Item 7. Bank of America Corporation and Subsidiaries

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

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

Bank of America Corporation (the Corporation) and its management may make certain statements that constitute "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as "anticipates," "targets," "expects," "hopes," "estimates," "intends," "plans," "goals," "believes," "continue" and other similar expressions or future or conditional verbs such as "will," "may," "might," "should," "would" and "could." Forward-looking statements represent the Corporation's current expectations, plans or forecasts of its future results, revenues, liquidity, net interest income, provision for credit losses, expenses, efficiency ratio, capital measures, strategy, deposits, assets, and future business and economic conditions more generally, and other future matters. These statements are not guarantees of future results or performance and involve certain known and unknown risks, uncertainties and assumptions that are difficult to predict and are often beyond the Corporation's control. Actual outcomes and results may differ materially from those expressed in, or implied by, any of these forward-looking statements.

You should not place undue reliance on any forward-looking statement and should consider the following uncertainties and risks, as well as the risks and uncertainties more fully discussed under Item 1A. Risk Factors of this Annual Report on Form 10-K: *and in any of the Corporation's subsequent Securities and Exchange Commission filings: the Corporation's potential judgments, orders, settlements, penalties, fines and reputational damage resulting from pending or future litigation and regulatory investigations, proceedings and enforcement actions, including as a result of our participation in and execution of government programs related to the Coronavirus Disease 2019 (COVID-19) pandemic, such as the processing of unemployment benefits for California and certain other states; the possibility that the Corporation's future liabilities may be in excess of its recorded liability and estimated range of possible loss for litigation, and regulatory and government actions; the possibility that the Corporation could face increased claims from one or more parties involved in mortgage securitizations; the Corporation's ability to resolve representations and warranties repurchase and related claims; the risks related to the discontinuation of reference rates, including increased expenses and litigation and the effectiveness of hedging strategies; uncertainties about the financial stability and growth rates of non-U.S. jurisdictions, the risk that those jurisdictions may face difficulties servicing their sovereign debt, and related stresses on financial markets, currencies and trade, and the Corporation's exposures to such risks, including direct, indirect and operational; the impact of U.S. and global interest rates, inflation, currency exchange rates, economic conditions, trade policies and tensions, including tariffs, and potential geopolitical instability; the impact of the interest rate, inflationary, macroeconomic, banking and regulatory environment on the Corporation's assets, business, financial condition and results of operations; the impact of adverse developments affecting the U.S. or global banking industry, including bank failures and liquidity concerns, resulting in worsening economic and market volatility, and regulatory responses thereto; the possibility that future credit losses may be higher than currently expected due to changes in economic assumptions, customer behavior, adverse developments with respect to U.S. or global economic conditions and other uncertainties, including the impact of supply chain disruptions, inflationary pressures and labor shortages on economic conditions and our business; potential losses related to the Corporation's concentration of credit risk; the Corporation's ability to achieve its expense targets and expectations regarding revenue, net interest income, provision for credit losses, net charge-offs, effective tax rate, loan growth or other projections; adverse changes to the Corporation's credit ratings from the major credit rating agencies; an inability to access capital markets or maintain deposits or borrowing costs; estimates of the fair value and other accounting values, subject to impairment assessments, of certain of the Corporation's assets and liabilities; the estimated or actual impact of changes in accounting standards or assumptions in applying those standards; uncertainty regarding the content, timing and impact of regulatory capital and liquidity requirements; the impact of adverse changes to total loss-absorbing capacity requirements, stress capital buffer requirements and/or global systemically important bank surcharges; the potential impact of actions of the* Board of Governors of the Federal Reserve System *on the Corporation's capital plans; the effect of changes in or interpretations of income tax laws and regulations; the impact of implementation and compliance with U.S. and international laws, regulations and regulatory interpretations, including, but not limited to, recovery and resolution planning requirements, Federal Deposit Insurance Corporation assessments, the Volcker Rule, fiduciary standards, derivatives regulations and potential changes to loss allocations between financial institutions and customers, including for losses incurred from the use of our products and services, including electronic payments and payment of checks, that were authorized by the customer but induced by fraud; the impact of failures or disruptions in or breaches of the Corporation's operations or information systems or those of third parties, including as a result of cybersecurity incidents; the risks related to the development, implementation, use and management of emerging technologies, including artificial intelligence and machine learning; the risks related to the transition and physical impacts of climate change; our ability to achieve environmental, social and governance goals and commitments or the impact of any changes in the Corporation's sustainability strategy or commitments generally; the impact of any future federal government shutdown and uncertainty regarding the federal government's debt limit or changes in fiscal, monetary or regulatory policy; the emergence or continuation of widespread health emergencies or pandemics; the impact of natural disasters, extreme weather events, military conflicts (including the Russia/Ukraine conflict, the conflict in the Middle East, the possible expansion of such conflicts and potential geopolitical consequences), terrorism or other geopolitical events; and other matters.*

Forward-looking statements speak only as of the date they are made, and the Corporation undertakes no obligation to update any forward-looking statement to reflect the impact of circumstances or events that arise after the date the forward-looking statement was made.

Notes to the Consolidated Financial Statements referred to in the Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) are incorporated by reference into the MD&A. Certain prior-year amounts have been reclassified to conform to current-year presentation. Throughout the MD&A, the Corporation uses certain acronyms and abbreviations which are defined in the Glossary.

Executive Summary

Business Overview

The Corporation is a Delaware corporation, a bank holding company (BHC) and a financial holding company. When used in this report, "Bank of America," "the Corporation," "we," "us" and "our" may refer to Bank of America Corporation individually, Bank of America Corporation and its subsidiaries, or certain of Bank of America Corporation's subsidiaries or affiliates. Our principal executive offices are located in Charlotte, North Carolina. Through our various bank and nonbank subsidiaries throughout the U.S. and in international markets, we provide a diversified range of banking and nonbank financial services and products through four business segments: *Consumer Banking*, *Global Wealth & Investment Management (GWIM)*, *Global Banking* and *Global Markets*, with the remaining operations recorded in *All Other*. We operate our banking activities primarily under the Bank of America, National Association (Bank of America, N.A. or BANA) charter. At December 31, 2023, the Corporation had $3.2 trillion in assets and a headcount of approximately 213,000 employees.

As of December 31, 2023, we served clients through operations across the U.S., its territories and more than 35 countries. Our retail banking footprint covers all major markets in the U.S., and we serve approximately 69 million consumer and small business clients with approximately 3,800 retail financial centers, approximately 15,000 ATMs, and leading digital banking platforms (www.bankofamerica.com) with approximately 46 million active users, including approximately 38 million active mobile users. We offer industry-leading support to approximately four million small business households. Our *GWIM* businesses, with client balances of $3.8 trillion, provide tailored solutions to meet client needs through a full set of investment management, brokerage, banking, trust and retirement products. We are a global leader in corporate and investment banking and trading across a broad range of asset classes serving corporations, governments, institutions and individuals around the world.

Recent Developments

Capital Management

On January 31, 2024, the Corporation's Board of Directors (the Board) declared a quarterly common stock dividend of $0.24 per share, payable on March 29, 2024 to shareholders of record as of March 1, 2024.

For more information on our capital resources, see Capital Management on page 47.

Impact of BSBY's Future Cessation

In the fourth quarter of 2023, the Corporation recognized a net non-cash, pretax charge of approximately $1.6 billion in market making and similar activities as a result of the announcement of Bloomberg Short-Term Bank Yield Index's (BSBY) future cessation. For more information, see Business Segment Operations — *All Other* on page 43, *Note 3 – Derivatives* to the Consolidated Financial Statements and the Corporation's Current Report on Form 8-K filed on January 8, 2024.

FDIC Special Assessment

On November 16, 2023, the Federal Deposit Insurance Corporation (FDIC) issued its final rule to impose a special assessment to recover the loss to the Deposit Insurance Fund resulting from the closure of Silicon Valley Bank and Signature Bank. Accordingly, in the fourth quarter of 2023, the Corporation recorded noninterest expense of $2.1 billion for its estimated assessment amount. For more information, see *Note 12 – Commitments and Contingencies* to the Consolidated Financial Statements.

Financial Highlights

Table 1 Summary Income Statement and Selected Financial Data

(Dollars in millions, except per share information)	2023	2022
Income statement		
Net interest income	$ 56,931	$ 52,462
Noninterest income	41,650	42,488
Total revenue, net of interest expense	98,581	94,950
Provision for credit losses	4,394	2,543
Noninterest expense	65,845	61,438
Income before income taxes	28,342	30,969
Income tax expense	1,827	3,441
Net income	26,515	27,528
Preferred stock dividends and other	1,649	1,513
Net income applicable to common shareholders	$ 24,866	$ 26,015
Per common share information		
Earnings	$ 3.10	$ 3.21
Diluted earnings	3.08	3.19
Dividends paid	0.92	0.86
Performance ratios		
Return on average assets [(1)]	0.84 %	0.88 %
Return on average common shareholders' equity [(1)]	9.75	10.75
Return on average tangible common shareholders' equity [(2)]	13.46	15.15
Efficiency ratio [(1)]	66.79	64.71
Balance sheet at year end		
Total loans and leases	$ 1,053,732	$ 1,045,747
Total assets	3,180,151	3,051,375
Total deposits	1,923,827	1,930,341
Total liabilities	2,888,505	2,778,178
Total common shareholders' equity	263,249	244,800
Total shareholders' equity	291,646	273,197

(1) For definitions, see Key Metrics on page 170.
(2) Return on average tangible common shareholders' equity is a non-GAAP financial measure. For more information and a corresponding reconciliation to the most closely related financial measures defined by accounting principles generally accepted in the United States of America (GAAP), see Non-GAAP Reconciliations on page 85.

Net income was $26.5 billion, or $3.08 per diluted share in 2023 compared to $27.5 billion, or $3.19 per diluted share in 2022. The decrease in net income was primarily due to higher noninterest expense and provision for credit losses, partially offset by higher net interest income.

For discussion and analysis of our consolidated and business segment results of operations for 2022 compared to 2021, see Financial Highlights and Business Segment Operations sections in the MD&A of the Corporation's 2022 Annual Report on Form 10-K.

Net Interest Income

Net interest income increased $4.5 billion to $56.9 billion in 2023 compared to 2022. Net interest yield on a fully taxable-equivalent (FTE) basis increased 12 basis points (bps) to 2.08 percent for 2023. The increases were primarily driven by benefits from higher interest rates and loan growth, partially offset by higher funding costs, lower deposits and net interest income related to *Global Markets* activity. For more information on net interest yield and FTE basis, see Supplemental Financial Data on page 29, and for more information on interest rate risk management, see Interest Rate Risk Management for the Banking Book on page 77.

