \$237 million of unrecognized tax benefits as of December 31, 2023, up to \$113 million could decrease within the next 12 months due to agreements with tax authorities and the expiration of statutes of limitations. Management believes that we have sufficient accrued liabilities as of December 31, 2023 for tax exposures and related interest expense.

Income tax expense included related interest and penalties of approximately \$7 million, \$8 million and \$6 million in 2023, 2022 and 2021, respectively. Total accrued interest and penalties were approximately \$21 million, \$15 million and \$9 million as of December 31, 2023, 2022 and 2021, respectively.

Note 23. Earnings Per Common Share

Basic EPS is calculated pursuant to the twoclass method, by dividing net income available to common shareholders by the weighted-average common shares outstanding during the period. Diluted EPS is calculated pursuant to the two-class method, by dividing net income available to common shareholders by the total weighted-average number of common shares outstanding for the period plus the shares representing the dilutive effect of equity-based awards. The effect of equity-based awards is excluded from the calculation of diluted EPS in periods in which their effect would be anti-dilutive.

The two-class method requires the allocation of undistributed net income between common and participating shareholders. Net income available to common shareholders, presented separately in our consolidated statement of income, is the basis for the calculation of both basic and diluted EPS. Participating securities are composed of unvested and fully vested SERP shares and fully vested deferred director stock awards, which are equitybased awards that contain non-forfeitable rights to dividends, and are considered to participate with the common stock in undistributed earnings. The following table presents the computation of basic and diluted earnings per common share for the periods indicated:

	Years Ended December 31,						
(Dollars in millions, except per share amounts)		2023		2022	2021		
Net income	\$	1,944	\$	\$ 2,774		2,693	
Less:							
Preferred stock dividends		(122)		(112)	(11		
Dividends and undistributed earnings allocated to participating securities ⁽¹⁾		(1)		(2)	(2)		
Net income available to common shareholders	\$	1,821	\$	2,660	\$	2,572	
Average common shares outstanding (In thousands):							
Basic average common shares	:	322,337		365,214		352,565	
Effect of dilutive securities: equity- based awards		4,231		4,895		5,397	
Diluted average common shares		326,568		370,109		357,962	
Anti-dilutive securities ⁽²⁾		1,251	-	866	_	3	
Earnings per common share:							
Basic	\$	5.65	\$	7.28	\$	7.30	
Diluted ⁽³⁾		5.58		7.19		7.19	

⁽¹⁾ Represents the portion of net income available to common equity allocated to participating securities, composed of unvested and fully vested SERP (Supplemental executive retirement plans) shares and fully vested deferred director stock awards, which are equity-based awards that contain non-forfeitable rights to dividends, and are considered to participate with the common stock in undistributed earnings.

⁽²⁾ Represents equity-based awards outstanding, but not included in the computation of diluted average common shares, because their effect was antidilutive. Additional information about equity-based awards is provided in Note 18.

 $^{(3)}$ Calculations reflect allocation of earnings to participating securities using the two-class method, as this computation is more dilutive than the treasury stock method.

Note 24. Line of Business Information

Our operations are organized into two lines of business: Investment Servicing and Investment Management, which are defined based on products and services provided. The results of operations for these lines of business are not necessarily comparable with those of other companies, including companies in the financial services industry.

Investment Servicing, through State Street Investment Services, State Street Global Markets[®], State Street Alpha®, and State Street Digital®, we provide investment services for institutional clients, including mutual funds, collective investment funds and other investment pools, corporate and public retirement plans, insurance companies, investment managers, foundations and endowments worldwide. Products include: back office products such as custody, accounting, regulatory reporting, investor services, performance and analytics; middle office products such as investment book of record, transaction management, loans, cash, derivatives and collateral services, record keeping, client investment analytics; investment reporting and manager alternative investment manager and

operations outsourcing; performance, risk and compliance analytics; financial data management to support institutional investors; foreign exchange, brokerage and other trading services; securities finance, including prime services products; and deposit and short-term investment facilities.

Included within our Investment Servicing line of is the Charles business River Investment Management Solution, a technology offering which is designed to automate and simplify the institutional investment process across asset classes, from portfolio management and risk analytics through trading and post-trade settlement, with integrated compliance and managed data throughout. With the acquisition of CRD in 2018, we took the first step in building our front-to-back platform, State Street Alpha. In 2021, we further expanded State Street Alpha's technology offering with the acquisition of Mercatus, Inc., enabling the launch of Alpha for Private Markets. In 2023, we enhanced State Street Alpha with the release of two notable upgrades to its fixed income management module. Today our State Street Alpha platform combines portfolio management, trading and execution, analytics and compliance tools, and advanced data aggregation and integration with other industry platforms and providers.

In 2021, we established State Street Digital to focus on the development of services related to digital assets and related technologies, such as blockchain, tokenization, cryptocurrency, and central bank digital currency, including the evolution of a new integrated business and digital operating model designed to support primarily our institutional clients' digital investment cycle.

Investment Management provides a broad range of investment management strategies and products for our clients through State Street Global Advisors. Our investment management strategies and products for equity, fixed income and cash assets, including core and enhanced indexing, multi-asset strategies, active quantitative and fundamental active capabilities and alternative investment strategies, span the risk/ reward spectrum of these investment products. Our AUM is currently primarily weighted to indexed strategies. In addition, we provide a breadth of services and solutions, including ESG investing, defined benefit and defined contribution products, and Global Fiduciary Solutions. State Street Global Advisors is also a provider of ETFs, including the $\mbox{SPDR}^{\mbox{\tiny B}}\mbox{ETF}$ brand.

Our investment servicing strategy is to focus on total client relationships and the full integration of our products and services across our client base through cross-selling opportunities. In general, our clients will use a combination of services, depending on their needs, rather than one product or service. For instance, a custody client may purchase securities finance and cash management services from different business units. Products and services that we provide to our clients are parts of an integrated offering to these clients. We price our products and services on the basis of overall client relationships and other factors; as a result, revenue may not necessarily reflect the stand-alone market price of these products and services within the business lines in the same way it would for separate business entities.

Our servicing and management fee revenue from the Investment Servicing and Investment Management business lines, including foreign exchange trading services and securities finance activities, represents approximately 70% to 80% of our consolidated total revenue. The remaining 20% to 30% is composed of software and processing fees, including front office software and data and lending related and other fees, as well as NII, which is largely generated by our investment of client deposits, shortterm borrowings and long-term debt in a variety of assets, and net gains (losses) related to investment securities. These other revenue types are generally fully allocated to, or reside in, Investment Servicing and Investment Management.

Revenue and expenses are directly charged or allocated to our lines of business through management information systems. Assets and liabilities are allocated according to policies that support management's strategic and tactical goals. Capital is allocated based on the relative risks and capital requirements inherent in each business line, along with management judgment. Capital allocations may not be representative of the capital that might be required if these lines of business were separate business entities.

The following is a summary of our line of business results "Other" column for the periods indicated.

	Years Ended December 31, Other							
(Dollars in millions)	2023		2022	2021				
Fee revenue	\$	— \$	23	\$ —				
Other Income		(294)	—	111				
FDIC special assessment		(387)	_	_				
Net repositioning charges		(203)	(70)	3				
Net acquisition and restructuring costs		15	(65)	(65)				
Legal and related expenses		_	—	(18)				
Deferred incentive compensation expense acceleration		_	_	(147)				
Other expenses		(55)	(10)	(35)				
Total	\$	(924) \$	(122)	\$ (151)				

The "Other" columns represent amounts that are not allocated to our two lines of business. In 2023, we recognized a pre-tax expense within other expenses of approximately \$387 million related to the FDIC special assessment to recover estimated losses to the Deposit Insurance Fund arising from the protection of uninsured depositors following the closure of SVB and Signature Bank. In 2023, we also recognized a pre-tax loss on sale of AFS securities of \$294 million, related to an investment portfolio repositioning and net repositioning charges of \$203 million. In addition, the acceleration of deferred compensation of \$147 million in 2021 was not allocated to our two lines of business.

The following is a summary of our line of business results for the periods indicated.

	Years Ended December 31,											
		Investment Servicing		Investment Management				Other		Total		
(Dollars in millions)	2023	2022	2021	2023	2022	2021	2023	2022	2021	2023	2022	2021
Servicing fees	\$ 4,922	\$ 5,087	\$ 5,531	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 4,922	\$ 5,087	\$ 5,531
Management fees	_	_	_	1,876	1,939	2,053	_	_	_	1,876	1,939	2,053
Foreign exchange trading services	1,140	1,271	1,149	125	82	62	_	23	_	1,265	1,376	1,211
Securities finance	402	397	402	24	19	14	_	_	_	426	416	416
Software and processing fees	811	789	738	_	_	_	_	_	_	811	789	738
Other fee revenue ⁽¹⁾	145	46	59	35	(47)	4			—	180	(1)	63
Total fee revenue	7,420	7,590	7,879	2,060	1,993	2,133	—	23	—	9,480	9,606	10,012
Net interest income	2,740	2,551	1,919	19	(7)	(14)		—	—	2,759	2,544	1,905
Total other income		(2)	(1)				(294)		111	(294)	(2)	110
Total revenue	10,160	10,139	9,797	2,079	1,986	2,119	(294)	23	111	11,945	12,148	12,027
Provision for credit losses	46	20	(33)	_	_	_	_	_	_	46	20	(33)
Total expenses	7,413	7,260	7,182	1,540	1,396	1,445	630	145	262	9,583	8,801	8,889
Income before income tax expense	\$ 2,701	\$ 2,859	\$ 2,648	\$ 539	\$ 590	\$ 674	\$ (924)	\$ (122)	\$ (151)	\$ 2,316	\$ 3,327	\$ 3,171
Pre-tax margin	27 %	28 %	27 %	26 %	30 %	32 %				19 %	27 %	26 %
Average assets (in billions)	\$ 271.5	\$ 283.2	\$ 296.5	\$ 3.2	\$ 3.2	\$ 3.2				\$ 274.7	\$ 286.4	\$ 299.7

⁽¹⁾ Investment Management includes other revenue items that are primarily driven by equity market movements.

Note 25. Revenue from Contracts with Customers

We account for revenue from contracts with customers in accordance with ASC 606. The amount of revenue that we recognize is measured based on the consideration specified in contracts with our customers, and excludes taxes collected from customers subsequently remitted to governmental authorities. We recognize revenue when a performance obligation is satisfied over time as the services are performed or at a point in time depending on the nature of the services provided as further discussed below. Revenue recognition guidance related to contracts with customers excludes our NII, revenue earned on security lending transactions entered into as principal, realized gains/losses on securities, revenue earned on foreign exchange activity, loans and related fees, and gains/losses on hedging and derivatives, to which we apply other applicable U.S. GAAP guidance.

For contracts with multiple performance obligations, or contracts that have been combined, we allocate the contracts' transaction price to each performance obligation using our best estimate of the standalone selling price.

Our contractual fees are negotiated on a customer by customer basis and are representative of standalone selling price utilized for allocating revenue when there are multiple performance obligations.

Substantially all of our services are provided as a distinct series of daily performance obligations that the customer simultaneously benefits from as they are performed. Payments may be made to third party service providers and the expense is recognized gross when we control those services as we are deemed the principal.

Contract durations may vary from short- to long-term or may be open ended. Termination notice periods are in line with general market practice and typically do not include termination penalties. Therefore, for substantially all of our revenues, the duration of the contract and the enforceable rights and obligations do not extend beyond the services that are performed daily or at the transaction level. In instances where we have substantive termination penalties, the duration of the contract may extend through the date of substantive termination penalties.

Investment Servicing

Revenue from contracts with customers related to servicing fees is recognized over time as our customers benefit from the custody, administration, accounting, transfer agency and other related asset services as they are performed. At contract inception, no revenue is estimated as the fees are dependent on assets under custody and/ or administration and/or actual transactions which are susceptible to market factors outside of our control. Therefore, revenue is recognized using a time-based output method as the customers benefit from the services over time and as the assets under custody or transactions are known or determinable during each reporting period based on contractual fee schedules. Payments made to third party service providers, such as sub-custodians, are generally recognized gross as we control those services and are deemed to be a principal in such arrangements.

Foreign exchange trading services revenue includes revenue generated from providing access and use of electronic trading platforms and other trading, transition management and brokerage services. Electronic FX services are dependent on the volume of actual transactions initiated through our electronic exchange platforms. Revenue is recognized over time using a time-based measure as access to, and use of, the electronic exchange platforms is made available to the customer and the activity is determinable. Revenue related to other trading, transition management and brokerage services is recognized when the customer obtains the benefit of such services which may be over time or at a point in time upon trade execution.

Securities finance revenue is related to services for providing agency lending programs to State Street Global Advisors managed investment funds and third-party investment managers and asset owners. This securities finance revenue is recognized over time using a time-based measure as our customers benefit from these lending services.

Revenue related to the front office solutions provided by CRD is primarily driven by the sale of licenses and SaaS arrangements, including professional services such as consulting and implementation services, software support and maintenance. Revenue for a sale of software to be installed on premise is recognized at a point in time when the customer benefits from obtaining access to and use of the software license. Revenue for a SaaS related arrangement is recognized over time as services are provided.

Investment Management

Revenue from contracts with customers related to investment management, investment research and investment advisory services provided through State Street Global Advisors is recognized over time as our customers benefit from the services as they are performed. Substantially all of our investment management fees are determined by the value of assets under management and the investment strategies employed. At contract inception, no revenue is estimated as the fees are dependent on assets under management which are susceptible to market factors outside of our control.

Therefore, substantially all of our Investment Management services revenue is recognized using a time-based output method as the customers benefit from the services over time and as the assets under management are known or determinable during each reporting period based on contractual fee schedules. Payments made to third party service providers, such as payments to others in unitary fee arrangements, are generally recognized on a gross basis when State Street Global Advisors controls those services and is deemed to be a principal in such transactions.

Revenue by category

In the following table, revenue is disaggregated by our two lines of business and by revenue stream for which the nature, amount, timing and uncertainty of revenue and cash flows are affected by economic factors. The amounts in the "Other" columns were not allocated to our business lines.

		Year Ended December 31, 2023										
	Inve	estment Serv	/icing	Invest	ment Manag	gement		Total				
(Dollars in millions)	Topic 606 revenue	All other revenue	Total	Topic 606 revenue	All other revenue	Total	Topic 606 revenue	All other revenue	Total	2023		
Servicing fees	\$ 4,922	\$ _	\$ 4,922	\$ _	\$ _	\$ _	\$ _	\$ _	\$ _	\$ 4,922		
Management fees	_	_	_	1,876	_	1,876	_	_	_	1,876		
Foreign exchange trading services	344	796	1,140	125	_	125	_	_	_	1,265		
Securities finance	225	177	402	_	24	24	_	_	_	426		
Software and processing fees	627	184	811	_	_	_	_	_	_	811		
Other fee revenue		145	145		35	35				180		
Total fee revenue	6,118	1,302	7,420	2,001	59	2,060	_	_	_	9,480		
Net interest income	_	2,740	2,740	_	19	19	_	_	_	2,759		
Total other income								(294)	(294)	(294)		
Total revenue	\$ 6,118	\$ 4,042	\$ 10,160	\$ 2,001	\$ 78	\$ 2,079	\$	\$ (294)	\$ (294)	\$ 11,945		

		Year Ended December 31, 2022																	
		Inve	stme	nt Serv	icin	g		Invest	ment	Manag	jem	ent	Other				Total		
(Dollars in millions)	6	opic 606 renue		other enue		Total	(opic 606 venue		other enue		Total	6	opic 06 enue		other enue	т	otal	2022
Servicing fees	\$	5,087	\$	_	\$	5,087	\$	_	\$	_	\$	—	\$	_	\$	_	\$	_	\$ 5,087
Management fees		—		_		_		1,939		—		1,939		_		_		_	1,939
Foreign exchange trading services		363		908		1,271		82		—		82		—		23		23	1,376
Securities finance		233		164		397		_		19		19		_		_		_	416
Software and processing fees		599		190		789		—		—		_		—		—		—	789
Other fee revenue		_		46		46				(47)		(47)		_		_		_	 (1)
Total fee revenue		6,282		1,308		7,590		2,021		(28)		1,993		_		23		23	9,606
Net interest income		—		2,551		2,551		_		(7)		(7)		_		_		_	2,544
Total other income				(2)		(2)		_						_		_		_	 (2)
Total revenue	\$	6,282	\$	3,857	\$	10,139	\$	2,021	\$	(35)	\$	1,986	\$	_	\$	23	\$	23	\$ 12,148

	Year Ended December 31, 2021										
	Inve	estment Serv	/icing	Invest			Total				
(Dollars in millions)	Topic 606 revenue	All other revenue	Total	Topic 606 revenue	All other revenue	Total	Topic 606 revenue	All other revenue	Total	2021	
Servicing fees	\$ 5,531	\$ —	\$ 5,531	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 5,531	
Management fees	_	_	_	2,053	_	2,053	_	_	_	2,053	
Foreign exchange trading services	342	807	1,149	62	_	62	_	_	_	1,211	
Securities finance	235	167	402	_	14	14	_	_	_	416	
Software and processing fees	535	203	738	_	_	_	_	_	_	738	
Other fee revenue		59	59		4	4				63	
Total fee revenue	6,643	1,236	7,879	2,115	18	2,133	_	_	_	10,012	
Net interest income	_	1,919	1,919	_	(14)	(14)	_	_	_	1,905	
Total other income		(1)	(1)					111	111	110	
Total revenue	\$ 6,643	\$ 3,154	\$ 9,797	\$ 2,115	\$4	\$ 2,119	\$ —	\$ 111	\$ 111	\$ 12,027	

Contract balances and contract costs

As of December 31, 2023 and 2022, net receivables of \$2.72 billion and \$2.63 billion, respectively, are included in accrued interest and fees receivable, representing amounts billed or currently billable related to revenue from contracts with customers. As performance obligations are satisfied, we have an unconditional right to payment and billing is generally performed monthly or quarterly; therefore, we do not have significant contract assets.

We had \$133 million and \$138 million of deferred revenue as of December 31, 2023 and 2022, respectively. Deferred revenue is a contract liability which represents payments received and accounts receivable recorded in advance of providing services and is included in accrued expenses and other liabilities in the consolidated statement of condition. In the year ended December 31, 2023, we recognized revenue of \$122 million relating to deferred revenue of \$138 million as of December 31, 2022.

Transaction price allocated to the remaining performance obligations represents future, non-cancelable contracted revenue that has not yet been recognized, inclusive of deferred revenue that has been invoiced and non-cancelable amounts that will be invoiced and recognized as revenue in future periods. As of December 31, 2023, total remaining non-cancelable performance obligations for services and products not yet delivered, primarily consisting of software license sales and SaaS, were approximately \$1.52 billion. We expect to recognize approximately half of this amount in revenue over the next three years, with the remainder to be recognized thereafter.

No adjustments are made to the promised amount of consideration for the effects of a significant financing component as the period between when we transfer a promised service to a customer and when the customer pays for that service is expected to be one year or less.

Note 26. Non-U.S. Activities

We define our non-U.S. activities as those revenue-producing business activities that arise from clients which are generally serviced or managed outside the U.S. Due to the integrated nature of our business, precise segregation of our U.S. and non-U.S. activities is not possible.

Subjective estimates, assumptions and other judgments are applied to quantify the financial results and assets related to our non-U.S. activities, including our application of funds transfer pricing, our asset and liability management policies and our allocation of certain indirect corporate expenses. Management periodically reviews and updates its processes for quantifying the financial results and assets related to our non-U.S. activities.

		Years Ended December 31,															
		2023				2022						2021					
(In millions)	No	n-U.S. ⁽¹⁾		U.S.		Total	No	n-U.S. ⁽¹⁾		U.S.		Total	No	n-U.S. ⁽¹⁾		U.S.	 Total
Total revenue	\$	5,108	\$	6,837	\$	11,945	\$	5,170	\$	6,978	\$	12,148	\$	5,397	\$	6,630	\$ 12,027
Income before income tax expense		1,057		1,259		2,316		1,358		1,969		3,327		1,590		1,581	3,171

The following table presents our U.S. and non-U.S. financial results for the periods indicated:

⁽¹⁾ Geographic mix is generally based on the domicile of the entity servicing the funds and is not necessarily representative of the underlying asset mix.

Non-U.S. assets were \$89.85 billion and \$96.34 billion as of December 31, 2023 and 2022, respectively.

Note 27. Parent Company Financial Statements

The following tables present the financial statements of the Parent Company without consolidation of its banking and non-banking subsidiaries, as of and for the years indicated:

Statement of Income - Parent Company

	Years Ended December 31,						
(In millions)	2	2023	2022		2021		
Cash dividends from consolidated banking subsidiary	\$	4,550	\$ 1,500	\$	_		
Cash dividends from consolidated non-banking subsidiaries and unconsolidated entities		320	198		170		
Other, net		274	69		49		
Total revenue		5,144	1,767		219		
Interest expense		975	426		239		
Other expenses		198	93		315		
Total expenses		1,173	519		554		
Income tax (benefit)		(224)	(121)		(153)		
Income (Loss) before equity in undistributed income of consolidated subsidiaries and unconsolidated entities		4,195	1,369		(182)		
Equity in undistributed income of consolidated subsidiaries and unconsolidated entities:							
Consolidated banking subsidiary		(2,464)	1,275		2,657		
Consolidated non-banking subsidiaries and unconsolidated entities		213	130		218		
Net income	\$	1,944	\$ 2,774	\$	2,693		

Statement of Condition - Parent Company

	As of De	cember 31,		
(In millions)	2023	2022		
Assets:				
Interest-bearing deposits with consolidated banking subsidiary	\$ 659	\$ 460		
Trading account assets	454	425		
Investment securities available-for-sale	279	260		
Investments in subsidiaries:				
Consolidated banking subsidiary	25,391	26,579		
Consolidated non-banking subsidiaries	10,055	9,151		
Unconsolidated entities	111	121		
Notes and other receivables from:				
Consolidated banking subsidiary	2	_		
Consolidated non-banking subsidiaries and unconsolidated entities	6,816	3,512		
Other assets	230	205		
Total assets	\$ 43,997	\$ 40,713		
Liabilities:				
Notes and other payables to:				
Consolidated banking subsidiary	\$ 68	\$ 22		
Consolidated non-banking subsidiaries and unconsolidated entities	896	214		
Accrued expenses and other liabilities	615	509		
Long-term debt	18,619	14,777		
Total liabilities	20,198	15,522		
Shareholders' equity	23,799	25,191		
Total liabilities and shareholders' equity	\$ 43,997	\$ 40,713		

Statement of Cash Flows - Parent Company

	Years Ended December 31,									
(In millions)	2	023	2022		2021					
Net cash provided by (used in) operating activities	\$	4,194	\$1,	608 \$	(116)					
Investing Activities:										
Net (increase) decrease in interest-bearing deposits with consolidated banking subsidiary		(199)		22	10					
Proceeds from sales and maturities of available-for-sale securities		830		780	525					
Purchases of available-for-sale securities		(836)	(886)	(575)					
Investments in consolidated banking and non-banking subsidiaries		(10,784)	(16,	252)	(6,288)					
Sale or repayment of investment in consolidated banking and non-banking subsidiaries		7,920	15,	092	7,006					
Net cash (used in) provided by investing activities		(3,069)	(1,	244)	678					
Financing Activities:										
Proceeds from issuance of long-term debt, net of issuance costs		6,221	3,	731	1,343					
Payments for long-term debt		(2,500)	(1,	500)	(1,500)					
Payments for redemption of preferred stock		_		_	(500)					
Proceeds from issuance of common stock, net of issuance costs		_		—	1,900					
Repurchases of common stock		(3,781)	(1,	500)	(900)					
Repurchases of common stock for employee tax withholding		(95)	(123)	(39)					
Payments for cash dividends		(970)	(972)	(866)					
Net cash (used in) financing activities		(1,125)	(364)	(562)					
Net change		_		—	—					
Cash and due from banks at beginning of year					_					
Cash and due from banks at end of year	\$		\$	\$						

Note 28. Subsequent Events

In January 2024, we issued 1.5 million depositary shares, each representing 1/100th ownership interest in shares of fixed-to-floating rate, non-cumulative perpetual preferred stock, Series I, without par value per share, with a liquidation preference of \$100,000 per share (equivalent to \$1,000 per depositary share), in a public offering. The aggregate proceeds from the offering, net of underwriting discounts, commissions and other issuance costs, were approximately \$1.5 billion.

On February 8, 2024, we announced that we will redeem on March 15, 2024 an aggregate \$1.0 billion, or 7,500 outstanding shares, of our non-cumulative perpetual preferred stock, Series D, for a cash redemption price of \$100,000 per share (equivalent to \$25 per depository share) and all 2,500 of the outstanding shares of our non-cumulative perpetual preferred stock, Series F, for a cash redemption price of \$100,000 per share (equivalent to \$25 per depository share) and all 2,500 of the outstanding shares of our non-cumulative perpetual preferred stock, Series F, for a cash redemption price of \$100,000 per share (equivalent to \$1,000 per depository share), plus all declared and unpaid dividends.

SUPPLEMENTAL FINANCIAL DATA (UNAUDITED)

Distribution of Average Assets, Liabilities and Shareholders' Equity; Interest Rates and Interest Differential

The following table presents consolidated average statements of condition and NII for the years indicated:

					nded Decem				
·····		2023			2022			2021	
(Dollars in millions; fully taxable-equivalent basis)	Average Balance	Interest	Average Rate	Average Balance	Interest	Average Rate	Average Balance	Interest	Average Rate
Assets:									
Interest-bearing deposits with U.S. banks	\$ 39,071	\$ 1,260	3.22 %	\$ 28,415	\$ 563	1.98 %	\$ 28,584	\$ 41	0.14 %
Interest-bearing deposits with non-U.S. banks	30,812	1,609	5.22	48,083	279	0.58	61,412	(56)	(0.09)
Securities purchased under resale agreements	1,764	312	17.67	2,116	188	8.88	4,193	27	0.63
Trading account assets	711	—	—	721	—	0.01	752	—	0.01
Investment securities:									
U.S. Treasury and federal agencies ⁽¹⁾	69,890	1,594	2.28	73,261	1,126	1.54	66,195	873	1.32
State and political subdivisions ⁽¹⁾	621	14	2.33	1,053	33	3.15	1,451	44	3.06
Other investments	35,254	1,402	3.98	37,615	553	1.47	43,770	331	0.76
Investment securities held-to-maturity purchased under money market liquidity facility	_	_	_	_	_	_	314	4	1.35
Loans	34,800	1,863	5.35	35,117	973	2.77	31,009	640	2.07
Other interest-earning assets	18,098	1,131	6.25	20,850	383	1.84	22,355	17	0.08
Total interest-earning assets ⁽¹⁾	231,021	9,185	3.98	247,231	4,098	1.66	260,035	1,921	0.74
Cash and due from banks	3,925	0,100		3,652	,		5,057	1,021	011 1
Other assets	39,750			35,547			34,651		
Total assets	\$ 274,696			\$ 286,430	-		\$ 299,743		
10101 055615	\$ 214,090			\$ 200,430	=		\$ 299,743		
Interest-bearing deposits: Time	\$ 4,352	\$ 243	5.59 %	\$ 524	\$ 23	— %	s —	\$ —	— %
Savings	105,852	³ 243	3.53	97,728	864	0.88	³ –	پ <u> </u>	0.01
· ·				,					
Non-U.S.	62,689	1,015	1.62	76,842		0.10	82,126	(273)	0.33
Total interest-bearing deposits	172,893	4,991	2.89	175,094	967	0.55	186,974	(263)	0.51
Securities sold under repurchase agreements	3,904	34	0.87	3,633	14	0.39	667	—	—
Federal funds purchased	65	3	4.82	_	_	-	-	_	-
Short-term borrowings under money market liquidity facility	_	_	_	_	_	_	315	4	1.21
Other short-term borrowings	1,120	40	3.60	1,188	26	2.18	788	2	0.21
Long-term debt	17,355	888	5.12	14,132	376	2.66	13,383	219	1.64
Other interest-bearing liabilities	3,891	465	11.96	2,725	161	5.91	5,486	41	0.75
Total interest-bearing liabilities	199,228	6,421	3.22	196,772	1,544	0.78	207,613	3	_
Non-interest-bearing deposits:									
Demand	30,065			46,730			47,747		
Non-U.S. ⁽²⁾	2,153			1,050			683		
Other liabilities	19,073			15,992			17,615		
Shareholders' equity	24,177			25,886			26,085		
	\$ 274,696			\$ 286,430			\$ 299,743		
Total liabilities and shareholders' equity					=				
Total liabilities and shareholders' equity Net interest income, fully taxable-equivalent basis	<u> </u>	\$ 2,764			\$ 2,554			\$ 1,918	
Net interest income, fully taxable-equivalent	<u> </u>	\$ 2,764	0.75 %		\$ 2,554	0.87 %		\$ 1,918	0.74 %