Noninterest Income

Table 2 Noninterest Income

(Dollars in millions)		2023		2022
Fees and commissions:				
Card income	$	**6,054**	$	6,083
Service charges		**5,684**		6,405
Investment and brokerage services		**15,563**		15,901
Investment banking fees		**4,708**		4,823
Total fees and commissions		**32,009**		33,212
Market making and similar activities		**12,732**		12,075
Other income		**(3,091)**		(2,799)
Total noninterest income	$	**41,650**	$	42,488

Noninterest income decreased $838 million to $41.7 billion in 2023 compared to 2022. The following highlights the significant changes.

- Service charges decreased $721 million primarily driven by the impact of non-sufficient funds and overdraft policy changes, as well as lower treasury service charges.
- Investment and brokerage services decreased $338 million primarily due to lower transactional revenue and asset management fees driven by declines in assets under management (AUM) pricing, as well as lower average market valuations, partially offset by the impact of positive AUM flows.
- Investment banking fees decreased $115 million primarily due to lower advisory and debt issuance fees, partially offset by higher equity issuance fees.
- Market making and similar activities increased $657 million primarily driven by improved trading in mortgage products in Fixed Income, Currencies and Commodities (FICC) and by the impact of higher interest rates on client financing activities in Equities, partially offset by the net $1.6 billion impact of BSBY's future cessation.
- Other income decreased $292 million primarily due to higher partnership losses on tax-advantaged investments and losses on sales of available-for-sale (AFS) debt securities, partially offset by certain negative valuation adjustments in the prior year.

Provision for Credit Losses

The provision for credit losses increased $1.9 billion to $4.4 billion in 2023 compared to 2022. The provision for credit losses for 2023 was driven by our consumer portfolio primarily due to credit card loan growth and asset quality, partially offset by improved macroeconomic conditions that primarily benefited our commercial portfolio. For the same period in the prior year, the provision for credit losses was primarily driven by loan growth and a dampened macroeconomic outlook, partially offset by a reduction in COVID-19 pandemic uncertainties. For more information on the provision for credit losses, see Allowance for Credit Losses on page 71.

Noninterest Expense

Table 3 Noninterest Expense

(Dollars in millions)		2023		2022
Compensation and benefits	$	**38,330**	$	36,447
Occupancy and equipment		**7,164**		7,071
Information processing and communications		**6,707**		6,279
Product delivery and transaction related		**3,608**		3,653
Marketing		**1,927**		1,825
Professional fees		**2,159**		2,142
Other general operating		**5,950**		4,021
Total noninterest expense	$	**65,845**	$	61,438

Noninterest expense increased $4.4 billion to $65.8 billion in 2023 compared to 2022 primarily due to higher investments in people and technology and higher FDIC expense, including $2.1 billion for the estimated special assessment amount arising from the closure of Silicon Valley Bank and Signature Bank, partially offset by lower litigation expense and revenue-related compensation.

Income Tax Expense

Table 4 Income Tax Expense

(Dollars in millions)		2023		2022
Income before income taxes	$	**28,342**	$	30,969
Income tax expense		**1,827**		3,441
Effective tax rate		**6.4 %**		11.1 %

Income tax expense was $1.8 billion for 2023 compared to $3.4 billion in 2022, resulting in an effective tax rate of 6.4 percent compared to 11.1 percent.

The effective tax rates for 2023 and 2022 were primarily driven by our recurring tax preference benefits, which primarily consisted of tax credits from investments in affordable housing and renewable energy. Also included in the effective tax rate for 2023 were tax impacts from charges recorded in the fourth quarter of 2023 related to the FDIC special assessment and the impact of BSBY's future cessation. For more information on these charges, see Executive Summary – Recent Developments on page 26. For more information on our recurring tax preference benefits, see *Note 19 – Income Taxes* to the Consolidated Financial Statements. Absent the tax credits related to tax-advantaged investments and discrete tax benefits, the effective tax rates would have been approximately 25 percent for both periods.

Balance Sheet Overview

Table 5 Selected Balance Sheet Data

(Dollars in millions)	December 31 2023	2022	$ Change	% Change
Assets				
Cash and cash equivalents	$ **333,073**	$ 230,203	$ 102,870	45 %
Federal funds sold and securities borrowed or purchased under agreements to resell	**280,624**	267,574	13,050	5
Trading account assets	**277,354**	296,108	(18,754)	(6)
Debt securities	**871,407**	862,819	8,588	1
Loans and leases	**1,053,732**	1,045,747	7,985	1
Allowance for loan and lease losses	**(13,342)**	(12,682)	(660)	5
All other assets	**377,303**	361,606	15,697	4
Total assets	$ **3,180,151**	$ 3,051,375	$ 128,776	4
Liabilities				
Deposits	$ **1,923,827**	$ 1,930,341	$ (6,514)	—
Federal funds purchased and securities loaned or sold under agreements to repurchase	**283,887**	195,635	88,252	45
Trading account liabilities	**95,530**	80,399	15,131	19
Short-term borrowings	**32,098**	26,932	5,166	19
Long-term debt	**302,204**	275,982	26,222	10
All other liabilities	**250,959**	268,889	(17,930)	(7)
Total liabilities	**2,888,505**	2,778,178	110,327	4
Shareholders' equity	**291,646**	273,197	18,449	7
Total liabilities and shareholders' equity	$ **3,180,151**	$ 3,051,375	$ 128,776	4

Assets

At December 31, 2023, total assets were approximately $3.2 trillion, up $128.8 billion from December 31, 2022. The increase in assets was primarily due to higher cash and cash equivalents.

Cash and Cash Equivalents

Cash and cash equivalents increased $102.9 billion primarily driven by increased funding to support balance sheet and liquidity positioning.

Federal Funds Sold and Securities Borrowed or Purchased Under Agreements to Resell

Federal funds transactions involve lending reserve balances on a short-term basis. Securities borrowed or purchased under agreements to resell are collateralized lending transactions utilized to accommodate customer transactions, earn interest rate spreads and obtain securities for settlement and for collateral. Federal funds sold and securities borrowed or purchased under agreements to resell increased $13.1 billion primarily due to the investment of excess cash from higher federal funds purchased and securities loaned or sold under agreements to repurchase, short-term borrowings and long-term debt, as well as client activity within *Global Markets*.

Trading Account Assets

Trading account assets consist primarily of long positions in equity and fixed-income securities including U.S. government and agency securities, corporate securities and non-U.S. sovereign debt. Trading account assets decreased $18.8 billion primarily due to a decline in inventory within *Global Markets*.

Debt Securities

Debt securities primarily include U.S. Treasury and agency securities, mortgage-backed securities (MBS), principally agency MBS, non-U.S. bonds, corporate bonds and municipal debt. We reinvest cash in the debt securities portfolio primarily to manage interest rate and liquidity risk. Debt securities increased $8.6 billion primarily due to investment of excess cash from higher federal funds purchased and securities loaned or sold under agreements to repurchase, short-term borrowings and long-term debt. For more information on debt securities, see *Note 4 – Securities* to the Consolidated Financial Statements.

Loans and Leases

Loans and leases increased $8.0 billion primarily driven by higher credit card spending and growth in commercial loans. For more information on the loan portfolio, see Credit Risk Management on page 57.

Allowance for Loan and Lease Losses

The allowance for loan and lease losses increased $660 million driven by the Corporation's consumer portfolio primarily due to credit card loan growth and asset quality, partially offset by a reserve release in the Corporation's commercial portfolio primarily driven by improved macroeconomic conditions applicable to the commercial portfolio. For more information, see Allowance for Credit Losses on page 71.

All Other Assets

All other assets increased $15.7 billion primarily driven by *Global Markets* activity.

Liabilities

At December 31, 2023, total liabilities were approximately $2.9 trillion, up $110.3 billion from December 31, 2022, primarily due to higher federal funds purchased and securities loaned or sold under agreements to repurchase and long-term debt.

Deposits

Deposits decreased $6.5 billion primarily due to an increase in customer spending and customers' movement of balances to higher yielding investment alternatives.

Federal Funds Purchased and Securities Loaned or Sold Under Agreements to Repurchase

Federal funds transactions involve borrowing reserve balances on a short-term basis. Securities loaned or sold under agreements to repurchase are collateralized borrowing transactions utilized to accommodate customer transactions, earn interest rate spreads and finance assets on the balance sheet. Federal funds purchased and securities loaned or sold under agreements to repurchase increased $88.3 billion primarily driven by an increase in repurchase agreements to support liquidity.

Trading Account Liabilities

Trading account liabilities consist primarily of short positions in equity and fixed-income securities including U.S. Treasury and agency securities, non-U.S. sovereign debt and corporate securities. Trading account liabilities increased $15.1 billion primarily due to higher levels of short positions within *Global Markets*.

Short-term Borrowings

Short-term borrowings provide an additional funding source and primarily consist of Federal Home Loan Bank (FHLB) short-term borrowings, notes payable and various other borrowings that generally have maturities of one year or less. Short-term borrowings increased $5.2 billion primarily due to an increase in FHLB advances and commercial paper to manage liquidity needs. For more information on short-term borrowings, see *Note 10 – Securities Financing Agreements, Short-term Borrowings, Collateral and Restricted Cash* to the Consolidated Financial Statements.

Long-term Debt

Long-term debt increased $26.2 billion primarily due to debt issuances and valuation adjustments, partially offset by debt maturities and redemptions. For more information on long-term debt, see *Note 11 – Long-term Debt* to the Consolidated Financial Statements.

All Other Liabilities

All other liabilities decreased $17.9 billion primarily driven by *Global Markets* activity.

Shareholders' Equity

Shareholders' equity increased $18.4 billion primarily due to net income and market value increases on derivatives, partially offset by returns of capital to shareholders through common and preferred stock dividends and common stock repurchases.

Cash Flows Overview

The Corporation's operating assets and liabilities support our global markets and lending activities. We believe that cash flows from operations, available cash balances and our ability to generate cash through short- and long-term debt are sufficient to fund our operating liquidity needs. Our investing activities primarily include the debt securities portfolio and loans and leases. Our financing activities reflect cash flows primarily related to customer deposits, securities financing agreements, long-term debt and common and preferred stock. For more information on liquidity, see Liquidity Risk on page 52.

Supplemental Financial Data

Non-GAAP Financial Measures

In this Form 10-K, we present certain non-GAAP financial measures. Non-GAAP financial measures exclude certain items or otherwise include components that differ from the most directly comparable measures calculated in accordance with GAAP. Non-GAAP financial measures are provided as additional useful information to assess our financial condition, results of operations (including period-to-period operating performance) or compliance with prospective regulatory requirements. These non-GAAP financial measures are not intended as a substitute for GAAP financial measures and may not be defined or calculated the same way as non-GAAP financial measures used by other companies.