⁽¹⁾ Fully taxable-equivalent revenue is a method of presentation in which the tax savings achieved by investing in tax-exempt investment securities and certain leases are included in interest income with a corresponding charge to income tax expense. This method facilitates the comparison of the performance of these assets. The adjustments are computed using a federal income tax rate of 21% for periods ending in 2023, 2022 and 2021, adjusted for applicable state income taxes, net of the related federal tax benefit. The fully taxable-equivalent adjustments included in interest income presented above were \$5 million, \$10 million and \$13 million for the years ended December 31, 2023, 2022 and 2021, respectively, and were substantially related to tax-exempt securities (state and political subdivisions).

⁽²⁾ Non-U.S. non-interest-bearing deposits were \$2.81 billion, \$2.30 billion and \$968 million as of December 31, 2023, 2022 and 2021, respectively.

⁽³⁾ NIM is calculated by dividing fully taxable-equivalent NII by average total interest-earning assets.

SUPPLEMENTAL FINANCIAL DATA (CONTINUED)

The following table summarizes changes in fully taxable-equivalent interest income and interest expense due to changes in volume of interest-earning assets and interest-bearing liabilities, and due to changes in interest rates. Changes attributed to both volumes and rates have been allocated based on the proportion of change in each category.

Years Ended December 31,	2023 Compared to 2022			2022 Compared to 2021					
(Dollars in millions; fully taxable-equivalent basis)	Change in Volume	Change in Rate	Net (Decrease) Increase	Change in Volume	Change in Rate	Net (Decrease) Increase			
Interest income related to:									
Interest-bearing deposits with U.S. banks	\$ 211	\$ 486	\$ 697	\$ —	\$ 522	\$ 522			
Interest-bearing deposits with non-U.S. banks	(100)	1,430	1,330	12	323	335			
Securities purchased under resale agreements	(31)	155	124	(13)	174	161			
Trading account assets	_	_	—	—	—	—			
Investment securities:									
U.S. Treasury and federal agencies	(52)	520	468	93	160	253			
State and political subdivisions	(14)	(5)	(19)	(12)	1	(11)			
Other investments	(35)	884	849	(47)	269	222			
Investment securities held-to-maturity purchased under money market liquidity facility		_	_	(4)	_	(4)			
Loans	(9)	899	890	85	248	333			
Other interest-earning assets	(51)	799	748	(1)	367	366			
Total interest-earning assets	(81)	5,168	5,087	113	2,064	2,177			
Interest expense related to:									
Deposits:									
Time	_	220	220	_	23	23			
Savings	72	2,797	2,869	(1)	855	854			
Non-U.S.	(15)	950	935	17	336	353			
Securities sold under repurchase agreements	1	19	20	—	14	14			
Federal funds purchased		3	3	—	—	—			
Short-term borrowings under money market liquidity facility	_	_	_	(4)	_	(4)			
Other short-term borrowings	(1)	15	14	1	23	24			
Long-term debt	86	426	512	12	145	157			
Other interest-bearing liabilities	69	235	304	(21)	141	120			
Total interest-bearing liabilities	212	4,665	4,877	4	1,537	1,541			
Net interest income	\$ (293)	\$ 503	\$ 210	\$ 109	\$ 527	\$ 636			

ACRONYMS

ABS	Asset-backed securities	IDI	Insured Depository Institution
AFS	Available-for-sale		Liquidity coverage ratio
AML	Anti-money laundering	LIHTC	Low income housing tax credits
AOCI	Accumulated other comprehensive income (loss)	LDA model	Loss distribution approach model
ASU	Accounting Standards Update	LIBOR	London Interbank Offered Rate
AUC/A	Assets under custody and/or administration	LTD	Long-term debt
AUM	Assets under management	MBS	
BBH	Brown Brothers Harriman & Co	MMLF	Mortgage-backed securities
BCCC		MRAC	Money Market Mutual Fund Liquidity Facility
	Business Conduct and Compliance Committee		Management Risk and Capital Committee
bps	Basis points	MRC	Model Risk Committee
CAP	Capital adequacy process	MRM	Model Risk Management
CCAR	Comprehensive Capital Analysis and Review	MVG	Model Validation Group
CCB	Capital conservation buffer	NII	Net interest income
CECL	Current Expected Credit Loss	NIM	Net interest margin
CET1 ⁽¹⁾	Common equity tier 1	NOL	Net Operating Loss
CFTC	Commodity Futures Trading Commission	NSFR ⁽¹⁾	Net stable funding ratio
CLO	Collateralized loan obligation	000	Office of the Comptroller of the Currency
CMBS	Commercial mortgage-backed securities	ORM	Operational risk management
CMRC	Credit and Market Risk Committee	OTC	Over-the-counter
COSO	Committee of Sponsoring Organizations of the Treadway Commission	PCA	Prompt corrective action
CRD	Charles River Development	PCAOB	Public Company Accounting Oversight Board
CRO	Chief Risk Officer	PD ⁽¹⁾	Probability-of-default
CVA	Credit valuation adjustment	P&L	Profit-and-loss
DOJ	Department of Justice	RC	Risk Committee
DOL	Department of Labor	RMBS	Residential mortgage-backed securities
DORA	Digital Operational Resilience Act	RWA ⁽¹⁾	Risk-weighted asset
E&A Committee	Examining and Audit Committee	SA-CCR	Standardized approach for counterparty credit risk
ECB	European Central Bank	SaaS	Software as a service
EEO	Equal Employment Opportunity	SCB	Stress Capital Buffer
EGRRCPA	Economic Growth, Regulatory Relief, and Consumer Protection Act	SEC	Securities and Exchange Commission
EPS	Earnings per share	SIFI	Systemically important financial institutions
ERM	Enterprise Risk Management	SLB	Stress Leverage Buffer
ESG	Environmental, social and governance	SLR ⁽¹⁾	Supplementary leverage ratio
ETF	Exchange-Traded Fund	SOFR	Secured Overnight Financing Rate
EURIBOR	Euro Interbank Offered Rate	SPDR	Spider; Standard and Poor's depository receipt
E.U.	European Union	SPOE Strategy	Single Point of Entry Strategy
EVE	Economic value of equity	SSIF	State Street Intermediate Funding, LLC
FDIC	Federal Deposit Insurance Corporation	TLAC ⁽¹⁾	Total loss-absorbing capacity
FHLB	Federal Home Loan Bank of Boston	TOPS	Technology and Operations Committee
FICC	Fixed Income Clearing Corporation	TORC	Technology and Operational Risk Committee
FTE	Fully taxable-equivalent	UCITS	Undertakings for Collective Investments in Transferable Securities
FSOC	Financial Stability Oversight Council	U.K.	United Kingdom
FX	Foreign exchange	UOM	Unit of measure
GAAP	Generally accepted accounting principles	U.S.	United States of America
GCR	Global credit review	USD	U.S. dollar
GCS	Global Cybersecurity	VaR	Value-at-Risk
GDPR	General data protection regulation	VIE	Variable interest entity
G-SIB	Global systemically important bank		
HQLA ⁽¹⁾	High-quality liquid assets		
НТМ	Held-to-maturity		

 $^{^{(1)}\}mbox{As}$ defined by the applicable U.S. regulations.

Asset-backed securities: A financial security backed by collateralized assets, other than real estate or mortgage backed securities.

Assets under custody and/or administration: Assets that we hold directly or indirectly on behalf of clients under a safekeeping or custody arrangement or for which we provide administrative services for clients. To the extent that we provide more than one AUC/A service (including back and middle office services) for a client's assets, the value of the asset is only counted once in the total amount of AUC/A.

Assets under management: The total market value of client assets for which we provide investment management strategy services, advisory services and/or distribution services generating management fees based on a percentage of the assets' market values. These client assets are not included on our balance sheet. Assets under management include managed assets lost but not liquidated. Lost business occurs from time to time and it is difficult to predict the timing of client behavior in transitioning these assets as the timing can vary significantly.

Beacon: A multi-year program, announced in October 2015, to create cost efficiencies through changes in our operational processes and to further digitize our processes and interfaces with our clients.

Certificates of deposit: A savings certificate with a fixed maturity date, specified fixed interest rate and can be issued in any denomination aside from minimum investment requirements. A CD restricts access to the funds until the maturity date of the investment.

Collateralized loan obligations: A loan or security backed by a pool of debt, primarily senior secured leveraged loans. CLOs are similar to collateralized mortgage obligations, except for the different type of underlying loan. With a CLO, the investor receives scheduled loan or debt payments from the underlying loans, assuming most of the risk in the event borrowers default, but is offered greater diversity and the potential for higher-than-average returns.

Commercial real estate: Property intended to generate profit from capital gains or rental income. CRE loans are term loans secured by commercial and multifamily properties. We seek CRE loans with strong competitive positions in major domestic markets, stable cash flows, modest leverage and experienced institutional ownership.

Deposit beta: A measure of how much of an interest rate increase is expected to be passed on to client interest-bearing accounts, on average.

Doubtful: Doubtful loans and leases meet the same definition of substandard loans and leases (i.e., well-defined weaknesses that jeopardize repayment with the possibility that we will sustain some loss) with the added characteristic that the weaknesses make collection or liquidation in full highly questionable and improbable.

Economic value of equity: A measure designed to estimate the fair value of assets, liabilities and off-balance sheet instruments based on a discounted cash flow model.

Exchange-Traded Fund: A type of exchange-traded investment product that offer investors a way to pool their money in a fund that makes investments in stocks, bonds, or other assets and, in return, to receive an interest in that investment pool. ETF shares are traded on a national stock exchange and at market prices that may or may not be the same as the net asset value.

Exposure-at-default: A measure used in the calculation of regulatory capital under Basel III final rule. It can be defined as the expected amount of loss a bank may be exposed to upon default of an obligor.

Global systemically important bank: A financial institution whose distress or disorderly failure, because of its size, complexity and systemic interconnectedness, would cause significant disruption to the wider financial system and economic activity, which will be subject to additional capital requirements.

Held-to-maturity investment securities: We classify investments in debt securities as held-to-maturity only if we have the positive intent and ability to hold those securities to maturity. Investments in debt securities classified as held-to-maturity are measured subsequently at amortized cost in the statement of financial condition.

High-quality liquid assets: Cash or assets that can be converted into cash at little or no loss of value in private markets and are considered unencumbered.

Investment grade: A rating of loans and leases to counterparties with strong credit quality and low expected credit risk and probability of default. It applies to counterparties with a strong capacity to support the timely repayment of any financial commitment.

Liquidity coverage ratio: The ratio of encumbered high-quality liquid assets divided by expected total net cash outflows over a 30-day stress period. A Basel III framework requirement for banks and bank holding companies to measure liquidity, it is designed to ensure that certain banking institutions, including us, maintain a minimum amount of unencumbered HQLA sufficient to withstand the net cash outflow under a hypothetical standardized acute liquidity stress scenario for a 30-day stress period.

Net asset value: The amount of net assets attributable to each share/ unit of the fund at a specific date or time.

Net stable funding ratio: The ratio of the amount of available stable funding relative to the amount of required stable funding. This ratio should be equal to at least 100% on an ongoing basis.

On-premises revenue: Revenue derived from locally installed software.

Prime services: The securities lending business previously referred to as enhanced custody.

Probability of default: A measure of the likelihood that a credit obligor will enter into default status.

Qualified financial contracts: Securities contracts, commodity contracts, forward contracts, repurchase agreements, swap agreements and any other contract determined by the FDIC to be a qualified financial contract.

Risk-weighted assets: A measurement used to quantify risk inherent in our on and off-balance sheet assets by adjusting the asset value for risk. RWA is used in the calculation of our risk-based capital ratios.

Software-enabled revenue: Includes SaaS, maintenance and support revenue, FIX, brokerage, and value-add services.

Special mention: Loans and leases that consist of counterparties with potential weaknesses that, if uncorrected, may result in deterioration of repayment prospects.