When presented on a consolidated basis, net interest income on an FTE basis is a non-GAAP financial measure. To derive the FTE basis, net interest income is adjusted to reflect tax-exempt income on an equivalent before-tax basis with a corresponding increase in income tax expense. For purposes of this calculation, we use the federal statutory tax rate of 21 percent and a representative state tax rate. Net interest yield, which measures the basis points we earn over the cost of funds, utilizes net interest income on an FTE basis. We believe that presentation of these items on an FTE basis allows for comparison of amounts from both taxable and tax-exempt sources and is consistent with industry practices.

We may present certain key performance indicators and ratios excluding certain items (e.g., debit valuation adjustment (DVA) gains (losses)), which result in non-GAAP financial measures. We believe that the presentation of measures that exclude these items is useful because such measures provide additional information to assess the underlying operational performance and trends of our businesses and to allow better comparison of period-to-period operating performance.

We also evaluate our business based on certain ratios that utilize tangible equity, a non-GAAP financial measure. Tangible equity represents shareholders' equity or common shareholders' equity reduced by goodwill and intangible assets (excluding mortgage servicing rights (MSRs)), net of related deferred tax liabilities ("adjusted" shareholders' equity or common shareholders' equity). These measures are used to evaluate our use of equity. In addition, profitability, relationship and investment models use both return on average tangible common shareholders' equity and return on average tangible shareholders' equity as key measures to support our overall growth objectives. These ratios are:

- Return on average tangible common shareholders' equity measures our net income applicable to common shareholders as a percentage of adjusted average common shareholders' equity. The tangible common equity ratio represents adjusted ending common shareholders' equity divided by total tangible assets.
- Return on average tangible shareholders' equity measures our net income as a percentage of adjusted average total shareholders' equity. The tangible equity ratio represents adjusted ending shareholders' equity divided by total tangible assets.
- Tangible book value per common share represents adjusted ending common shareholders' equity divided by ending common shares outstanding.

We believe ratios utilizing tangible equity provide additional useful information because they present measures of those assets that can generate income. Tangible book value per common share provides additional useful information about the level of tangible assets in relation to outstanding shares of common stock.

The aforementioned supplemental data and performance measures are presented in Tables 6 and 7.

For more information on the reconciliation of these non-GAAP financial measures to the corresponding GAAP financial measures, see Non-GAAP Reconciliations on page 85.

Key Performance Indicators

We present certain key financial and nonfinancial performance indicators (key performance indicators) that management uses when assessing our consolidated and/or segment results. We believe they are useful to investors because they provide additional information about our underlying operational performance and trends. These key performance indicators (KPIs) may not be defined or calculated in the same way as similar KPIs used by other companies. For information on how these metrics are defined, see Key Metrics on page 170.

Our consolidated key performance indicators, which include various equity and credit metrics, are presented in Table 1 on page 26, Table 6 on page 30 and Table 7 on page 31.

For information on key segment performance metrics, see Business Segment Operations on page 34.

Table 6 Selected Annual Financial Data

(In millions, except per share information)	2023	2022	2021
Income statement			
Net interest income	$ 56,931	$ 52,462	$ 42,934
Noninterest income	41,650	42,488	46,179
Total revenue, net of interest expense	98,581	94,950	89,113
Provision for credit losses	4,394	2,543	(4,594)
Noninterest expense	65,845	61,438	59,731
Income before income taxes	28,342	30,969	33,976
Income tax expense	1,827	3,441	1,998
Net income	26,515	27,528	31,978
Net income applicable to common shareholders	24,866	26,015	30,557
Average common shares issued and outstanding	8,028.6	8,113.7	8,493.3
Average diluted common shares issued and outstanding	8,080.5	8,167.5	8,558.4
Performance ratios			
Return on average assets [1]	0.84 %	0.88 %	1.05 %
Return on average common shareholders' equity [1]	9.75	10.75	12.23
Return on average tangible common shareholders' equity [1, 2]	13.46	15.15	17.02
Return on average shareholders' equity [1]	9.36	10.18	11.68
Return on average tangible shareholders' equity [1, 2]	12.44	13.76	15.71
Total ending equity to total ending assets	9.17	8.95	8.52
Common equity ratio [1]	8.28	8.02	7.74
Total average equity to total average assets	8.99	8.62	9.02
Dividend payout [1]	29.65	26.77	21.51
Per common share data			
Earnings	$ 3.10	$ 3.21	$ 3.60
Diluted earnings	3.08	3.19	3.57
Dividends paid	0.92	0.86	0.78
Book value [1]	33.34	30.61	30.37
Tangible book value [2]	24.46	21.83	21.68
Market capitalization	$ 265,840	$ 264,853	$ 359,383
Average balance sheet			
Total loans and leases	$ 1,046,256	$ 1,016,782	$ 920,401
Total assets	3,153,513	3,135,894	3,034,623
Total deposits	1,887,541	1,986,158	1,914,286
Long-term debt	248,853	246,479	237,703
Common shareholders' equity	254,956	241,981	249,787
Total shareholders' equity	283,353	270,299	273,757
Asset quality			
Allowance for credit losses [3]	$ 14,551	$ 14,222	$ 13,843
Nonperforming loans, leases and foreclosed properties [4]	5,630	3,978	4,697
Allowance for loan and lease losses as a percentage of total loans and leases outstanding [4]	1.27 %	1.22 %	1.28 %
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases [4]	243	333	271
Net charge-offs	$ 3,799	$ 2,172	$ 2,243
Net charge-offs as a percentage of average loans and leases outstanding [4]	0.36 %	0.21 %	0.25 %
Capital ratios at year end [5]			
Common equity tier 1 capital	11.8 %	11.2 %	10.6 %
Tier 1 capital	13.5	13.0	12.1
Total capital	15.2	14.9	14.1
Tier 1 leverage	7.1	7.0	6.4
Supplementary leverage ratio	6.1	5.9	5.5
Tangible equity [2]	7.1	6.8	6.4
Tangible common equity [2]	6.2	5.9	5.7

(1) For definition, see Key Metrics on page 170.
(2) Tangible equity ratios and tangible book value per share of common stock are non-GAAP financial measures. For more information on these ratios and corresponding reconciliations to GAAP financial measures, see Supplemental Financial Data on page 29 and Non-GAAP Reconciliations on page 85.
(3) Includes the allowance for loan and leases losses and the reserve for unfunded lending commitments.
(4) Balances and ratios do not include loans accounted for under the fair value option. For additional exclusions from nonperforming loans, leases and foreclosed properties, see Consumer Portfolio Credit Risk Management – Nonperforming Consumer Loans, Leases and Foreclosed Properties Activity on page 62 and corresponding Table 27 and Commercial Portfolio Credit Risk Management – Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity on page 66 and corresponding Table 33.
(5) For more information, including which approach is used to assess capital adequacy, see Capital Management on page 47.

Table 7 Selected Quarterly Financial Data

(In millions, except per share information)	2023 Quarters				2022 Quarters			
	Fourth	Third	Second	First	Fourth	Third	Second	First
Income statement								
Net interest income	**$ 13,946**	$ 14,379	$ 14,158	$ 14,448	$ 14,681	$ 13,765	$ 12,444	$ 11,572
Noninterest income	**8,013**	10,788	11,039	11,810	9,851	10,737	10,244	11,656
Total revenue, net of interest expense	**21,959**	25,167	25,197	26,258	24,532	24,502	22,688	23,228
Provision for credit losses	**1,104**	1,234	1,125	931	1,092	898	523	30
Noninterest expense	**17,731**	15,838	16,038	16,238	15,543	15,303	15,273	15,319
Income before income taxes	**3,124**	8,095	8,034	9,089	7,897	8,301	6,892	7,879
Income tax expense	**(20)**	293	626	928	765	1,219	645	812
Net income	**3,144**	7,802	7,408	8,161	7,132	7,082	6,247	7,067
Net income applicable to common shareholders	**2,838**	7,270	7,102	7,656	6,904	6,579	5,932	6,600
Average common shares issued and outstanding	**7,990.9**	8,017.1	8,040.9	8,065.9	8,088.3	8,107.7	8,121.6	8,136.8
Average diluted common shares issued and outstanding	**8,062.5**	8,075.9	8,080.7	8,182.3	8,155.7	8,160.8	8,163.1	8,202.1
Performance ratios								
Return on average assets [(1)]	**0.39 %**	0.99 %	0.94 %	1.07 %	0.92 %	0.90 %	0.79 %	0.89 %
Four-quarter trailing return on average assets [(2)]	**0.84**	0.98	0.96	0.92	0.88	0.87	0.89	0.99
Return on average common shareholders' equity [(1)]	**4.33**	11.24	11.21	12.48	11.24	10.79	9.93	11.02
Return on average tangible common shareholders' equity [(3)]	**5.92**	15.47	15.49	17.38	15.79	15.21	14.05	15.51
Return on average shareholders' equity [(1)]	**4.32**	10.86	10.52	11.94	10.38	10.37	9.34	10.64
Return on average tangible shareholders' equity [(3)]	**5.71**	14.41	14.00	15.98	13.98	13.99	12.66	14.40
Total ending equity to total ending assets	**9.17**	9.10	9.07	8.77	8.95	8.77	8.65	8.23
Common equity ratio [(1)]	**8.28**	8.20	8.16	7.88	8.02	7.82	7.71	7.40
Total average equity to total average assets	**8.98**	9.11	8.89	8.95	8.87	8.73	8.49	8.40
Dividend payout [(1)]	**67.42**	26.39	24.88	23.17	25.71	27.06	28.68	25.86
Per common share data								
Earnings	**$ 0.36**	$ 0.91	$ 0.88	$ 0.95	$ 0.85	$ 0.81	$ 0.73	$ 0.81
Diluted earnings	**0.35**	0.90	0.88	0.94	0.85	0.81	0.73	0.80
Dividends paid	**0.24**	0.24	0.22	0.22	0.22	0.22	0.21	0.21
Book value [(1)]	**33.34**	32.65	32.05	31.58	30.61	29.96	29.87	29.70
Tangible book value [(3)]	**24.46**	23.79	23.23	22.78	21.83	21.21	21.13	20.99
Market capitalization	**$ 265,840**	$ 216,942	$ 228,188	$ 228,012	$ 264,853	$ 242,338	$ 250,136	$ 332,320
Average balance sheet								
Total loans and leases	**$1,050,705**	$1,046,254	$1,046,608	$1,041,352	$1,039,247	$1,034,334	$1,014,886	$ 977,793
Total assets	**3,213,159**	3,128,466	3,175,358	3,096,058	3,074,289	3,105,546	3,157,855	3,207,702
Total deposits	**1,905,011**	1,876,153	1,875,353	1,893,649	1,925,544	1,962,775	2,012,079	2,045,811
Long-term debt	**256,262**	245,819	248,480	244,759	243,871	250,204	245,781	246,042
Common shareholders' equity	**260,221**	256,578	254,028	248,855	243,647	241,882	239,523	242,865
Total shareholders' equity	**288,618**	284,975	282,425	277,252	272,629	271,017	268,197	269,309
Asset quality								
Allowance for credit losses [(4)]	**$ 14,551**	$ 14,640	$ 14,338	$ 13,951	$ 14,222	$ 13,817	$ 13,434	$ 13,483
Nonperforming loans, leases and foreclosed properties [(5)]	**5,630**	4,993	4,274	4,083	3,978	4,156	4,326	4,778
Allowance for loan and lease losses as a percentage of total loans and leases outstanding [(5)]	**1.27 %**	1.27 %	1.24 %	1.20 %	1.22 %	1.20 %	1.17 %	1.23 %
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases [(5)]	**243**	275	314	319	333	309	288	262
Net charge-offs	**$ 1,192**	$ 931	$ 869	$ 807	$ 689	$ 520	$ 571	$ 392
Annualized net charge-offs as a percentage of average loans and leases outstanding [(5)]	**0.45 %**	0.35 %	0.33 %	0.32 %	0.26 %	0.20 %	0.23 %	0.16 %
Capital ratios at period end [(6)]								
Common equity tier 1 capital	**11.8 %**	11.9 %	11.6 %	11.4 %	11.2 %	11.0 %	10.5 %	10.4 %
Tier 1 capital	**13.5**	13.6	13.3	13.1	13.0	12.8	12.3	12.0
Total capital	**15.2**	15.4	15.1	15.0	14.9	14.7	14.2	14.0
Tier 1 leverage	**7.1**	7.3	7.1	7.1	7.0	6.8	6.5	6.3
Supplementary leverage ratio	**6.1**	6.2	6.0	6.0	5.9	5.8	5.5	5.4
Tangible equity [(3)]	**7.1**	7.0	7.0	6.7	6.8	6.6	6.5	6.2
Tangible common equity [(3)]	**6.2**	6.1	6.1	5.8	5.9	5.7	5.6	5.3
Total loss-absorbing capacity and long-term debt metrics								
Total loss-absorbing capacity to risk-weighted assets	**29.0 %**	29.3 %	28.8 %	28.8 %	29.0 %	28.9 %	27.8 %	27.2 %
Total loss-absorbing capacity to supplementary leverage exposure	**13.0**	13.3	13.0	13.1	13.2	13.0	12.6	12.2
Eligible long-term debt to risk-weighted assets	**14.5**	14.8	14.6	14.8	15.2	15.2	14.7	14.4
Eligible long-term debt to supplementary leverage exposure	**6.5**	6.7	6.6	6.7	6.9	6.8	6.6	6.5