Speculative: Loans and leases that consist of counterparties that face ongoing uncertainties or exposure to business, financial, or economic downturns. However, these counterparties may have financial flexibility or access to financial alternatives, which allow for financial commitments to be met.

Substandard: Loans and leases that consist of counterparties with well-defined weakness that jeopardizes repayment with the possibility we will sustain some loss.

Supplementary leverage ratio: The ratio of our Tier 1 capital to our total leverage exposure, which measures our capital adequacy relative to our on and off-balance sheet assets.

Total loss-absorbing capacity: The sum of our Tier 1 regulatory capital plus eligible external long-term debt issued by us.

Value-at-Risk: Statistical model used to measure the potential loss in value of a portfolio that could occur in normal markets condition, over a defined holding period, within a certain confidence level.

Variable interest entity: An entity that: (1) lacks enough equity investment at risk to permit the entity to finance its activities without additional financial support from other parties; (2) has equity owners that lack the right to make significant decisions affecting the entity's operations; and/or (3) has equity owners that do not have an obligation to absorb or the right to receive the entity's losses or return.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

State Street has established and maintains disclosure controls and procedures that are designed to ensure that material information related to State Street and its subsidiaries on a consolidated basis required to be disclosed in its reports filed or submitted under the Securities Exchange Act of 1934 is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to State Street's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure. For the year ended December 31, 2023, State Street's management carried out an evaluation, with the participation of the Chief Executive Officer and Chief Financial Officer, and procedures. Based on the evaluation of these disclosure controls and procedures, the Chief Executive Officer and Chief Financial Officer and Chief Financial Officer state Street's disclosure controls and procedures were effective as of December 31, 2023.

State Street has also established and maintains internal control over financial reporting as a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of consolidated financial statements for external purposes in conformity with U.S. GAAP. In the ordinary course of business, State Street routinely enhances its internal controls and procedures for financial reporting by either upgrading its current systems or implementing new systems. Changes have been made and may be made to State Street's internal controls and procedures for financial reporting as a result of these efforts. During the quarter ended December 31, 2023, no change occurred in State Street's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, State Street's internal control over financial reporting.

INTERNAL CONTROL OVER FINANCIAL REPORTING

Management's Report on Internal Control Over Financial Reporting

The management of State Street is responsible for establishing and maintaining adequate internal control over financial reporting.

State Street'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 accounting principles generally accepted in the United States of America. State Street's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of State Street; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with accounting principles generally accepted in the United States of America, and that receipts and expenditures of State Street are being made only in accordance with authorizations of management and directors of State Street; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of State Street'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.

Management assessed the effectiveness of State Street's internal control over financial reporting as of December 31, 2023 based on the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control - Integrated Framework (2013)*.

Based on that assessment, management concluded that, as of December 31, 2023, State Street's internal control over financial reporting is effective.

The effectiveness of State Street's internal control over financial reporting as of December 31, 2023 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in their accompanying report, which follows this report.

Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of State Street Corporation

Opinion on Internal Control Over Financial Reporting

We have audited State Street Corporation's internal control over financial reporting as of December 31, 2023, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, State Street Corporation (the Corporation) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2023 consolidated financial statements of the Corporation and our report dated February 15, 2024 expressed an unqualified opinion thereon.

Basis for Opinion

The Corporation'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 Corporation'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 Corporation 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/ Ernst & Young LLP

Boston, Massachusetts February 15, 2024

ITEM 9B. OTHER INFORMATION

Securities Trading Plans of Directors and Executive Officers

A significant portion of the compensation of our executive officers is delivered in the form of deferred equity awards, including deferred stock and performance-based restricted stock unit awards. This compensation design is intended to align executive compensation with the performance experienced by our shareholders. Following the delivery of shares of our common stock under those equity awards, once any applicable service-, time- or performance-based vesting standards have been satisfied, our executive officers from time to time engage in the open-market sale of some of those shares. Our executive officers may also engage from time to time in other transactions involving our securities.

Transactions in our securities by our executive officers are required to be made in accordance with our Securities Trading Policy, which, among other things, requires that the transactions be in accordance with applicable U.S. federal securities laws that prohibit trading while in possession of material nonpublic information. Rule 10b5-1 under the Exchange Act provides an affirmative defense that enables prearranged transactions in securities in a manner that avoids concerns about initiating transactions at a future date while possibly in possession of material nonpublic information. Our Securities Trading Policy permits our executive officers to enter into trading plans designed to comply with Rule 10b5-1.

The following table describes contracts, instructions or written plans for the sale or purchase of our securities adopted by our executive officers during the fourth quarter of 2023, each of which is intended to satisfy the affirmative defense conditions of Rule 10b5-1(c), referred to as Rule 10b5-1 trading plans.

Name and Title	Date of Adoption of Rule 10b5-1 Trading Plan	Scheduled Expiration Date of Rule 10b5-1 Trading Plan ⁽¹⁾	Aggregate Number of Securities to Be Purchased or Sold
Eric W. Aboaf Vice Chairman and Chief Financial Officer	11/17/2023	5/31/2024	Sale of up to 24,000 shares of common stock in several transactions during 2024
Louis D. Maiuri ⁽²⁾ Former President and Chief Operating Officer	11/17/2023	2/29/2024	Sale of up to 7,400 shares of common stock during 2024

⁽¹⁾ A trading plan may also expire on such earlier date as all transactions under the trading plan are completed.

(2) Louis D. Maiuri was an executive officer during the applicable reporting period and effective January 1, 2024, is no longer an executive officer.

During the fourth quarter of 2023, none of our other executive officers or directors adopted Rule 10b5-1 trading plans and none of our directors or executive officers terminated a Rule 10b5-1 trading plan or adopted or terminated a non-Rule 10b5-1 trading arrangement (as defined in Item 408(c) of Regulation S-K).

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information concerning our directors will appear in our Proxy Statement for the 2024 Annual Meeting of Shareholders, to be filed pursuant to Regulation 14A on or before April 29, 2024, referred to as the 2024 Proxy Statement, under the caption "Election of Directors." Information concerning compliance with Section 16(a) of the Exchange Act, if required, will appear in our 2024 Proxy Statement under the caption "Delinquent Section 16(a) Reports." Information concerning our Code of Ethics for Senior Financial Officers and our Examining and Audit Committee will appear in our 2024 Proxy Statement under the caption "Corporate Governance at State Street." Such information is incorporated herein by reference.

Information about our executive officers is included under Part I.

ITEM 11. EXECUTIVE COMPENSATION

Information in response to this item will appear in our 2024 Proxy Statement under the captions "Executive Compensation" and "Non-Management Director Compensation." Such information (other than the information required by Item 402(v) of Regulation S-K) is incorporated herein by reference.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information concerning security ownership of certain beneficial owners and management will appear in our 2024 Proxy Statement under the caption "Security Ownership of Certain Beneficial Owners and Management." Such information is incorporated herein by reference.

RELATED STOCKHOLDER MATTERS

The following table presents the number of outstanding common stock awards, options, warrants and rights granted by State Street to participants in our equity compensation plans, as well as the number of securities available for future issuance under these plans, as of December 31, 2023. The table provides this information separately for equity compensation plans that have and have not been approved by shareholders. Shares presented in the table and in the footnotes following the table are stated in thousands of shares.

(Shares in thousands)	(a) Number of securities to be issued upon exercise of outstanding options, warrants and rights		(b) Weighted-average exercise price of outstanding options, warrants and rights ⁽¹⁾	(c) Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a))
Plan category:				
Equity compensation plans approved by shareholders	7,174	(2)	\$ —	19,928
Equity compensation plans not approved by shareholders	7	(3)	_	_
Total	7,181		-	19,928

⁽¹⁾ Excludes deferred stock awards and performance awards for which there is no exercise price.

⁽²⁾ Consists of 4,968 thousand shares subject to deferred stock awards, zero shares subject to stock options, zero stock appreciation rights and 2,206 thousand shares subject to performance awards (assuming payout at 100% for all awards, including awards for which performance is uncertain).

⁽³⁾ Consists of shares subject to deferral.

Individual directors who are not our employees have received stock awards and cash retainers, both of which may be deferred. Directors may elect to receive shares of our common stock in place of cash. If payment is in the form of common stock, the number of shares is determined by dividing the approved cash amount by the closing price on the date of the annual shareholders' meeting or date of grant, if different. All deferred shares, whether stock awards or common stock received in place of cash retainers, are increased to reflect dividends paid on the common stock and, for certain directors, may include share amounts in respect of an accrual under a terminated retirement plan.

Pursuant to State Street's Deferred Compensation Plan for Directors, non-employee directors may elect to defer the receipt of 0% or 100% of their (1) retainers, (2) meeting fees or (3) annual equity grant award. Non-employee directors also may elect to receive their retainers in cash or shares of common stock. Non-employee directors who elect to defer the cash payment of their retainers or meeting fees may choose from four notional investment fund returns for such deferred cash. Deferrals of common stock are adjusted to reflect the hypothetical reinvestment in additional shares of common stock for any dividends or distributions on State Street common stock. Deferred amounts will be paid (a) as elected by the non-employee director, on either the date of their termination of service on the Board or on the earlier of such termination and a future date specified, and (b) in the form elected by the non-employee director as either a lump sum or in installments over a two- to five-year period.

Stock awards totaling 256,441 shares of common stock were outstanding as of December 31, 2023; awards made through June 30, 2003, totaling 7,294 shares outstanding as of December 31, 2023, have not been approved by shareholders. There are no other equity compensation plans under which our equity securities are authorized for issuance that have been adopted without shareholder approval. Awards of stock made or retainer shares paid to individual directors after June 30, 2003 have been or will be made under our 1997, 2006 or 2017 Equity Incentive Plan, which were approved by shareholders.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information concerning certain relationships and related transactions and director independence will appear in our 2024 Proxy Statement under the caption "Corporate Governance at State Street." Such information is incorporated herein by reference.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES

Information concerning principal accounting fees and services and the Examining and Audit Committee's preapproval policies and procedures will appear in our 2024 Proxy Statement under the caption "Examining and Audit Committee Matters." Such information is incorporated herein by reference.

PART IV.

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES

(A)(1) FINANCIAL STATEMENTS

The following consolidated financial statements of State Street are included in Item 8 hereof:

Report of Independent Registered Public Accounting Firm

Consolidated Statement of Income - Years ended December 31, 2023, 2022 and 2021

Consolidated Statement of Comprehensive Income - Years ended December 31, 2023, 2022 and 2021 Consolidated Statement of Condition - As of December 31, 2023 and 2022

Consolidated Statement of Changes in Shareholders' Equity - Years ended December 31, 2023, 2022 and 2021

Consolidated Statement of Cash Flows - Years ended December 31, 2023, 2022 and 2021 Notes to Consolidated Financial Statements

(A)(2) FINANCIAL STATEMENT SCHEDULES

Certain schedules to the consolidated financial statements have been omitted if they were not required by Article 9 of Regulation S-X or if, under the related instructions, they were inapplicable, or the information was contained elsewhere herein.

(A)(3) EXHIBITS

The exhibits listed in the Exhibit Index preceding the signature page in this Form 10-K are filed herewith or are incorporated herein by reference to other SEC filings.

ITEM 16. FORM 10-K SUMMARY

Not applicable.

EXHIBIT INDEX

<u>3.1</u>	Restated Articles of Organization, as amended		
<u>3.2</u>	By-laws, as amended (filed as Exhibit 3.1 to State Street's Current Report on Form 8-K (File No.001-07511) filed with the SEC on December 16, 2022 and incorporated herein by reference)		
<u>4.1</u>	Description of Securities Registered under Section 12 of the Exchange Act		
<u>4.2</u>	Deposit Agreement, dated March 4, 2014, among State Street Corporation, American Stock Transfer & Trust Company, LLC (as depositary), and the holders from time to time of depositary receipts (filed as Exhibit 4.1 to State Street's Current Report on Form 8-K (File No. 001-07511) dated March 4, 2014 filed with the SEC on March 4, 2014 and incorporated herein by reference)		
<u>4.3</u>	Deposit Agreement dated May 21, 2015, among State Street Corporation, American Stock Transfer & Trust Company, LLC (as depositary) and the holders from time to time of depositary receipts (filed as Exhibit 4.1 to State Street's Current Report on Form 8-K (File No. 001-7511) dated May 21, 2015 filed with the SEC on May 21, 2015 and incorporated herein by reference)		
<u>4.4</u>	Deposit Agreement dated April 11, 2016, among State Street Corporation, American Stock Transfer & Trust Company, LLC (as depositary) and the holders from time to time of depositary receipts (filed as Exhibit 4.1 to State Street's Current Report on Form 8-K (File No. 001-7511) dated April 11, 2016 filed with the SEC on April 11, 2016 and incorporated herein by reference)		
<u>4.5</u>	Deposit Agreement dated September 27, 2018, among State Street Corporation, American Stock Transfer & Trust Company, LLC (as depositary) and the holders from time to time of the depositary receipts (filed as Exhibit 4.3 to State Street's Current Report on Form 8-K (File No. 001-07511) filed with the SEC on September 27, 2018 and incorporated herein by reference)		
<u>4.6</u>	Deposit Agreement dated January 31, 2024, by and among State Street Corporation, Equiniti Trust Company, LLC (as depositary), and the holders from time to time of the depositary receipts (filed as Exhibit 4.3 to State Street's Current Report on Form 8-K (File No. 001-07511) filed with the SEC on January 31, 2024 and incorporated herein by reference)		
	(Note: None of the instruments defining the rights of holders of State Street's outstanding long-term debt are in respect of indebtedness in excess of 10% of the total assets of State Street and its subsidiaries on a consolidated basis. State Street hereby agrees to furnish to the SEC upon request a copy of any other instrument with respect to long-term debt of State Street and its subsidiaries.)		
<u>10.1†</u>	State Street's Executive Supplemental Retirement Plan, as amended and restated, and First, Second and Third Amendments thereto (filed as Exhibit 10.2 to State Street's Annual Report on Form 10-K (File No. 001-07511) for the year ended December 31, 2020 filed with the SEC on February 19, 2021 and incorporated herein by reference)		
<u>10.2†</u>	Supplemental Cash Incentive Plan, as amended, First and Second Amendments thereto, and form of award agreement thereunder (filed as Exhibit 10.1 to State Street's Quarterly Report on Form 10-Q (File No. 001-07511) for the quarter ended March 31, 2023 filed with the SEC on April 27, 2023 and incorporated herein by reference)		
<u>10.3A†</u>	State Street's Amended and Restated 2017 Stock Incentive Plan (filed as Exhibit 99.1 to State Street's Current Report on Form 8-K (File No. 001-07511) filed with the SEC on May 19, 2023 and incorporated herein by reference)		
<u>10.3B†</u>	Forms of award agreements under State Street's Amended and Restated 2017 Stock Incentive Plan (filed as Exhibit 10.3 to State Street's Quarterly Report on Form 10-Q (File No. 001-07511) for the quarter ended March 31, 2023 filed with the SEC on April 27, 2023 and incorporated herein by reference)		
<u>10.4†</u>	State Street's Management Supplemental Savings Plan, Amended and Restated, as amended (filed as Exhibit 10.10 to State Street's Annual Report on Form 10-K (File No. 001-07511) for the year ended December 31, 2016 filed with the SEC on February 17, 2017 and incorporated herein by reference)		