(1) For definitions, see Key Metrics on page 170.
(2) Calculated as total net income for four consecutive quarters divided by annualized average assets for four consecutive quarters.
(3) Tangible equity ratios and tangible book value per share of common stock are non-GAAP financial measures. For more information on these ratios and corresponding reconciliations to GAAP financial measures, see Supplemental Financial Data on page 29 and Non-GAAP Reconciliations on page 85.
(4) Includes the allowance for loan and lease losses and the reserve for unfunded lending commitments.
(5) Balances and ratios do not include loans accounted for under the fair value option. For additional exclusions from nonperforming loans, leases and foreclosed properties, see Consumer Portfolio Credit Risk Management – Nonperforming Consumer Loans, Leases and Foreclosed Properties Activity on page 62 and corresponding Table 27 and Commercial Portfolio Credit Risk Management – Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity on page 66 and corresponding Table 33.
(6) For more information, including which approach is used to assess capital adequacy, see Capital Management on page 47.

Table 8 Average Balances and Interest Rates - FTE Basis

(Dollars in millions)	Average Balance 2023	Interest Income/ Expense (1) 2023	Yield/ Rate 2023	Average Balance 2022	Interest Income/ Expense (1) 2022	Yield/ Rate 2022	Average Balance 2021	Interest Income/ Expense (1) 2021	Yield/ Rate 2021
Earning assets									
Interest-bearing deposits with the Federal Reserve, non-U.S. central banks and other banks	$ 324,389	$ 15,965	4.92 %	$ 195,564	$ 2,591	1.32 %	$ 255,595	$ 172	0.07 %
Time deposits placed and other short-term investments	9,704	465	4.79	9,209	132	1.44	7,603	15	0.19
Federal funds sold and securities borrowed or purchased under agreements to resell (2)	291,669	18,679	6.40	292,799	4,560	1.56	267,257	(90)	(0.03)
Trading account assets	189,263	8,849	4.68	158,102	5,586	3.53	147,891	3,823	2.58
Debt securities	794,192	20,332	2.55	922,730	17,207	1.86	905,169	12,433	1.38
Loans and leases (3):									
Residential mortgage	229,001	6,923	3.02	227,604	6,375	2.80	216,983	5,995	2.76
Home equity	25,969	1,471	5.67	27,364	959	3.50	31,014	1,066	3.44
Credit card	96,190	10,436	10.85	83,539	8,408	10.06	75,385	7,772	10.31
Direct/Indirect and other consumer	104,571	5,200	4.97	107,050	3,317	3.10	96,472	2,276	2.36
Total consumer	455,731	24,030	5.27	445,557	19,059	4.28	419,854	17,109	4.08
U.S. commercial	378,212	19,494	5.15	366,748	12,251	3.34	324,795	8,606	2.65
Non-U.S. commercial	125,486	8,023	6.39	125,222	3,702	2.96	99,584	1,752	1.76
Commercial real estate (4)	72,981	5,162	7.07	65,421	2,595	3.97	60,303	1,496	2.48
Commercial lease financing	13,846	646	4.67	13,834	473	3.42	15,865	462	2.91
Total commercial	590,525	33,325	5.64	571,225	19,021	3.33	500,547	12,316	2.46
Total loans and leases	1,046,256	57,355	5.48	1,016,782	38,080	3.75	920,401	29,425	3.20
Other earning assets	98,127	9,184	9.36	105,674	4,847	4.59	112,512	2,321	2.06
Total earning assets	2,753,600	130,829	4.75	2,700,860	73,003	2.70	2,616,428	48,099	1.84
Cash and due from banks	26,076			28,029			31,214		
Other assets, less allowance for loan and lease losses	373,837			407,005			386,981		
Total assets	$ 3,153,513			$ 3,135,894			$ 3,034,623		
Interest-bearing liabilities									
U.S. interest-bearing deposits:									
Demand and money market deposits	952,736	15,527	1.63 %	987,247	3,145	0.32 %	925,970	314	0.03 %
Time and savings deposits	254,476	7,366	2.89	166,490	818	0.49	161,512	170	0.11
Total U.S. interest-bearing deposits	1,207,212	22,893	1.90	1,153,737	3,963	0.34	1,087,482	484	0.04
Non-U.S. interest-bearing deposits	96,845	3,270	3.38	80,951	755	0.93	82,769	53	0.06
Total interest-bearing deposits	1,304,057	26,163	2.01	1,234,688	4,718	0.38	1,170,251	537	0.05
Federal funds purchased, securities loaned or sold under agreements to repurchase	301,015	20,583	6.84	214,369	4,117	1.92	210,848	461	0.22
Short-term borrowings and other interest-bearing liabilities (2)	152,548	9,970	6.54	137,277	2,861	2.08	106,975	(819)	(0.77)
Trading account liabilities	46,083	2,043	4.43	51,208	1,538	3.00	54,107	1,128	2.08
Long-term debt	248,853	14,572	5.86	246,479	6,869	2.79	237,703	3,431	1.44
Total interest-bearing liabilities	2,052,556	73,331	3.57	1,884,021	20,103	1.07	1,779,884	4,738	0.27
Noninterest-bearing sources:									
Noninterest-bearing deposits	583,484			751,470			744,035		
Other liabilities (5)	234,120			230,104			236,947		
Shareholders' equity	283,353			270,299			273,757		
Total liabilities and shareholders' equity	$ 3,153,513			$ 3,135,894			$ 3,034,623		
Net interest spread			1.18 %			1.63 %			1.57 %
Impact of noninterest-bearing sources			0.90			0.33			0.09
Net interest income/yield on earning assets (6)		$ 57,498	2.08 %		$ 52,900	1.96 %		$ 43,361	1.66 %

(1) Includes the impact of interest rate risk management contracts. For more information, see Interest Rate Risk Management for the Banking Book on page 77.
(2) For more information on negative interest, see *Note 1 – Summary of Significant Accounting Principles* to the Consolidated Financial Statements.
(3) Nonperforming loans are included in the respective average loan balances. Income on these nonperforming loans is generally recognized on a cost recovery basis.
(4) Includes U.S. commercial real estate loans of $67.2 billion, $61.1 billion and $56.5 billion, and non-U.S. commercial real estate loans of $5.8 billion, $4.3 billion and $3.8 billion for 2023, 2022 and 2021, respectively.
(5) Includes $40.2 billion, $30.7 billion and $30.4 billion of structured notes and liabilities for 2023, 2022 and 2021, respectively.
(6) Net interest income includes FTE adjustments of $567 million, $438 million and $427 million in 2023, 2022 and 2021, respectively.