<u>10.5†</u>	Deferred Compensation Plan for Directors of State Street Corporation, Restated January 1, 2007, as amended (filed as Exhibit 10.12 to State Street's Annual Report on Form 10-K (File No. 001-07511) for the year ended December 31, 2011 filed with the SEC on February 27, 2012 and incorporated herein by reference)
<u>10.6†</u>	Deferred Compensation Plan for Directors of State Street Corporation, Restated January 1, 2021, as amended (filed as Exhibit 10.1 to State Street's Quarterly Report on Form 10-Q (File No. 001-07511) for the quarter ended June 30, 2020 filed with the SEC on July 27, 2020 and incorporated herein by reference)
<u>10.7</u>	Deferred Prosecution Agreement dated January 17, 2017 between State Street Corporation and the U.S. Department of Justice and United States Attorney for the District of Massachusetts (filed as Exhibit 10.14 to State Street's Annual Report on Form 10-K (File No. 001-07511) for the year ended December 31, 2016 filed with the SEC on February 17, 2017 and incorporated herein by reference)
<u>10.8</u>	Deferred Prosecution Agreement dated May 13, 2021 between State Street Corporation and the Office of the United States Attorney for the District of Massachusetts (filed as Exhibit 10.1 to State Street's Current Report on Form 8-K (File No. 001-07511) filed with the SEC on May 14, 2021 and incorporated herein by reference)
<u>10.9†</u>	Description of compensation arrangements for non-employee directors filed as Exhibit 10.2 to State Street's Quarterly Report on Form 10-Q (File No. 001-07511) for the quarter ended June 30, 2022 filed with the SEC on July 28, 2022 and incorporated herein by reference)
<u>10.10†</u>	State Street's Executive Compensation Trust Agreement dated June 1, 2002 (Rabbi Trust), as amended (filed as Exhibit 10.22 to State Street's Annual Report on Form 10-K (File No. 001-07511) for the year ended December 31, 2017 filed with the SEC on February 26, 2018 and incorporated herein by reference)
<u>10.11A†</u>	Form of Indemnification Agreement between State Street Corporation and each of its directors (filed as Exhibit 10.18A to State Street's Annual Report on Form 10-K (File No. 001-07511) for the year ended December 31, 2013 filed with the SEC on February 21, 2014 and incorporated herein by reference)
<u>10.11B†</u>	Form of Indemnification Agreement between State Street Corporation and each of its executive officers (filed as Exhibit 10.18B to State Street's Annual Report on Form 10-K (File No. 001-07511) for the year ended December 31, 2013 filed with the SEC on February 21, 2014 and incorporated herein by reference)
<u>10.11C†</u>	Form of Indemnification Agreement between State Street Bank and Trust Company and each of its directors (filed as Exhibit 10.18C to State Street's Annual Report on Form 10-K (File No. 001-07511) for the year ended December 31, 2013 filed with the SEC on February 21, 2014 and incorporated herein by reference)
<u>10.11D†</u>	Form of Indemnification Agreement between State Street Bank and Trust Company and each of its executive officers (filed as Exhibit 10.18D to State Street's Annual Report on Form 10-K (File No. 001-07511) for the year ended December 31, 2013 filed with the SEC on February 21, 2014 and incorporated herein by reference)
<u>10.12†</u>	Form of employment agreement for executive officers in the United States and Hong Kong (filed as Exhibit 10.1 to State Street's Quarterly Report on Form 10-Q (File No. 001-07511) for the quarter ended March 31, 2020 filed with the SEC on April 28, 2020 and incorporated herein by reference)
<u>10.13†</u>	Employment Letter Agreement entered into with Yie-Hsin Hung dated September 9, 2022
<u>10.14†</u>	Employment Letter Agreements entered into with Andrew Erickson dated August 21, 2012, November 19, 2012, and May 25, 2016 (filed as Exhibit 10.2 to State Street's Quarterly Report on Form 10-Q (File No. 001-07511) for the quarter ended March 31, 2018 filed with the SEC on May 3, 2018 and incorporated herein by reference)
<u>10.15†</u>	Deed of Release entered into with Andrew Erickson dated August 16, 2023 (filed as Exhibit 10.1 to State Street's Quarterly Report on Form 10-Q (File No. 001-07511) for the quarter ended September 30, 2023 filed with the SEC on October 27, 2023 and incorporated herein by reference)

Employment Letter Agreement entered into with Eric Aboaf dated September 22, 2016 (filed as Exhibit 10.1 to State Street's Current Report on Form 8-K (File No. 001-07511) dated September 28, 2016 filed with the SEC on September 28, 2016 and incorporated herein by reference)		
Francisco Aristeguieta Employment Letter Agreement dated June 22, 2021 and Confidentiality, Intellectual Property and Restrictive Covenant Protective Agreement dated July 15, 2019 (filed as Exhibit 10.1 to State Street's Quarterly Report on Form 10-Q (File No. 001-07511) for the quarter ended June 30, 2021 filed with the SEC on July 23, 2021 and incorporated herein by reference)		
Francisco Aristeguieta Transition and Separation Agreement dated May 9, 2022 (filed as Exhibit 10.1 to State Street's Quarterly Report on Form 10-Q (File No. 001-07511) for the quarter ended June 30, 2022 filed with the SEC on July 28, 2022 and incorporated herein by reference)		
State Street Corporation Incentive Compensation Program, Effective January 1, 2022, (filed as Exhibit 10.17 to State Street's Annual Report on Form 10-K (File No. 001-7511) for the year ended December 31, 2022 filed with the SEC on February 16, 2023 and incorporated herein by reference)		
State Street Corporation Cash Award Plan, Effective January 1, 2019 (filed as Exhibit 10.25 to State Street's Annual Report on Form 10-K (File No. 001-07511) for the year ended December 31, 2018 filed with the SEC on February 21, 2019 and incorporated herein by reference)		
Subsidiaries of State Street Corporation		
Consent of Independent Registered Public Accounting Firm		
Rule 13a-14(a)/15d-14(a) Certification of Chairman, Chief Executive Officer and President		
Rule 13a-14(a)/15d-14(a) Certification of Chief Financial Officer		
Section 1350 Certifications		
State Street Compensation Recovery Policy		
The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document		
Inline XBRL Taxonomy Extension Schema Document		
Inline XBRL Taxonomy Calculation Linkbase Document		
Inline XBRL Taxonomy Extension Definition Linkbase Document		
Inline XBRL Taxonomy Label Linkbase Document		
Inline XBRL Taxonomy Presentation Linkbase Document		
Cover Page Interactive Data File (formatted as Inline XBRL and included within the Exhibit 101 attachments)		

* Submitted electronically herewith

Attached as Exhibit 101 to this report are the following formatted in iXBRL (Inline Extensible Business Reporting Language): (i) consolidated statement of income for the years ended December 31, 2023, 2022 and 2021, (ii) consolidated statement of comprehensive income for the years ended December 31, 2023, 2022 and 2021, (iii) consolidated statement of condition as of December 31, 2023 and 2022, (iv) consolidated statement of changes in shareholders' equity for the years ended December 31, 2023, 2022 and 2021, (v) consolidated statement of cash flows for the years ended December 31, 2023, 2022 and 2021, (v) consolidated statement of asterment of cash flows for the years ended December 31, 2023, 2022 and 2021, and (vi) notes to consolidated financial statements.

[†] Denotes management contract or compensatory plan or arrangement

SIGNATURES

Pursuant to the requirement 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, on February 15, 2024, hereunto duly authorized.

STATE STREET CORPORATION

By /s/ ERIC W. ABOAF

ERIC W. ABOAF, Vice Chairman and Chief Financial Officer

By /s/ IAN W. APPLEYARD

IAN W. APPLEYARD,

Executive Vice President, Global Controller and Chief Accounting Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below on February 15, 2024, by the following persons on behalf of the registrant and in the capacities indicated.

OFFICERS:

/s/ RONALD P. O'HANLEY RONALD P. O'HANLEY, Chairman, Chief Executive Officer and President /s/ Eric W. Aboaf

ERIC W. ABOAF, Vice Chairman and Chief Financial Officer

/s/ IAN W. APPLEYARD

IAN W. APPLEYARD,

Executive Vice President, Global Controller and Chief Accounting Officer

DIRECTORS:

/s/ MARIE A. CHANDOHA

MARIE A. CHANDOHA

/s/ DONNALEE A. DEMAIO

DONNALEE A. DEMAIO

/s/ PATRICK de SAINT-AIGNAN

PATRICK de SAINT-AIGNAN

/s/ AMELIA C. FAWCETT AMELIA C. FAWCETT

/s/ WILLIAM C. FREDA WILLIAM C. FREDA

/s/ SARA MATHEW

SARA MATHEW

/s/ WILLIAM L. MEANEY

WILLIAM L. MEANEY

/s/ RONALD P. O'HANLEY RONALD P. O'HANLEY

/s/ SEAN P. O'SULLIVAN

SEAN P. O'SULLIVAN

/s/ JULIO A. PORTALATIN JULIO A. PORTALATIN

/s/ JOHN B. RHEA

JOHN B. RHEA

/s/ GREGORY L. SUMME

GREGORY L. SUMME

September 9, 2022 Yie-Hsin Hung

Dear Yie-Hsin:

I am pleased to offer you employment with State Street Global Advisors Trust Co. (together with its parent, State Street Bank & Trust Co., its parent State Street Corporation and its or their direct and indirect subsidiaries, referred to below as "State Street" or the "Company"). This letter and the documents attached to it, including the Restrictive Covenant Agreement attached as Appendix A, contain a summary of the initial terms of your employment (the "Terms Summary").

To accept State Street's offer of employment, please sign and date one copy of this document and return it by e-mailing a scanned copy to your recruiter. Your expected start date is no later than December 5, 2022. Please retain a copy of this Terms Summary for your records.

General Terms

Position Details

You will be employed in the position of Executive Vice President, Chief Executive Officer of State Street Global Advisors, within job family Management Committee / Executive Management. In this role, you will have such duties, responsibilities and authorities as are commensurate with the position of CEO of State Street Global Advisors, including the right to hire and, fire, allocate resources, assume P&L responsibility, lead SSGA's Executive Management Group and make all strategic decisions with respect to State Street Global Advisors. You will report directly to the Chief Executive Officer of State Street Corporation, currently Ronald O'Hanley, and will be a member of the Executive Committee.

You agree to perform the duties of your position and such other duties as may be assigned to you from time to time, in a diligent and competent manner. Further, while employed by State Street, you will devote your full working time and your best efforts, business judgment, skill and knowledge exclusively to the advancement of the business interests of State Street. Your agreement to do so is a material inducement to State Street's willingness to extend this offer of employment to you. This is a full-time position. Notwithstanding the foregoing, nothing shall preclude you from engaging in professional, educational, religious, civic, charitable or similar types of activities, community affairs and/or managing your (or your family's) personal investments and affairs, provided that these activities do not interfere or conflict with the performance of your duties and responsibilities hereunder, including without limitation your obligations to comply with the policies of State Street governing outside activities.

Place of Work, Commuting, and Business Travel

At the start of your employment, we expect that you will work remotely from New York, though your official work location will be our offices in Stamford, Connecticut.

Effective January 1, 2024, your official work location will become our offices in Boston, Massachusetts. From that point, if you elect not to live in the Boston area, you will be personally responsible for the cost of any travel to and from our offices in Boston as well as any personal income tax liability related to your presence in Massachusetts, just as you would if you instead chose to live in the Boston area.

You will be responsible for reimbursing the Company for the aggregate incremental cost of any business travel originating from a city other than Boston for non-business reasons. By way of example, if you continue to live in New York, and the cost of first-class airfare from New York to visit a client exceeds the cost of comparable travel from Boston, you will be required to reimburse the Company for that difference.

Base Compensation

State Street will pay you a base salary at the initial gross rate of at least \$700,000, annually, for all hours worked. You will not be eligible to earn overtime pay. State Street currently uses a biweekly pay cycle which generally results in payment every other Friday. State Street may adjust this base salary (upward only, not downward) and pay cycle from time to time.

Incentive Compensation Plan Participation

State Street's approach to employee compensation is based on total compensation and pay-forperformance. Employees generally have the opportunity to earn some type of variable, discretionary incentive pay in addition to base compensation through State Street's incentive compensation or structured incentive plans. Incentive compensation may be delivered in the form of immediate or deferred awards. For Executive Vice Presidents, the standard 2021 performance year split between immediate and deferred awards was 10% immediate / 90% deferred. Receipt of incentive compensation is subject to the terms and conditions of the applicable plan and deferred award documents approved by the Board of Directors of State Street Corporation or its delegate (the "Board") as in effect from time to time, including any forfeiture and/or clawback provisions therein. Although State Street intends to continue to use incentive compensation and structured incentive plans to reward performance indefinitely, it may amend, modify or terminate its plans and programs at any time. State Street's incentive compensation program is subject to the applicable guidance and regulations of the Board of Governors of the Federal Reserve System ("FRB") and of other United States and international regulators, which may require that certain risk-mitigating features be included in your incentive awards. Because your position will be deemed a "material risk taker" position for FRB purposes, your incentive awards will be subject to applicable clawback/ forfeiture requirements, in addition to any other State-Street-determined clawback/ forfeiture provisions.

Other than as set forth below, you will be eligible to be considered for annual discretionary incentive compensation awards under the State Street incentive compensation plan applicable to your role (the "Plan"). Awards under the Plan are made at the sole discretion of the Board or its delegate and are based upon company performance, individual performance, risk factors and such other factors as determined by the Board, or its delegate. State Street may adjust the proportion of cash and deferred compensation in each award, the type, form and structure of deferred compensation, as well as the threshold for deferred compensation eligibility at any time.

Incentive compensation awards are typically made in the first quarter of each calendar year. You must be employed on the date an award is made in order to receive it. The variable incentive compensation described above, together with your base salary, constitute the components of your total compensation package under State Street's total compensation structure.

<u>2022 and 2023 Incentive Compensation</u>. For the 2022 performance year, you will not be eligible to be considered for an incentive compensation award.

For the 2023 performance year, you will be eligible to be considered for an incentive compensation award under the Plan. A target amount of \$7,800,000 will be used in determining the amount of your 2023 award.

Please understand that a target is not a guarantee but represents the approximate amount you can expect to be awarded under the Plan with respect to your performance in 2023. Like all awards under State Street incentive compensation plans, the amount ultimately awarded to you may vary up or down at the sole discretion of State Street based upon your individual, team and business unit performance, risk factors, overall Plan funding, the capital reserve requirements of State Street, your 2023 performance assessment, and such other factors as determined by the Board or its delegate in its discretion.

The target will be used in determining the amount of your incentive compensation award for the specified year only and will not be used to determine any other awards you are considered for in any State Street incentive plan for subsequent years. Payment under the Plan will be made in cash and/or deferred awards, pursuant to the cash/deferral split determined by the Board which shall include the same or higher percentage of immediate cash vs. deferred compensation as awards to similarly situated executives of State Street. An award of incentive compensation in one year does not guarantee an award in any future year.

Sign-On Awards

In addition, State Street is pleased to provide you these sign-on bonus awards -

<u>Cash Sign-On</u>. You will receive a one-time cash sign-on bonus (the "Cash Sign-On") in the gross amount of \$4,000,000, payable in advance as soon as practicable following your first day of employment, provided you are employed by State Street on the payment date. You will earn this Cash Sign-On bonus upon the completion of one (1) year of employment with State Street. You agree that if you resign from employment with State Street for any reason within one (1) year of your first day of employment, you will repay the entire amount, through deduction from final pay (which you hereby authorize) in a manner consistent with applicable law, within two (2) weeks of the termination date. For the avoidance of doubt, State Street will not seek to recover the Additional Cash Sign-On following any termination of your employment by State Street, except to the extent it may be required to do so pursuant to applicable law, rules, or regulations.

<u>Sign-On DVA</u>. You will receive a one-time sign-on deferred value award (the "Sign-on DVA") with an economic value at the time of the award of \$2,000,000 promptly following your first day of employment, provided you are employed by State Street on the grant date. It will vest in a single installment on February 15, 2024. The Sign-on DVA will be granted under the State Street Corporation Supplemental Cash Incentive Plan, subject to all terms and conditions set forth in the applicable plan documents and Deferred Value Award agreement, including without limitation any forfeiture and/or clawback provisions contained therein. You will have to accept the then-current form of Deferred Value Award in order to receive the award.

Additional Sign-On Awards

<u>Additional Cash Sign On</u>. You will receive an additional one-time cash sign-on bonus (the "Additional Cash Sign-On") in the gross amount of \$1,500,000, payable on the six-month anniversary of your start date, but no later than June 30, 2023, provided you are employed by State Street on the payment date. You will earn this Additional Cash Sign-On bonus upon the completion of one (1) year of employment with State Street. You agree that if you resign from employment with State Street for any reason within one (1) year of your first day of employment, you will repay the entire amount, through deduction from final pay (which you hereby authorize) in a manner consistent with applicable law, within two (2) weeks of the termination date. For the avoidance of doubt, State Street will not seek to recover the Additional Cash Sign-On following any termination of your employment by State Street, except to the extent it may be required to do so pursuant to applicable law, rules, or regulations.

<u>Additional Sign-On DVA</u>. In February 2023, you will receive an additional one-time sign-on deferred value award (the "Additional Sign-On DVA") with an economic value at the time of the award of \$3,000,000, provided you are employed by State Street on the grant date. It will vest in three equal installments, on February 15, 2024, February 15, 2025, and February 15, 2026.

<u>Sign-On DSA</u>. In February 2023, you will receive a one-time sign-on deferred stock award (the "Sign-On DSA") with an economic value at the time of the award of \$5,000,000, provided you are employed by State Street on the grant date. It will vest in three equal installments, on February 15, 2024, February 15, 2025, and February 15, 2026.

The Additional Cash Sign-On, Additional Sign-On DVA and Sign-On DSA will be subject to the applicable laws, regulations, and guidance in force at the time they are granted. Calculation of the grant value in respect of the Sign-On DSA will be determined with reference to the price of State Street shares on the New York Stock Exchange on the date of Board approval. The grant of the Sign-On DSA and the grant of the Additional Sign-On DVA are subject to the approval of the Board and to your acceptance of the terms and conditions of the applicable plan and award agreement documents in effect at the time of grant, including without limitation any forfeiture and/or clawback provisions contained therein.

Relocation Assistance

Should you elect to move from New York to Boston, you will be eligible to receive Relocation assistance as set forth in the Relocation Assistance agreement which will be sent to you under separate cover. Relocation Assistance is managed by State Street's Global Mobility group. Relocation Assistance will be available to you for a relocation within twenty-four (24) months of your start date, and later if mutually agreed.

Benefit Program Participation

You will be eligible to participate in all employee benefit programs that State Street makes available to its U.S. employees, subject to the eligibility requirements and other terms and conditions contained in the applicable plan documents. The State Street Benefits Overview, which provides information regarding State Street's current benefit plan offerings, will be provided under a separate cover.

You will also be entitled to certain additional benefits that are also provided to executives at the Executive Vice President level within the Company, such as an executive physical examination program, and umbrella liability insurance.

Visit Fidelity NetBenefits at www.netbenefits.com/statestreet for additional information about State Street's benefits plans. State Street also provides a wide variety of talent development opportunities, which include online and instructor-led classes across a wide range of disciplines and topics, as well as mentors and numerous on-the-job experiences and skill-building opportunities.

Although State Street intends to continue to offer valuable employee benefits and training programs for its employees indefinitely, it may amend, modify or terminate such programs at any time.

Vacation

Currently, State Street's policies allow you to accrue vacation time at the rate of four (4) weeks per year. Vacation currently accrues annually, on a calendar year basis, so you will begin earning vacation at this rate commencing on your start date. For more information, please refer to the State Street Benefits Overview.

Additional Terms and Conditions

At-Will Employment

Your employment at State Street is at-will. This means that either you or State Street may terminate the employment relationship at any time, for any reason. Nothing in this Terms Summary or any of the documents referenced in it obligates State Street to continue your employment for any particular period or level of compensation. Only the Chief Executive Officer of State Street may authorize, in writing, any change to the at-will status of your employment.

Conditions to Employment

This offer of employment is subject to your satisfaction of the following conditions:

• <u>Background Investigation</u>. You must consent to a background investigation (including credit history, criminal background, education and employment verification), and the results of such investigation must be satisfactory to State Street. Unsatisfactory results in the background investigation will result in withdrawal of this offer of employment or termination of employment.

• <u>Restrictive Covenant Agreement</u>. You must sign and return this Terms Summary and abide by all its terms, including those terms contained in the Restrictive Covenant Agreement in Appendix A.

• <u>Additional Employment-Related Agreements and Codes</u>. You will also be required to complete State Street's on-line Standard of Conduct (and Code of Ethics where applicable) certification and learning assessment following the commencement of employment, as a condition of continued employment.

• <u>Eligibility for Employment</u>. You must also document your eligibility to work in the United States by providing identification and/or employment eligibility documents which satisfy the requirements of U.S. law. State Street will also use an electronic system established by the federal government (E- Verify) to verify your employment eligibility. Further information regarding State Street's use of E- Verify is posted in the workplace.

• <u>Political Donations</u>. In addition, if required by your business unit, level and/or position, you may be required, as a condition of initial and/or continuing employment, to complete a

questionnaire regarding certain state and local political contributions made by you and/or your dependents in order to establish your eligibility for employment with State Street.

Nonimmigrant Visa Classification

If you are an individual holding a time-limited authorization to work in the United States (such as an

H-1B or L-1 visa), your inability to continue working for State Street following the expiration of that visa will constitute a voluntary termination of your employment for the purpose of any State Street compensation or benefit plan or program. You further understand and agree that the decision to extend or not to extend any nonimmigrant visa classification is solely State Street's.

Miscellaneous

By accepting this offer of employment, you represent and warrant that your accepting employment with and performing services for State Street will not breach or be in conflict with your obligations to any third party and that you are not now subject to any covenant against competition, covenant against solicitation, court order or other agreement or obligation that could affect your performance of your duties and obligations to State Street. You further agree that you will not disclose to or use on behalf of State Street any confidential or proprietary information of any third party without that party's consent.

All payments made to you during your employment shall be reduced by any tax or other amounts legally required to be withheld by State Street and any lawful deductions authorized by you.

This Terms Summary and the documents referenced in it set forth the entire agreement between you and State Street, and replace all prior and contemporaneous communications, agreement and understandings, written and oral, with respect to the terms and conditions of your employment.

Acceptance and New Hire Process

In order to make your onboarding process as smooth as possible, you will need to complete a series of new hire tasks within the required timeframes. Failure to complete these steps promptly will impact your start date.

- <u>Offer Letter</u> Please sign and date one copy of this document and return it by emailing a scanned copy to the contact listed below.
- <u>Fingerprinting</u> You will receive a Workday task instructing you to complete the necessary Global Security tasks and to visit one of State Street's Global Security offices as soon as possible but no less than **6 business days** prior to your start date to be fingerprinted.
- <u>Employment Work Authorization</u> Section 1 of the electronic Form I-9 must be complete on or before your first day of employment. Section 2 of the form may be completed at the time of fingerprinting, but no later than **2 business days** following your date of employment.

(The remainder of this page is intentionally left blank.)

During your first week of employment, you will receive a MyWorkday task to visit the Employee Onboarding portal which will provide you with a high level overview of State Street's culture, values, communities and informational links that will assist you as you begin to assimilate into the organization. Prior to your employment commencing, you will be assigned MyWorkday tasks to complete all the required Global Security tasks, update your personal data and enroll in direct deposit. Please ensure these tasks are completed promptly to ensure your new employee record is updated accordingly.

Please return all signed documentation via email to me at kmhorgan@statestreet.com.

I am delighted to extend this offer of employment to you on behalf of State Street and hope that you will choose to join our team.

STATE STREET GLOBAL ADVISORS TRUST COMPANY

/s/ Kathryn M. Horgan

Kathryn M. Horgan Chief Human Resources and Citizenship Officer

By signing and dating below, I represent and agree that I have read, understand and agree to the terms and conditions of this Terms Summary as set forth above, including the Restrictive Covenant Agreement at Appendix A.

Signed: <u>/s/ Yie-Hsin Hung</u>

	Date:	9/16	5/22	
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Yie-Hsin Hung

Effective date of hire: no later than December 5, 2022

Accept Offer

□ Reject Offer: Please provide a brief description for rejecting offer:

Appendix A

Restrictive Covenant Agreement

1. Confidentiality

You acknowledge that in connection with your employment by State Street, you will learn of, and may create Confidential Information as defined below. Subject to the below section labeled "Certain Limitations" you agree as follows:

- All Confidential Information is and shall remain the property of State Street, its Affiliates and/or its or their licensors, suppliers or customers.
- You will always preserve as confidential all Confidential Information and will never use it for your own benefit or for the benefit of others; this includes that you will not use any knowledge of activities or positions in the accounts or cash accounts of State Street, its subsidiaries, or any of their respective clients for your own personal gain or for the gain of others.
- You will not disclose, divulge, or communicate Confidential Information to any unauthorized person, business or corporation during or after the termination of your employment with State Street. You will use your best efforts and exercise due diligence to protect, to not disclose, and to keep as confidential all Confidential Information.
- You will not initiate or facilitate any unauthorized attempts to intercept data in transmission or attempt entry into data systems or files. You will not intentionally affect the integrity of any State Street data or systems through the introduction of unauthorized code or data, or through unauthorized deletion or addition. You will abide by all applicable Corporate Information Security procedures and policies designed to protect State Street's data.
- Upon request and at the termination of your employment, you agree to return to the Company or, if so directed by the Company, to destroy any and all copies of materials in your possession containing Confidential Information.