Table 9 Analysis of Changes in Net Interest Income - FTE Basis

(Dollars in millions)	Due to Change in [1] Volume	Due to Change in [1] Rate	Net Change	Due to Change in [1] Volume	Due to Change in [1] Rate	Net Change
	From 2022 to 2023			From 2021 to 2022		
Increase (decrease) in interest income						
Interest-bearing deposits with the Federal Reserve, non-U.S. central banks and other banks	$ 1,691	$ 11,683	$ 13,374	$ (35)	$ 2,454	$ 2,419
Time deposits placed and other short-term investments	8	325	333	2	115	117
Federal funds sold and securities borrowed or purchased under agreements to resell	(10)	14,129	14,119	2	4,648	4,650
Trading account assets	1,095	2,168	3,263	256	1,507	1,763
Debt securities	(2,435)	5,560	3,125	301	4,473	4,774
Loans and leases						
Residential mortgage	37	511	548	287	93	380
Home equity	(50)	562	512	(125)	18	(107)
Credit card	1,269	759	2,028	841	(205)	636
Direct/Indirect and other consumer	(75)	1,958	1,883	250	791	1,041
Total consumer			4,971			1,950
U.S. commercial	381	6,862	7,243	1,113	2,532	3,645
Non-U.S. commercial	12	4,309	4,321	452	1,498	1,950
Commercial real estate	302	2,265	2,567	126	973	1,099
Commercial lease financing	1	172	173	(59)	70	11
Total commercial			14,304			6,705
Total loans and leases			19,275			8,655
Other earning assets	(343)	4,680	4,337	(144)	2,670	2,526
Net increase (decrease) in interest income			$ 57,826			$ 24,904
Increase (decrease) in interest expense						
U.S. interest-bearing deposits						
Demand and money market deposit accounts	$ (96)	$ 12,478	$ 12,382	$ (18)	$ 2,849	$ 2,831
Time and savings deposits	429	6,119	6,548	13	635	648
Total U.S. interest-bearing deposits			18,930			3,479
Non-U.S. interest-bearing deposits	146	2,369	2,515	(4)	706	702
Total interest-bearing deposits			21,445			4,181
Federal funds purchased and securities loaned or sold under agreements to repurchase	1,662	14,804	16,466	11	3,645	3,656
Short-term borrowings and other interest-bearing liabilities	312	6,797	7,109	(238)	3,918	3,680
Trading account liabilities	(156)	661	505	(63)	473	410
Long-term debt	74	7,629	7,703	118	3,320	3,438
Net increase (decrease) in interest expense			53,228			15,365
Net increase (decrease) in net interest income [2]			$ 4,598			$ 9,539

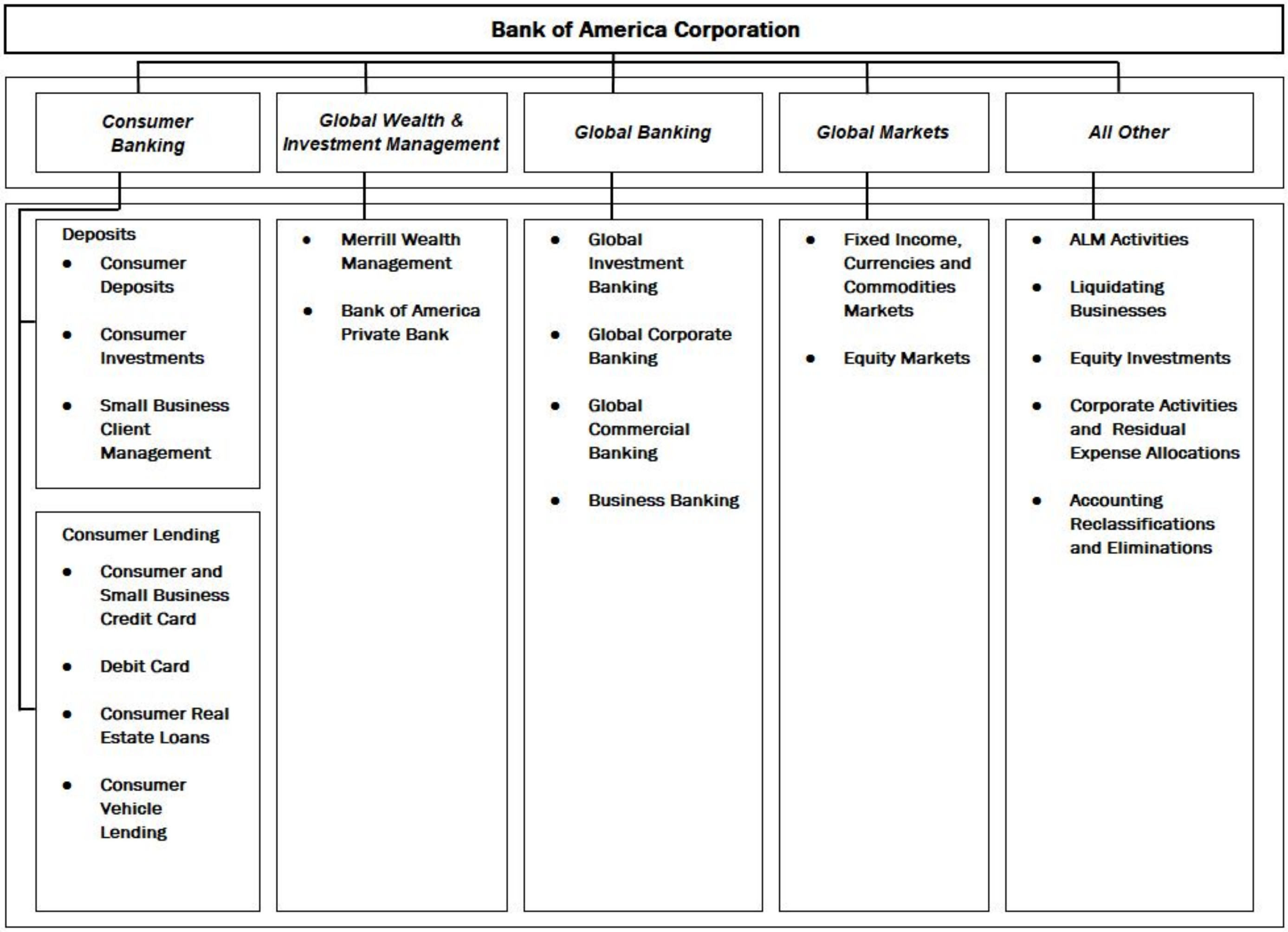
[1] The changes for each category of interest income and expense are divided between the portion of change attributable to the variance in volume and the portion of change attributable to the variance in rate for that category. The unallocated change in rate or volume variance is allocated between the rate and volume variances.

[2] Includes an increase in FTE basis adjustments of $129 million from 2022 to 2023 and $11 million from 2021 to 2022.

Business Segment Operations

Segment Description and Basis of Presentation

We report our results of operations through the following four business segments: *Consumer Banking, GWIM, Global Banking* and *Global Markets*, with the remaining operations recorded in *All Other*. We manage our segments and report their results on an FTE basis. The primary activities, products and businesses of the business segments and *All Other* are shown below.



We periodically review capital allocated to our businesses and allocate capital annually during the strategic and capital planning processes. We utilize a methodology that considers the effect of regulatory capital requirements in addition to internal risk-based capital models. Our internal risk-based capital models use a risk-adjusted methodology incorporating each segment's credit, market, interest rate, business and operational risk components. For more information on the nature of these risks, see Managing Risk on page 44. The capital allocated to the business segments is referred to as allocated capital. Allocated equity in the reporting units is comprised of allocated capital plus capital for the portion of goodwill and intangibles specifically assigned to the reporting unit. For more information, including the definition of a reporting unit, see *Note 7 – Goodwill and Intangible Assets* to the Consolidated Financial Statements.

For more information on our presentation of financial information on an FTE basis, see Supplemental Financial Data on page 29, and for reconciliations to consolidated total revenue, net income and year-end total assets, see *Note 23 – Business Segment Information* to the Consolidated Financial Statements.

Key Performance Indicators

We present certain key financial and nonfinancial performance indicators that management uses when evaluating segment results. We believe they are useful to investors because they provide additional information about our segments' operational performance, customer trends and business growth.

Consumer Banking

(Dollars in millions)	Deposits 2023	Deposits 2022	Consumer Lending 2023	Consumer Lending 2022	Total Consumer Banking 2023	Total Consumer Banking 2022	% Change
Net interest income	$ 22,545	$ 19,254	$ 11,144	$ 10,791	$ 33,689	$ 30,045	12 %
Noninterest income:							
Card income	(40)	(36)	5,304	5,205	5,264	5,169	2
Service charges	2,314	2,703	3	3	2,317	2,706	(14)
All other income	607	478	154	237	761	715	6
Total noninterest income	2,881	3,145	5,461	5,445	8,342	8,590	(3)
Total revenue, net of interest expense	25,426	22,399	16,605	16,236	42,031	38,635	9
Provision for credit losses	491	564	4,667	1,416	5,158	1,980	n/m
Noninterest expense	13,358	12,393	8,058	7,684	21,416	20,077	7
Income before income taxes	11,577	9,442	3,880	7,136	15,457	16,578	(7)
Income tax expense	2,894	2,314	970	1,748	3,864	4,062	(5)
Net income	$ 8,683	$ 7,128	$ 2,910	$ 5,388	$ 11,593	$ 12,516	(7)
Effective tax rate [1]					25.0 %	24.5 %	
Net interest yield	2.28 %	1.82 %	3.66 %	3.72 %	3.26 %	2.73 %	
Return on average allocated capital	63	55	10	20	28	31	
Efficiency ratio	52.54	55.33	48.52	47.32	50.95	51.96	
Balance Sheet							
Average							
Total loans and leases	$ 4,129	$ 4,161	$ 304,561	$ 288,205	$ 308,690	$ 292,366	6 %
Total earning assets [2]	989,000	1,057,531	304,838	289,719	1,032,525	1,099,410	(6)
Total assets [2]	1,022,361	1,090,692	310,805	296,499	1,071,853	1,139,351	(6)
Total deposits	987,675	1,056,783	5,075	5,778	992,750	1,062,561	(7)
Allocated capital	13,700	13,000	28,300	27,000	42,000	40,000	5
Year End							
Total loans and leases	$ 4,218	$ 4,148	$ 310,901	$ 300,613	$ 315,119	$ 304,761	3 %
Total earning assets [2]	965,088	1,043,049	311,008	300,787	1,009,360	1,085,079	(7)
Total assets [2]	999,372	1,077,203	317,194	308,007	1,049,830	1,126,453	(7)
Total deposits	964,136	1,043,194	5,436	5,605	969,572	1,048,799	(8)

(1) Estimated at the segment level only.
(2) In segments and businesses where the total of liabilities and equity exceeds assets, we allocate assets from *All Other* to match the segments' and businesses' liabilities and allocated shareholders' equity. As a result, total earning assets and total assets of the businesses may not equal total *Consumer Banking*.
n/m = not meaningful

Consumer Banking, comprised of Deposits and Consumer Lending, offers a diversified range of credit, banking and investment products and services to consumers and small businesses. Deposits and Consumer Lending include the net impact of migrating customers and their related deposit, brokerage asset and loan balances between Deposits, Consumer Lending and *GWIM*, as well as other client-managed businesses. Our customers and clients have access to a coast-to-coast network including financial centers in 39 states and the District of Columbia. As of December 31, 2023, our network includes approximately 3,800 financial centers, approximately 15,000 ATMs, nationwide call centers and leading digital banking platforms with more than 46 million active users, including approximately 38 million active mobile users.

Consumer Banking Results

Net income for *Consumer Banking* decreased $923 million to $11.6 billion due to an increase in provision for credit losses and higher noninterest expense, partially offset by higher revenue. Net interest income increased $3.6 billion to $33.7 billion primarily driven by higher interest rates and loan balances, partially offset by lower deposit balances. Noninterest income decreased $248 million to $8.3 billion primarily driven by the impact of non-sufficient funds and overdraft policy changes.