These terms do not apply to any information which (i) is previously known to you without an obligation of confidence, (ii) is publicly disclosed (other than by you in violation of this Agreement or any other obligation of confidence) either prior to or subsequent to your receipt of such information, or (iii) is rightfully received by you from a third party without obligation of confidence and other than in relation to your employment with State Street or (iv) your contact lists, whether in electronic or paper form (e.g. rolodex, Outlook contacts, etc.).

Your obligations under this Confidentiality section shall survive the termination of your employment, without regard to the reason for such termination.

2. Assignment and Disclosure

You hereby acknowledge that, by reason of being employed by State Street, to the fullest extent permitted by law, all inventions, works, deliverables, products, methodologies and other work product conceived, created and/or reduced to practice by you, individually or jointly with others, during the period and within the scope of your employment by State Street and relating to the business or demonstrably anticipated business, products, activities, research or development of State Street or any of its Affiliates or resulting from any work performed by you for State Street or any of its Affiliates, including any track record with which you may be associated as an investment manager or fund manager, or making use of Confidential Information or any of the equipment or facilities of State Street or any of its Affiliates ("Work Product") that consists of copyrightable

subject matter is "work made for hire" as defined in the Copyright Act of 1976 (17 U.S.C. § 101), and such copyrights are therefore owned, upon creation, exclusively by State Street. To the extent the foregoing does not apply and to the extent permitted by law, you hereby assign and agree to assign, for no additional consideration, all of your rights, title and interest in any Work Product and any intellectual property rights therein to State Street and its Affiliates. You hereby waive in favor of State Street and its Affiliates any and all artist's or moral rights (including without limitation, all rights of integrity and attribution) you may have pursuant to any state, federal or foreign laws, rules or regulations in respect of any Work Product and all similar rights thereto. You will not pursue any ownership or other interest in such Work Product, including any intellectual property rights.

You will promptly disclose, in writing, to State Street all Work Product, whether or not patentable or copyrightable. You agree to reasonably cooperate with State Street (a) to transfer to State Street and its Affiliates the Work Product and any intellectual property rights therein, (b) to obtain or perfect such rights, (c) to execute all papers, at State Street's expense, that State Street shall deem necessary to apply for and obtain domestic and foreign patents, copyright and other registrations, and (d) to protect and enforce State Street's and its Affiliates' interest in them.

These obligations shall continue beyond the period of your employment with respect to Work Product conceived or made by you during the period of your employment.

You hereby represent and warrant that you do not possess any pre-existing rights in any inventions, works, deliverables, products, methodologies and other work product and will not use any pre-existing rights during your period of employment by State Street. However, in the event that you create any inventions, works, deliverables, products, methodologies and other work product that are not assigned to State Street pursuant to the promises above and you subsequently incorporate any such inventions, works, deliverables, products, methodologies and other work product into any work that you perform or create for State Street or any of its Affiliates during the period of your employment by State Street, you hereby irrevocably grant to State Street and its Affiliates a royalty-free, fully paid-up, perpetual, transferable, worldwide, non-exclusive license (with the right to sublicense) to make, have made, copy, modify, make derivative works of, use, offer to sell, sell, import and otherwise distribute such inventions or works.

3. Certain Limitations

Nothing in this Appendix A, or in the Terms Summary to which it is appended, prohibits you from reporting possible violations of federal law or regulation to any governmental agency or regulatory authority or from making other disclosures that are protected under the whistleblower provisions of federal law or regulation.

Moreover, nothing in this Appendix A, or in the Terms Summary to which it is appended, requires you to notify the Company that you have made any such report or disclosure. However, in connection with any such activity, you acknowledge you must take reasonable precautions to ensure that any confidential information that is disclosed to such authority is not made generally available to the public, including by informing such authority of the confidentiality of the same.

You shall not be held criminally or civilly liable under any Federal or State trade secret law if you disclose a State Street trade secret (i) in confidence to a Federal, State, or local government official, either directly or indirectly, or to an attorney, solely for the purposes of reporting or investigating a suspected violation of law; or (ii) in a complaint or other document filed in a lawsuit or other proceeding, if such filing is made under seal.

Despite the foregoing, you also acknowledge that you are not permitted to disclose to any thirdparty, including any governmental or regulatory authority, any information learned in the course of your employment that is protected from disclosure by any applicable privilege, including but not limited to the attorney-client privilege, attorney work product doctrine, the bank examiner's privilege, and/or privileges applicable to information covered by the Bank Secrecy Act (31 U.S.C. §§ 5311-5330), including information that would reveal the existence or contemplated filing of a suspicious activity report. The Company does not waive any applicable privileges or the right to continue to protect its privileged attorney-client information, attorney work product, and other privileged information.

4. Post-Employment Cooperation

You agree that, following the termination of your employment with State Street and its Affiliates, you will reasonably cooperate with State Street with respect to any matters arising during or related to your employment, including but not limited to any litigation, governmental investigation, or regulatory or other proceeding. State Street shall reimburse you for any reasonable and pre-approved out-of-pocket and properly documented expenses (including first-class travel and accommodations) you incur in connection with such cooperation.

5. Enforcement

You acknowledge and agree that the provisions contained in this Appendix A are necessary to the protection of the Company's and its Affiliates' business and goodwill and are material and integral to the undertakings of the Company and its Affiliates. You further agree that State Street and its Affiliates will be irreparably harmed in the event such provisions are not performed in accordance with their specific terms or are otherwise breached. Accordingly, if you fail to comply with such provisions, State Street or any of its Affiliates shall be entitled to injunctive or other equitable relief or remedy in addition to, and not in lieu of, any other relief or remedy at law to which it or they may be entitled hereunder, without the need to post bond. In addition, State Street or any of its Affiliates are reasonable attorneys' fees and costs incurred in connection with obtaining any relief as a result of your breach of any of your obligations under this Appendix A. You acknowledge and agree that no change in the nature or scope of your employment or other relationship with State Street or any of its Affiliates shall operate to excuse you from the performance of your obligations hereunder.

6. No Waiver

No delay or waiver by the Company in exercising any rights under this Appendix A shall operate as a waiver of that right or of any other right. Any waiver or consent as to any of the provisions herein provided by the Company must be in writing, is effective only in that instance, and may not be construed as a broader waiver of rights or as a bar to enforcement of the provision(s) at issue on any other occasion.

7. Interpretation of Business Protections

The representations and agreements made by you in this Appendix A shall be construed and interpreted in any judicial or other adjudicatory proceeding to permit their enforcement to the maximum extent permitted by law, and each of the provisions in this Appendix A is severable and independently enforceable without reference to the enforcement of any other provision. If any restriction set forth in this Appendix A is found by any court of competent jurisdiction to be unenforceable because it extends for too long a period of time or over too great a range of activities or in too broad a geographic area, it shall be interpreted to extend only over the maximum period of time, range of activities or geographic area as to which it may be enforceable.

8. Definitions

For the purpose of clarity, the following terms in this Appendix A are defined as follows:

"Confidential Information" means any and all information of State Street and its Affiliates that is not generally available to the public, and includes any information received by State Street or any of its Affiliates from any third party with the understanding, express or implied, that it would be kept confidential. By way of example, Confidential Information includes but is not limited to all trade secrets, trade knowledge, systems, software, code, data documentation, files, formulas, processes, programs, training aids, printed materials, methods, books, records, client files, policies and procedures, client and prospect lists, employee data and other information relating to the operations of State Street and to its customers, and information concerning any and all discoveries, inventions or improvements thereof made or conceived by you or others for State Street whether or not patented or copyrighted, as well as cash and securities account transactions and position records of clients, regardless of whether such information is formally designated as "confidential." Notwithstanding the foregoing, Confidential Information does not include information which (i) is previously known to you without an obligation of confidence, (ii) is publicly disclosed (other than by you in violation of this Agreement or any other obligation of confidence) either prior to or subsequent to your receipt of such information, (iii) is rightfully received by you from a third party without obligation of confidence and other than in relation to your employment with State Street, or (iv) your contact lists, whether in electronic or paper form (e.g. rolodex, Outlook contacts, etc.)

"Affiliates" means any entity controlling, controlled by or under common control with State Street, including State Street Corporation and its direct and indirect subsidiaries and the direct and indirect subsidiaries of State Street.

"Client" means a present or former customer or client of State Street or any of its Affiliates with whom you have had, or with whom individuals supervised by you have had, personal contact, or with respect to whom you have had access to Confidential Information which would assist in your solicitation of such customer or client, in each case at any time during your employment with State Street or any of its Affiliates, or with respect to any restriction related to a Client that follows termination of your employment, within twelve months prior to the date your employment with State Street or any of its Affiliates stopped providing all services during your employment with State Street or any of its Affiliates, or with respect to any restriction related to a Client that follows termination of your employment, within twelve months prior to the date your employment with State Street or any of its Affiliates, or with respect to any restriction related to a Client that follows termination of your employment, within twelve months prior to the date your employment with State Street or any of its Affiliates, or with respect to any restriction related to a Client that follows termination of your employment, within twelve months prior to the date your employment with State Street or any of its Affiliates, or with respect to any restriction related to a Client that follows termination of your employment, within twelve months prior to the date your employment with State Street or any of its Affiliates.

"**Prospective Client**" means a prospective customer or client of State Street or any of its Affiliates with whom you have had, or with whom individuals supervised by you have had, personal contact, or with respect to whom you have had access to Confidential Information which would assist in your solicitation of such prospective customer or client, in each case at any time during your employment with State Street or any of its Affiliates, or with respect to any restriction related to a Prospective Client that follows termination of your employment, within twelve months prior to the date your employment with State Street ends.

"Solicitation of Business" means the attempt through direct or indirect contact by you or by any other person or entity with your assistance to induce a Client to:

- transfer the Client's business from State Street or any of its Affiliates to any other person or entity;
- b. cease or curtail the Client's business with State Street or any of its Affiliates; or

c. divert a business opportunity from State Street or any of its Affiliates to any other person or entity.

9. Non-Disparagement

Subject to the section labeled "Certain Limitations", above, you agree that, whether during your employment or following the termination thereof, you shall not make any false, disparaging, or derogatory statements to any media outlet (including, but not limited to, Internet-based chat rooms, message boards, social media (such as Facebook), and/or web pages), industry groups, financial institutions, or to any current, former or prospective employees, consultants, clients, or customers of State Street, its Affiliates or any of their respective directors, officers, employees, agents or representatives, or about State Street's or any of its Affiliates' business affairs and/or financial condition.

10. Non-Solicitation

You agree that during your employment and for a period of eighteen (18) months from the date of termination of your employment (in the aggregate, the "Non-Solicit Period"), you will not, without the prior written consent of State Street or the legal entity with whom you are employed: (A) solicit, directly or indirectly (other than through a general solicitation of employment not specifically directed to employees of State Street or its Affiliates), the employment or engagement of, hire, employ or engage, recruit, or in any way assist another in soliciting or recruiting the employment or engagement of, or otherwise induce the termination of the employment of, any person who then or within the preceding twelve (12) months was an Officer of State Street or any of its Affiliates (excluding any such Officer whose employment was involuntarily terminated); or (B) engage in the Solicitation of Business from any Client or Prospective Client on behalf of any person or entity other than State Street or its Affiliates.

If you reside in or have a primary reporting location in California or New York, clause (A) shall be deemed to exclude the words "hire, employ or engage" and shall be construed and enforced accordingly.

If you reside in or have a primary reporting location in California, clause (B) will apply during your employment only and will not apply following termination of your employment.

For the purpose of this Paragraph 10, the term "Officer" shall include any person holding a position title of Assistant Vice President or higher.

Notwithstanding the foregoing, the post-employment period of restriction contained in this Paragraph 10 shall be reduced by the duration of any Notice Period to which you are subject; provided that, during such Notice Period you fully comply with your obligations under this Paragraph 10 and under any other non-solicitation, no- hire or non-competition provision contained in any other agreement between you and State Street or any of its Affiliates, including any such restrictions that are a condition precedent to the receipt of compensation or benefits under other awards, plans or arrangements of State Street and its Affiliates.

11. Notice Period Upon Resignation

To permit State Street to safeguard its business interests, including its valuable customer goodwill, you agree to give State Street 180 days' advance notice of your resignation.

During the Notice Period, you will cooperate with State Street and provide State Street with any information it requests, in order to transition your duties, accomplish State Street's business, and/or preserve its valuable client relationships.

In its sole discretion, during the Notice Period, State Street may place you on a partial or complete leave of absence and relieve you of some or all of your duties and responsibilities. Nevertheless, except as described below, for the duration of the Notice Period you shall remain an employee of State Street, shall continue to receive your regular salary and benefits (although you may not be eligible for any new incentive compensation awards or, subject to applicable law, to accrue any paid vacation time), and shall continue to be subject to and to comply with State Street's corporate and other policies.

You agree that should you breach this Notice Period paragraph and fail to provide notice as required herein, in addition to remedies under law, State Street shall be entitled to injunctive relief restricting you from employment for a period equal to the period for which notice of resignation was required but not provided without the need to post bond.

If you have 60 or fewer days' notice remaining in your required Notice Period, State Street may choose to release you from your obligations under this Paragraph 11, and terminate your employment with immediate effect and without any payment in lieu of any unexpired Notice Period. For the avoidance of doubt, any such release by State Street shall not affect your other obligations under this Appendix A.

Any termination of your employment pursuant to this Notice Period paragraph, including by State Street during the Notice Period, will be a voluntary termination for all purposes.

Notwithstanding the foregoing, this Notice Period paragraph shall not apply in the event you terminate your employment for Good Reason as defined in an agreement or plan relating to a change in control of State Street.

12. Non-Competition

In consideration of your employment by State Street and the compensation and other benefits to be provided to you under the Terms Summary to which this Appendix A is appended, you agree that the restrictions set forth in this Paragraph 12 are necessary to protect the goodwill, Confidential Information (including trade secrets) and other legitimate interests of State Street and its Affiliates. State Street hereby advises that you have the right to consult an attorney before signing this agreement.

You agree that, while you are employed by State Street or any of its Affiliates and for 12 months following the date of termination of your employment with State Street or any of its Affiliates for any reason (in the aggregate, the "Non-Compete Period"), you will not, anywhere in the Restricted Area, for yourself or any other person or entity, directly or indirectly, in any Restricted Capacity, engage in, provide services to, consult for, or be employed by a business that provides products or services competitive with any products or services of State Street or any of its Affiliates with respect to which you were involved at any time during your employment or, with respect to the portion of the Non-Compete Period that follows termination of your employment, within the two years preceding the date of the termination of your employment with State Street or any of its Affiliates:

The Non-Compete Period will be reduced by one day for every day during which, at State Street's direction, you are on a complete leave of absence pursuant to Paragraph 11.

If you reside in or have a primary reporting location in Massachusetts at the time your employment ends, then the following special rules apply. First, If State Street terminates your employment not for Cause, as defined below, then the Non-Compete Period will end upon the termination of your employment. Second, if you violate a fiduciary duty to State Street or any of its Affiliates, then the post-employment portion of the Non-Compete Period shall be extended by the time during which you engage in such activities, for up to a total of two (2) years following termination of your employment.

For purposes of this Paragraph 12, the following definitions apply:

"Cause" means (i) State Street's good faith determination that it has a reasonable basis for dissatisfaction with your employment for reasons such as lack of capacity or diligence, failure to conform to usual standards of conduct, or other culpable or inappropriate behavior or (ii) other grounds for discharge that are reasonably related, in State Street's honest judgment, to the needs of the business of it and any of its Affiliates. The definition applies only to the enforceability of this Paragraph 12 and any other non-competition agreement between you and State Street or any of its Affiliates. It does not in any way modify the at-will employment relationships between you and State Street.

"Restricted Area" means anywhere that State Street or any of its Affiliates markets its products or services (which you acknowledge specifically includes the entire world), or with respect to the portion of the Non-Compete Period that follows termination of your employment, anywhere in which you provided services or had a material presence or influence on behalf of State Street or any of its Affiliates at any time within the 2-year period immediately preceding such termination.

"Restricted Capacity" means any capacity, or with respect to the portion of the Non-Compete Period that follows termination of your employment, any capacity that is the same or similar to the capacity in which you were employed by State Street at any time within the 2-year period immediately preceding such termination and/or involves any services that you provided to State Street or any of its Affiliates at any time within such 2-year period.

SUBSIDIARIES OF STATE STREET CORPORATION

The following table presents the name of certain State Street subsidiaries and the state or jurisdiction of organization. Certain subsidiaries of State Street have been omitted in accordance with SEC regulations because, when considered in the aggregate, they did not constitute a "significant subsidiary" of State Street.

when considered in the aggregate, they did not constitute a "significant subsidiary	
Antrim Corporation	Delaware
Charles River Systems, Inc	Massachusetts
Currenex, Inc	Delaware
Federated Underwriting Company	Vermont
FX Connect, LLC	Delaware
International Fund Services (N.A.) LLC	Delaware
Investors Copley Securities Corporation	Massachusetts
Offshore Financial Solutions LTD	Grand Cayman
Pebble Securities Corporation	Massachusetts
Quincy Securities Corporation	Massachusetts
SSB Investments, Inc.	Massachusetts
SSB Realty, LLC	Delaware
State Street Bank and Trust Company	Massachusetts
State Street Bank International GmbH	Germany
State Street Brasil S.A. – Banco Comercial	Brazil
State Street Europe Holdings Germany S.À R.L. & Co KG	Germany
State Street Fund Services (Ireland) Limited	Ireland
State Street Global Advisors, Inc	Delaware
State Street Global Advisors International Holdings Inc	Delaware
State Street Global Advisors Limited	United Kingdom
State Street Global Advisors Trust Company	Massachusetts
State Street Global Markets, LLC	Delaware
State Street Holdings Germany GmbH	Germany
State Street Intermediate Funding LLC	Delaware
State Street International Holdings	Massachusetts
State Street International Holdings Switzerland GmbH	Switzerland
State Street Public Lending Corporation	Massachusetts

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements, as listed below, of State Street Corporation and in the related Prospectuses, where applicable, of our reports dated February 15, 2024, with respect to the consolidated financial statements of State Street Corporation and the effectiveness of internal control over financial reporting of State Street Corporation, incorporated by reference in this Annual Report (Form 10-K) for the year ended December 31, 2023:

Form	Registration Statement No.	Description
Form S-3	333-265877	Debt Securities, Preferred Stock, Depositary Shares, Common Stock, Purchase Contracts, Units and Warrants
Form S-4	333-248707	Fixed-to-Floating Rate Senior Note Exchanges
Form S-8	333-100001	2002 Savings-Related Stock Plan
Form S-8	333-99989	1997 Equity Incentive Plan
Form S-8	333-46678	1997 Equity Incentive Plan
Form S-8	333-36793	1997 Equity Incentive Plan
Form S-8	333-36409	1997 Equity Incentive Plan
Form S-8	333-135696	2006 Equity Incentive Plan
Form S-8	333-160171	2006 Equity Incentive Plan
Form S-8	333-183656	2006 Equity Incentive Plan
Form S-8	333-218048	2017 Stock Incentive Plan
Form S-8	333-233874	2017 Stock Incentive Plan
Form S-8	333-272090	2017 Stock Incentive Plan

/s/ Ernst & Young LLP

Boston, Massachusetts February 15, 2024

RULE 13a-14(a)/15d-14(a) CERTIFICATION

I, Ronald P. O'Hanley, certify that:

- 1. I have reviewed this Annual Report on Form 10-K of State Street Corporation;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present, in all material respects, the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

By:

Date: February 15, 2024

/s/ Ronald P. O'Hanley

Ronald P. O'Hanley, Chairman, Chief Executive Officer and President

RULE 13a-14(a)/15d-14(a) CERTIFICATION

I, Eric W. Aboaf, certify that:

- 1. I have reviewed this Annual Report on Form 10-K of State Street Corporation;
- 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
- 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present, in all material respects, the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
- 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, 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;
 - (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
- 5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 15, 2024

By:

/s/ Eric W. Aboaf

Eric W. Aboaf,

Vice Chairman and Chief Financial Officer

SECTION 1350 CERTIFICATIONS

To my knowledge, this Annual Report on Form 10-K for the period ended December 31, 2023 fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in this Report fairly presents, in all material respects, the financial condition and results of operations of State Street Corporation.

Date: February 15, 2024

/s/ RONALD P. O'HANLEY

Ronald P. O'Hanley, Chairman, Chief Executive Officer and President

Date: February 15, 2024

By:

By:

/s/ Eric W. Aboaf

Eric W. Aboaf, Vice Chairman and Chief Financial Officer

State Street Corporation Compensation Recovery Policy

This Compensation Recovery Policy (this "Policy") is adopted by State Street Corporation (the "Company"), effective October 2, 2023, in accordance with Section 303A.14 of the New York Stock Exchange ("NYSE") Listed Company Manual ("Section 303A.14"). This Policy applies in addition to any other forfeiture, compensation recovery or similar requirements or standards under applicable law, regulations or regulatory guidance, and to other forfeiture, compensation recovery or similar requirements, plans, policies and practices in effect from time to time.

1. <u>Definitions</u>

(a) **"Accounting Restatement"** means a requirement that the Company prepare an accounting restatement due to the material noncompliance of the Company with any financial reporting requirement under the U.S. federal securities laws, including any required accounting restatement to correct an error in previously issued financial statements that is material to the previously issued financial statements, or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period. Changes to the Company's financial statements that do not represent error corrections are not an Accounting Restatement, including: (A) retrospective application of a change in accounting principle; (B) retrospective revision to reportable segment information due to a change in the structure of the Company's internal organization; (C) retrospective reclassification due to a discontinued operation; (D) retrospective application of a change in reporting entity, such as from a reorganization of entities under common control; and (E) retrospective revision for stock splits, reverse stock splits, stock dividends or other changes in capital structure.

(b) **"Committee"** means the Human Resources Committee of the Company's Board of Directors (the "Board").

(c) **"Covered Person"** means a person who served as an Executive Officer at any time during the performance period for the applicable Incentive-Based Compensation.

(d) **"Erroneously Awarded Compensation"** means the amount of Incentive-Based Compensation that was Received that exceeds the amount of Incentive-Based Compensation that otherwise would have been Received had the amount of Incentive-Based Compensation been determined based on the restated amounts, computed without regard to any taxes paid by the Covered Person or by the Company on the Covered Person's behalf. For Incentive-Based Compensation based on total shareholder return or Company stock price, where the amount of Erroneously Awarded Compensation is not subject to mathematical recalculation directly from the information in an accounting restatement, the amount of Erroneously Awarded Compensation will be based on a reasonable estimate by the Committee of the effect of the Accounting Restatement on the stock price or total shareholder return upon which the Incentive-Based Compensation of that reasonable estimate and provide such documentation to NYSE as required.

(e) **"Executive Officer"** means the Company's officers who have been designated as officers of the Company for purposes of Section 16 of the Securities Exchange Act of 1934, as amended.

(f) **"Financial Reporting Measures"** means (A) measures that are determined and presented in accordance with the accounting principles used in preparing the Company's financial statements, and any measures that are derived wholly or in part from such measures (whether or not such measures are presented within the Company's financial statements or included in a filing made with the U.S. Securities and Exchange Commission), (B) stock price and (C) total shareholder return.

(g) **"Incentive-Based Compensation"** means any compensation that is granted, earned, or vested based wholly or in part upon the attainment of a Financial Reporting Measure, including, without limitation, performance-based restricted stock units.

(h) Incentive-Based Compensation is deemed to be "**Received**" in the Company's fiscal period during which the Financial Reporting Measure specified in the applicable Incentive-Based Compensation award is attained, even if the payment or grant of the Incentive-Based Compensation occurs after the end of that period or is subject to additional time-based vesting requirements.

(i) **"Recovery Period"** means the three completed fiscal years immediately preceding the earlier of: (A) the date the Board, a committee of the Board, or the officer or officers of the Company authorized to take such action if Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare an Accounting Restatement; or (B) the date a court, regulator, or other legally authorized body directs the Company to prepare an Accounting Restatement. In addition, if there is a change in the Company's fiscal year end, the Recovery Period will also include any transition period to the extent required by Section 303A.14.

2. <u>Recovery of Erroneously Awarded Compensation</u>

Subject to the terms of this Policy and the requirements of Section 303A.14, if the Company is required to prepare an Accounting Restatement, the Company will attempt to recover, reasonably promptly from each Covered Person, any Erroneously Awarded Compensation that was Received by such Covered Person during the Recovery Period pursuant to Incentive-Based Compensation that is subject to this Policy.

3. Interpretation and Administration

(a) <u>Role of the Committee</u>. This Policy will be interpreted by the Committee in a manner that is consistent with Section 303A.14 and any other applicable law. All actions, decisions, determinations and interpretations by or of the Committee under or with respect to this Policy are in the Committee's discretion (subject to applicable law) and will be final and binding.

(b) <u>Compensation Not Subject to this Policy</u>. This Policy does not apply to Incentive-Based Compensation that was Received before October 2, 2023. With respect to any Covered Person, this Policy does not apply to Incentive-Based Compensation that was Received by such Covered Person before beginning service as an Executive Officer.

(c) <u>Determination of Means of Recovery</u>. Subject to the requirement that recovery be made reasonably promptly, the Committee will determine the appropriate means of recovery, which may vary, without limitation, between Covered Persons or based on the nature of the

applicable Incentive-Based Compensation, and which may involve, without limitation, establishing a deferred repayment plan or setting off against current or future compensation otherwise payable to the Covered Person. Recovery of Erroneously Awarded Compensation will be made without regard to income taxes paid by the Covered Person or by the Company on the Covered Person's behalf in connection with such Erroneously Awarded Compensation.

(d) <u>Determination That Recovery is Impracticable</u>. The Company is not required to recover Erroneously Awarded Compensation if a determination is made by the Committee that either (A) after the Company has made and documented a reasonable attempt to recover such Erroneously Awarded Compensation, the direct expense paid to a third party to assist in enforcing this Policy would exceed the amount to be recovered or (B) recovery of such Erroneously Awarded Compensation would likely cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the registrant, to fail to meet the requirements of Section 401(a)(13) or 411(a) of the Internal Revenue Code and regulations thereunder.

(e) <u>No Indemnification or Company-Paid Insurance</u>. The Company will not indemnify or reimburse any Covered Person against or for the loss of Erroneously Awarded Compensation and will not pay or reimburse any Covered Person for the purchase of a third-party insurance policy to fund potential recovery obligations.

(f) <u>Interaction with Other Clawback Provisions</u>. The Company will be deemed to have recovered Erroneously Awarded Compensation in accordance with this Policy to the extent the Company actually receives such amounts, including pursuant to any other Company agreement, plan, policy or practice.

(g) <u>No Limitation on Other Remedies</u>. Nothing in this Policy will be deemed to limit the Company's right to terminate employment of any Covered Person, to seek recovery of other compensation paid to a Covered Person, or to pursue other rights or remedies available to the Company under applicable law, including, without limitation, with respect to any other Company agreements, plans, policies and practices.