The provision for credit losses increased $3.2 billion to $5.2 billion primarily driven by credit card loan growth and asset quality. Noninterest expense increased $1.3 billion to $21.4 billion primarily driven by continued investments in the business, including people and technology, higher litigation expense, including consumer regulatory matters, and higher FDIC expense.

The return on average allocated capital was 28 percent, down from 31 percent, due to an increase in allocated capital and lower net income. For more information on capital allocated to the business segments, see Business Segment Operations on page 34.

Deposits

Deposits includes the results of consumer deposit activities that consist of a comprehensive range of products provided to consumers and small businesses. Our deposit products include noninterest- and interest-bearing checking accounts, money market savings accounts, traditional savings accounts, CDs and IRAs, as well as investment accounts and products. Net interest income is allocated to deposit products using our funds transfer pricing process that matches assets and liabilities with similar interest rate sensitivity and maturity characteristics. Deposits generates fees such as account service fees and ATM fees, as well as investment and brokerage fees from Consumer Investment accounts. Consumer Investments serves investment client relationships through the Merrill Edge integrated investing and banking service platform, providing investment advice and guidance, client brokerage asset services, self-directed online investing and key banking capabilities including access to the Corporation's network of financial centers and ATMs.

Net income for Deposits increased $1.6 billion to $8.7 billion primarily due to higher revenue, partially offset by higher noninterest expense. Net interest income increased $3.3 billion to $22.5 billion primarily due to higher interest rates, partially offset by lower deposit balances. Noninterest income decreased $264 million to $2.9 billion primarily driven by the impact of non-sufficient funds and overdraft policy changes.

Noninterest expense increased $965 million to $13.4 billion primarily due to continued investments in the business, including people and technology, higher litigation expense, including consumer regulatory matters, and higher FDIC expense.

Average deposits decreased $69.1 billion to $987.7 billion primarily due to net outflows of $51.8 billion in money market savings and $28.6 billion in checking, partially offset by growth in time deposits of $19.9 billion.

The table below provides key performance indicators for Deposits. Management uses these metrics, and we believe they are useful to investors because they provide additional information to evaluate our deposit profitability and digital/ mobile trends.

Key Statistics – Deposits

	2023	2022
Total deposit spreads (excludes noninterest costs) [1]	**2.70%**	1.86%
Year end		
Consumer investment assets (in millions) [2]	**$424,410**	$319,648
Active digital banking users (in thousands) [3]	**46,265**	44,054
Active mobile banking users (in thousands) [4]	**37,927**	35,452
Financial centers	**3,845**	3,913
ATMs	**15,168**	15,528

(1) Includes deposits held in Consumer Lending.
(2) Includes client brokerage assets, deposit sweep balances, Bank of America, N.A. brokered CDs and AUM in *Consumer Banking*.
(3) Represents mobile and/or online active users over the past 90 days.
(4) Represents mobile active users over the past 90 days.

Consumer investment assets increased $104.8 billion to $424.4 billion driven by market performance and client flows. Active mobile banking users increased approximately two million, reflecting continuing changes in our clients' banking preferences. We had a net decrease of 68 financial centers and 360 ATMs as we continue to optimize our consumer banking network.

Consumer Lending

Consumer Lending offers products to consumers and small businesses across the U.S. The products offered include debit and credit cards, residential mortgages and home equity loans, and direct and indirect loans such as automotive, recreational vehicle and consumer personal loans. In addition to earning net interest spread revenue on its lending activities, Consumer Lending generates interchange revenue from debit and credit card transactions, late fees, cash advance fees, annual credit card fees, mortgage banking fee income and other miscellaneous fees. Consumer Lending products are available to our customers through our retail network, direct telephone, and online and mobile channels. Consumer Lending results also include the impact of servicing residential mortgages and home equity loans, including loans held on the balance sheet of Consumer Lending and loans serviced for others.

Net income for Consumer Lending decreased $2.5 billion to $2.9 billion primarily due to an increase in provision for credit losses. Net interest income increased $353 million to $11.1 billion primarily due to higher loan balances. Noninterest income increased $16 million to $5.5 billion, relatively unchanged from the same period a year ago.

The provision for credit losses increased $3.3 billion to $4.7 billion primarily driven by credit card loan growth and asset quality. Noninterest expense increased $374 million to $8.1 billion primarily driven by continued investments in the business, including people and technology.

Average loans increased $16.4 billion to $304.6 billion primarily driven by an increase in credit card loans.

The table below provides key performance indicators for Consumer Lending. Management uses these metrics, and we believe they are useful to investors because they provide additional information about loan growth and profitability.

Key Statistics – Consumer Lending

(Dollars in millions)	**2023**	2022
Total credit card [1]		
Gross interest yield [2]	**11.88 %**	10.42 %
Risk-adjusted margin [3]	**7.83**	10.06
New accounts (in thousands)	**4,275**	4,397
Purchase volumes	**$363,117**	$356,588
Debit card purchase volumes	**$527,074**	$503,583

(1) Includes *GWIM's* credit card portfolio.
(2) Calculated as the effective annual percentage rate divided by average loans.
(3) Calculated as the difference between total revenue, net of interest expense, and net credit losses divided by average loans.

During 2023, the total risk-adjusted margin decreased 223 bps primarily driven by higher net credit losses, lower net fee income and lower interest margin. Total credit card purchase volumes increased $6.5 billion to $363.1 billion and debit card purchase volumes increased $23.5 billion to $527.1 billion, reflecting higher levels of consumer spending.

Key Statistics – Loan Production [1]

(Dollars in millions)	**2023**	2022
Consumer Banking:		
First mortgage	**$ 9,145**	$ 20,981
Home equity	**8,328**	7,988
Total [2]:		
First mortgage	**$ 19,405**	$ 44,765
Home equity	**9,814**	9,591

(1) The loan production amounts represent the unpaid principal balance of loans and, in the case of home equity, the principal amount of the total line of credit.
(2) In addition to loan production in *Consumer Banking*, there is also first mortgage and home equity loan production in *GWIM*.

First mortgage loan originations for *Consumer Banking* and the total Corporation decreased $11.8 billion and $25.4 billion during 2023 primarily driven by higher interest rates, resulting in lower customer demand.

Home equity production in *Consumer Banking* and the total Corporation increased $340 million and $223 million during 2023 primarily driven by higher demand.

Global Wealth & Investment Management

(Dollars in millions)	2023	2022	% Change
Net interest income	$ 7,147	$ 7,466	(4)%
Noninterest income:			
Investment and brokerage services	13,213	13,561	(3)
All other income	745	721	3
Total noninterest income	13,958	14,282	(2)
Total revenue, net of interest expense	21,105	21,748	(3)
Provision for credit losses	6	66	(91)
Noninterest expense	15,836	15,490	2
Income before income taxes	5,263	6,192	(15)
Income tax expense	1,316	1,517	(13)
Net income	$ 3,947	$ 4,675	(16)
Effective tax rate	25.0 %	24.5 %	
Net interest yield	2.17	1.95	
Return on average allocated capital	21	27	
Efficiency ratio	75.04	71.23	
Balance Sheet			
Average			
Total loans and leases	$ 219,503	$ 219,810	— %
Total earning assets	329,493	383,352	(14)
Total assets	342,531	396,167	(14)
Total deposits	298,335	351,329	(15)
Allocated capital	18,500	17,500	6
Year end			
Total loans and leases	$ 219,657	$ 223,910	(2)%
Total earning assets	330,653	355,461	(7)
Total assets	344,626	368,893	(7)
Total deposits	299,657	323,899	(7)

GWIM consists of two primary businesses: Merrill Wealth Management and Bank of America Private Bank.

Merrill Wealth Management's advisory business provides a high-touch client experience through a network of financial advisors focused on clients with over $250,000 in total investable assets. Merrill Wealth Management provides tailored solutions to meet clients' needs through a full set of investment management, brokerage, banking and retirement products.

Bank of America Private Bank, together with Merrill Wealth Management's Private Wealth Management business, provides comprehensive wealth management solutions targeted to high net worth and ultra high net worth clients, as well as customized solutions to meet clients' wealth structuring, investment management, trust and banking needs, including specialty asset management services.

Net income for *GWIM* decreased $728 million to $3.9 billion primarily due to lower revenue and higher noninterest expense. The operating margin was 25 percent compared to 28 percent a year ago.

Net interest income decreased $319 million to $7.1 billion primarily driven by lower average deposit balances and a portfolio mix shift to higher yielding deposit products.

Noninterest income, which primarily includes investment and brokerage services income, decreased $324 million to $14.0 billion. The decrease was primarily driven by lower transactional revenue and asset management fees driven by declines in AUM pricing as well as lower average market valuations, partially offset by the impact of positive AUM flows.

Noninterest expense increased $346 million to $15.8 billion primarily due to continued investments in the business, including strategic hiring and technology, as well as higher FDIC expense, partially offset by lower revenue-related incentives.

The return on average allocated capital was 21 percent, down from 27 percent, due to lower net income and, to a lesser extent, a small increase in allocated capital.

Average loans totaled $219.5 billion, relatively unchanged from the same period a year ago. Average deposits decreased $53.0 billion to $298.3 billion primarily driven by clients moving deposits to higher yielding investment cash alternatives, including offerings on our investment and brokerage platforms.

Merrill Wealth Management revenue of $17.5 billion decreased four percent primarily driven by lower net interest income, lower transactional revenue and asset management fees driven by declines in AUM pricing as well as lower average market valuations, partially offset by the impact of positive AUM flows.

Bank of America Private Bank revenue of $3.6 billion increased one percent primarily driven by higher net interest income as well as higher asset management fees driven by the impact of positive AUM flows.

Key Indicators and Metrics

(Dollars in millions)		2023		2022
Revenue by Business				
Merrill Wealth Management	**$**	**17,461**	$	18,135
Bank of America Private Bank		**3,644**		3,613
Total revenue, net of interest expense	**$**	**21,105**	$	21,748
Client Balances by Business, at year end				
Merrill Wealth Management	**$**	**3,182,735**	$	2,822,910
Bank of America Private Bank		**606,639**		563,931
Total client balances	**$**	**3,789,374**	$	3,386,841
Client Balances by Type, at year end				
Assets under management	**$**	**1,617,740**	$	1,401,474
Brokerage and other assets		**1,688,923**		1,482,025
Deposits		**299,657**		323,899
Loans and leases [(1)]		**222,287**		226,973
Less: Managed deposits in assets under management		**(39,233)**		(47,530)
Total client balances	**$**	**3,789,374**	$	3,386,841
Assets Under Management Rollforward				
Assets under management, beginning of year	**$**	**1,401,474**	$	1,638,782
Net client flows		**52,227**		20,785
Market valuation/other		**164,039**		(258,093)
Total assets under management, end of year	**$**	**1,617,740**	$	1,401,474
Total wealth advisors, at year end [(2)]		**18,916**		19,273

(1) Includes margin receivables which are classified in customer and other receivables on the Consolidated Balance Sheet.
(2) Includes advisors across all wealth management businesses in *GWIM* and *Consumer Banking*.

Client Balances

Client balances managed under advisory and/or discretion of GWIM are AUM and are typically held in diversified portfolios. Fees earned on AUM are calculated as a percentage of clients' AUM balances. The asset management fees charged to clients per year depend on various factors but are commonly driven by the breadth of the client's relationship. The net client AUM flows represent the net change in clients' AUM balances over a specified period of time, excluding market appreciation/depreciation and other adjustments.

Client balances increased $402.5 billion, or 12 percent, to $3.8 trillion at December 31, 2023 compared to December 31, 2022. The increase in client balances was primarily due to the impact of higher end-of-period market valuations and positive net client flows.

Global Banking

(Dollars in millions)	2023	2022	% Change
Net interest income	$ 14,645	$ 12,184	20 %
Noninterest income:			
Service charges	2,952	3,293	(10)
Investment banking fees	2,819	3,004	(6)
All other income	4,380	3,748	17
Total noninterest income	10,151	10,045	1
Total revenue, net of interest expense	24,796	22,229	12
Provision for credit losses	(586)	641	n/m
Noninterest expense	11,344	10,966	3
Income before income taxes	14,038	10,622	32
Income tax expense	3,790	2,815	35
Net income	$ 10,248	$ 7,807	31
Effective tax rate	27.0 %	26.5 %	
Net interest yield	2.73	2.26	
Return on average allocated capital	21	18	
Efficiency ratio	45.75	49.34	
Balance Sheet			
Average			
Total loans and leases	$ 378,762	$ 375,271	1 %
Total earning assets	535,500	539,032	(1)
Total assets	602,579	603,273	—
Total deposits	505,627	511,804	(1)
Allocated capital	49,250	44,500	11
Year end			
Total loans and leases	$ 373,891	$ 379,107	(1)%
Total earning assets	552,453	522,539	6
Total assets	621,751	588,466	6
Total deposits	527,060	498,661	6

n/m = not meaningful

Global Banking, which includes Global Corporate Banking, Global Commercial Banking, Business Banking and Global Investment Banking, provides a wide range of lending-related products and services, integrated working capital management and treasury solutions, and underwriting and advisory services through our network of offices and client relationship teams. Our lending products and services include commercial loans, leases, commitment facilities, trade finance, commercial real estate lending and asset-based lending. Our treasury solutions business includes treasury management, foreign exchange, short-term investing options and merchant services. We also provide investment banking services to our clients such as debt and equity underwriting and distribution, and merger-related and other advisory services. Underwriting debt and equity issuances, fixed-income and equity research, and certain market-based activities are executed through our global broker-dealer affiliates, which are our primary dealers in several countries. Within *Global Banking*, Global Corporate Banking clients generally include large global corporations, financial institutions and leasing clients. Global Commercial Banking clients generally include middle-market companies, commercial real estate firms and not-for-profit companies. Business Banking clients include mid-sized U.S.-based businesses requiring customized and integrated financial advice and solutions.

Net income for *Global Banking* increased $2.4 billion to $10.2 billion driven by higher revenue and lower provision for credit losses, partially offset by higher noninterest expense.

Net interest income increased $2.5 billion to $14.6 billion primarily due to the benefit of higher interest rates.

Noninterest income increased $106 million to $10.2 billion driven by negative valuation adjustments on leveraged loans in the prior year and higher revenue from tax-advantaged investment activities in the current year, partially offset by lower treasury service charges and lower investment banking fees.

The provision for credit losses improved $1.2 billion to a benefit of $586 million primarily due to an improved macroeconomic outlook.

Noninterest expense increased $378 million to $11.3 billion primarily due to continued investments in the business, including technology and strategic hiring in 2022, and higher FDIC expense, partially offset by expenses recognized for certain regulatory matters in the prior-year period.

The return on average allocated capital was 21 percent, up from 18 percent, due to higher net income, partially offset by higher allocated capital.

Global Corporate, Global Commercial and Business Banking

Global Corporate, Global Commercial and Business Banking each include Business Lending and Global Transaction Services activities. Business Lending includes various lending-related products and services, and related hedging activities, including commercial loans, leases, commitment facilities, trade finance, real estate lending and asset-based lending. Global Transaction Services includes deposits, treasury management, credit card, foreign exchange and short-term investment products.

The following table and discussion present a summary of the results, which exclude certain investment banking and other activities in *Global Banking*.

Global Corporate, Global Commercial and Business Banking

(Dollars in millions)	Global Corporate Banking 2023	Global Corporate Banking 2022	Global Commercial Banking 2023	Global Commercial Banking 2022	Business Banking 2023	Business Banking 2022	Total 2023	Total 2022
Revenue								
Business Lending	**$ 4,928**	$ 4,325	**$ 5,016**	$ 4,316	**$ 253**	$ 251	**$ 10,197**	$ 8,892
Global Transaction Services	**5,746**	5,002	**4,139**	4,166	**1,531**	1,213	**11,416**	10,381
Total revenue, net of interest expense	**$ 10,674**	$ 9,327	**$ 9,155**	$ 8,482	**$ 1,784**	$ 1,464	**$ 21,613**	$ 19,273
Balance Sheet								
Average								
Total loans and leases	**$ 171,554**	$ 174,052	**$ 194,725**	$ 187,597	**$ 12,285**	$ 12,743	**$ 378,564**	$ 374,392
Total deposits	**272,964**	250,648	**181,905**	204,893	**50,759**	56,263	**505,628**	511,804
Year end								
Total loans and leases	**$ 167,055**	$ 174,905	**$ 194,565**	$ 191,051	**$ 12,129**	$ 12,683	**$ 373,749**	$ 378,639
Total deposits	**289,961**	262,033	**188,141**	186,112	**48,951**	50,516	**527,053**	498,661

Business Lending revenue increased $1.3 billion in 2023 compared to 2022 primarily driven by higher interest rates, higher revenue from tax-advantaged investment activities and the impact of higher average loan balances.

Global Transaction Services revenue increased $1.0 billion in 2023 compared to 2022 primarily driven by higher interest rates, partially offset by lower treasury service charges and the impact of lower average deposit balances.

Average loans and leases increased one percent in 2023 compared to 2022 due to client demand. Average deposits decreased one percent in 2023 compared to 2022 due to declines in domestic balances.

Global Investment Banking

Client teams and product specialists underwrite and distribute debt, equity and loan products, and provide advisory services and tailored risk management solutions. The economics of certain investment banking and underwriting activities are shared primarily between *Global Banking* and *Global Markets* under an internal revenue-sharing arrangement. *Global Banking* originates certain deal-related transactions with our corporate and commercial clients that are executed and distributed by *Global Markets*. To provide a complete discussion of our consolidated investment banking fees, the table below presents total Corporation investment banking fees and the portion attributable to *Global Banking*.

Investment Banking Fees

(Dollars in millions)	Global Banking 2023	Global Banking 2022	Total Corporation 2023	Total Corporation 2022
Products				
Advisory	**$ 1,392**	$ 1,643	**$ 1,575**	$ 1,783
Debt issuance	**1,073**	1,099	**2,403**	2,523
Equity issuance	**354**	262	**886**	709
Gross investment banking fees	**2,819**	3,004	**4,864**	5,015
Self-led deals	**(43)**	(78)	**(156)**	(192)
Total investment banking fees	**$ 2,776**	$ 2,926	**$ 4,708**	$ 4,823

Total Corporation investment banking fees, which exclude self-led deals and are primarily included within *Global Banking* and *Global Markets*, decreased two percent to $4.7 billion primarily due to lower advisory and debt issuance fees, partially offset by higher equity issuance fees.

Global Markets

(Dollars in millions)	2023	2022	% Change
Net interest income	$ 1,678	$ 3,088	(46)%
Noninterest income:			
Investment and brokerage services	1,993	2,002	—
Investment banking fees	1,874	1,820	3
Market making and similar activities	13,430	11,406	18
All other income	552	(178)	n/m
Total noninterest income	17,849	15,050	19
Total revenue, net of interest expense	19,527	18,138	8
Provision for credit losses	(131)	28	n/m
Noninterest expense	13,206	12,420	6
Income before income taxes	6,452	5,690	13
Income tax expense	1,774	1,508	18
Net income	$ 4,678	$ 4,182	12
Effective tax rate	27.5 %	26.5 %	
Return on average allocated capital	10	10	
Efficiency ratio	67.63	68.48	
Balance Sheet			
Average			
Trading-related assets:			
Trading account securities	$ 318,443	$ 303,587	5 %
Reverse repurchases	133,735	126,324	6
Securities borrowed	121,547	116,764	4
Derivative assets	44,303	54,128	(18)
Total trading-related assets	618,028	600,803	3
Total loans and leases	129,657	116,652	11
Total earning assets	652,352	602,889	8
Total assets	869,756	857,637	1
Total deposits	33,278	40,382	(18)
Allocated capital	45,500	42,500	7
Year end			
Total trading-related assets	$ 542,544	$ 564,769	(4)%
Total loans and leases	136,223	127,735	7
Total earning assets	637,955	587,772	9
Total assets	817,588	812,489	1
Total deposits	34,833	39,077	(11)

n/m = not meaningful

Global Markets offers sales and trading services and research services to institutional clients across fixed-income, credit, currency, commodity and equity businesses. *Global Markets* product coverage includes securities and derivative products in both the primary and secondary markets. *Global Markets* provides market-making, financing, securities clearing, settlement and custody services globally to our institutional investor clients in support of their investing and trading activities. We also work with our commercial and corporate clients to provide risk management products using interest rate, equity, credit, currency and commodity derivatives, foreign exchange, fixed-income and mortgage-related products. As a result of our market-making activities in these products, we may be required to manage risk in a broad range of financial products including government securities, equity and equity-linked securities, high-grade and high-yield corporate debt securities, syndicated loans, MBS, commodities and asset-backed securities. The economics of certain investment banking and underwriting activities are shared primarily between *Global Markets* and *Global Banking* under an internal revenue-sharing arrangement. *Global Banking* originates certain deal-related transactions with our corporate and commercial clients that are executed and distributed by *Global Markets*. For information on investment banking fees on a consolidated basis, see page 40.

The following explanations for year-over-year changes in results for *Global Markets*, including those disclosed under Sales and Trading Revenue, are the same for amounts including and excluding net DVA. Amounts excluding net DVA are a non-GAAP financial measure. For more information on net DVA, see Supplemental Financial Data on page 29.

Net income for *Global Markets* increased $496 million to $4.7 billion in 2023 compared to 2022. Net DVA losses were $236 million compared to gains of $20 million in 2022. Excluding net DVA, net income increased $690 million to $4.9 billion. These increases were primarily driven by an increase in revenue, partially offset by higher noninterest expense.

Revenue increased $1.4 billion to $19.5 billion primarily due to higher sales and trading revenue in the current-year period and negative valuation adjustments on leveraged loans in the prior-year period. Sales and trading revenue increased $887 million, and excluding net DVA, increased $1.1 billion. These increases were primarily driven by higher revenue in FICC. Noninterest expense increased $786 million to $13.2 billion, primarily driven by continued investments in the business, including people and technology, partially offset by expenses recognized for certain regulatory matters in the prior-year period.

Average total assets increased $12.1 billion to $869.8 billion, driven by higher levels of inventory, increased secured financing activity and loan growth in FICC, partially offset by lower levels of inventory in Equities. Year-end total assets increased $5.1 billion to $817.6 billion driven by the same factors as average assets.

The return on average allocated capital was 10 percent, unchanged from the same period a year ago. For information on capital allocated to the business segments, see Business Segment Operations on page 34.

Sales and Trading Revenue

Sales and trading revenue includes unrealized and realized gains and losses on trading and other assets which are included in market making and similar activities, net interest income, and fees primarily from commissions on equity securities. Sales and trading revenue is segregated into fixed-income (government debt obligations, investment and non-investment grade corporate debt obligations, commercial MBS, residential mortgage-backed securities, collateralized loan obligations, interest rate and credit derivative contracts), currencies (interest rate and foreign exchange contracts), commodities (primarily futures, forwards, swaps and options) and equities (equity-linked derivatives and cash equity activity). The following table and related discussion present sales and trading revenue, substantially all of which is in *Global Markets*, with the remainder in *Global Banking*. In addition, the following table and related discussion also present sales and trading revenue, excluding net DVA, which is a non-GAAP financial measure. For more information on net DVA, see *Supplemental Financial Data* on page 29.

Sales and Trading Revenue (1, 2, 3)

(Dollars in millions)	2023	2022
Sales and trading revenue (2)		
Fixed-income, currencies and commodities	**$ 10,896**	$ 9,917
Equities	**6,480**	6,572
Total sales and trading revenue	**$ 17,376**	$ 16,489
Sales and trading revenue, excluding net DVA (4)		
Fixed-income, currencies and commodities	**$ 11,122**	$ 9,898
Equities	**6,490**	6,571
Total sales and trading revenue, excluding net DVA	**$ 17,612**	$ 16,469

(1) For more information on sales and trading revenue, see *Note 3 – Derivatives* to the Consolidated Financial Statements.
(2) Includes FTE adjustments of $546 million and $354 million for 2023 and 2022.
(3) Includes *Global Banking* sales and trading revenue of $654 million and $1.0 billion for 2023 and 2022.
(4) FICC and Equities sales and trading revenue, excluding net DVA, is a non-GAAP financial measure. FICC net DVA gains (losses) were $(226) million and $19 million for 2023 and 2022. Equities net DVA gains (losses) were $(10) million and $1 million for 2023 and 2022.

Including and excluding net DVA, FICC revenue increased $979 million and $1.2 billion driven by an improved trading environment for credit and mortgage products and an increase in secured financing activity. Including and excluding net DVA, Equities revenue decreased $92 million and $81 million driven by weaker trading performance in derivatives, partially offset by an increase in client financing activities.

All Other

(Dollars in millions)		2023		2022	% Change
Net interest income	$	**339**	$	117	n/m
Noninterest income (loss)		**(8,650)**		(5,479)	58 %
Total revenue, net of interest expense		**(8,311)**		(5,362)	55
Provision for credit losses		**(53)**		(172)	(69)
Noninterest expense		**4,043**		2,485	63
Loss before income taxes		**(12,301)**		(7,675)	60
Income tax benefit		**(8,350)**		(6,023)	39
Net loss	$	**(3,951)**	$	(1,652)	139
Balance Sheet					
Average					
Total loans and leases	$	**9,644**	$	12,683	(24)%
Total assets [1]		**266,794**		139,466	91
Total deposits		**57,551**		20,082	n/m
Year end					
Total loans and leases	$	**8,842**	$	10,234	(14)%
Total assets [1]		**346,356**		155,074	123
Total deposits		**92,705**		19,905	n/m

[1] In segments where the total of liabilities and equity exceeds assets, which are generally deposit-taking segments, we allocate assets from *All Other* to those segments to match liabilities (i.e., deposits) and allocated shareholders' equity. Average allocated assets were $975.9 billion and $1.1 trillion for 2023 and 2022 and year-end allocated assets were $972.9 billion and $1.0 trillion at December 31, 2023 and 2022.

n/m = not meaningful

All Other primarily consists of asset and liability management (ALM) activities, liquidating businesses and certain expenses not otherwise allocated to a business segment. ALM activities encompass interest rate and foreign currency risk management activities for which substantially all of the results are allocated to our business segments. For more information on our ALM activities, see *Note 23 – Business Segment Information* to the Consolidated Financial Statements.

The net loss in *All Other* increased $2.3 billion to $4.0 billion primarily due to lower noninterest income and higher noninterest expense, partially offset by a higher income tax benefit.

Noninterest income decreased $3.2 billion primarily due to a net charge incurred as a result of the impact of BSBY's future cessation, higher partnership losses for tax-advantaged investments and losses on sales of AFS debt securities. The announcement of BSBY's future cessation resulted in a $1.6 billion net charge due to the Corporation's determination that certain forecasted BSBY-indexed interest payments, which had been designated in cash flow hedges, were no longer expected to occur beyond November 15, 2024 as they will transition to a new reference rate. Accordingly, during the fourth quarter of 2023, the Corporation reclassified the fair value of the interest rate swaps used in the cash flow hedges related to these forecasted transactions from accumulated other comprehensive income (OCI) into noninterest income. The Corporation also recognized subsequent fair value changes of the interest rate swaps into noninterest income until they were re-designated into new cash flow hedges.

Noninterest expense increased $1.6 billion primarily due to an accrual of $2.1 billion for the estimated amount of the FDIC special assessment resulting from the closure of Silicon Valley Bank and Signature Bank, as well as higher costs related to a liquidating business activity in the current year, partially offset by higher litigation expense in the prior year.

The income tax benefit was $8.4 billion in 2023 compared to a benefit of $6.0 billion in 2022. The income tax benefit in *All Other* resulted from both periods having income tax benefit adjustments to allocate the FTE treatment of certain tax credits to *Global Banking* and *Global Markets.* The increase in the income tax benefit in 2023 was primarily due to the benefit recorded against pretax charges for the FDIC special assessment and impact of BSBY's future cessation, as well as higher income tax credits related to tax-advantaged investment activity.

Managing Risk

Risk is inherent in all our business activities. Sound risk management enables us to serve our customers and deliver for our shareholders. If not managed well, risk can result in financial loss, regulatory sanctions and penalties, and damage to our reputation, each of which may adversely impact our ability to execute our business strategies. We take a comprehensive approach to risk management with a defined Risk Framework and an articulated Risk Appetite Statement, which are approved annually by the Enterprise Risk Committee (ERC) and the Board.

The seven key types of risk faced by the Corporation are strategic, credit, market, liquidity, compliance, operational and reputational.

- Strategic risk is the risk to current or projected financial condition arising from incorrect assumptions about external or internal factors, inappropriate business plans, ineffective business strategy execution or failure to respond in a timely manner to changes in the regulatory, macroeconomic or competitive environments in the geographic locations in which we operate.
- Credit risk is the risk of loss arising from the inability or failure of a borrower or counterparty to meet its obligations.
- Market risk is the risk that changes in market conditions adversely impact the value of assets or liabilities or otherwise negatively impact earnings. Market risk is composed of price risk and interest rate risk.
- Liquidity risk is the inability to meet expected or unexpected cash flow and collateral needs while continuing to support our businesses and customers under a range of economic conditions.
- Compliance risk is the risk of legal or regulatory sanctions, material financial loss or damage to the reputation of the Corporation arising from the failure of the Corporation to comply with the requirements of applicable laws, rules and regulations and our internal policies and procedures.
- Operational risk is the risk of loss resulting from inadequate or failed internal processes or systems, people or external events.
- Reputational risk is the risk that negative perception of the Corporation may adversely impact profitability or operations.

The following sections address in more detail the specific procedures, measures and analyses of the major categories of risk.

As set forth in our Risk Framework, a culture of managing risk well is fundamental to our values and our purpose, and how we drive Responsible Growth. It requires us to focus on risk in all activities and encourages the necessary mindset and behavior to enable effective risk management and promote sound risk-taking within our risk appetite. Sustaining a culture of managing risk well throughout the organization is critical to the success of the Corporation and is a clear expectation of our executive management team and the Board.

Our Risk Framework serves as the foundation for the consistent and effective management of risks facing the Corporation. The Risk Framework sets forth roles and responsibilities for the management of risk and provides a blueprint for how the Board, through delegation of authority to committees and executive officers, establishes risk appetite and associated limits for our activities.

Executive management assesses, with Board oversight, the risk-adjusted returns of each business. Management reviews and approves the strategic and financial operating plans, as well as the capital plan and Risk Appetite Statement, and recommends them annually to the Board for approval. Our strategic plan takes into consideration return objectives and financial resources, which must align with risk capacity and risk appetite. Management sets financial objectives for each business by allocating capital and setting a target for return on capital for each business. Capital allocations are regularly evaluated as part of our overall governance processes as the businesses and the economic environment in which we operate continue to evolve. For more information regarding capital allocations, see Business Segment Operations on page 34.

The Corporation's risk appetite indicates the amount of capital, earnings or liquidity we are willing to put at risk to achieve our strategic objectives and business plans, consistent with applicable regulatory requirements. Our risk appetite provides a common framework that includes a set of measures to assist senior management and the Board in assessing the Corporation's risk profile across all risk types against our risk appetite and risk capacity. Our risk appetite is formally articulated in the Risk Appetite Statement, which includes both qualitative statements and quantitative limits.

Our overall capacity to take risk is limited; therefore, we prioritize the risks we take in order to maintain a strong and flexible financial position so we can weather challenging economic times and take advantage of organic growth opportunities. Therefore, we set objectives and targets for capital and liquidity that are intended to permit us to continue to operate in a safe and sound manner at all times, including during periods of stress. We also maintain operational risk management and operational resiliency capabilities designed to permit us to meet the expectations of our customers and clients through a range of operating conditions.

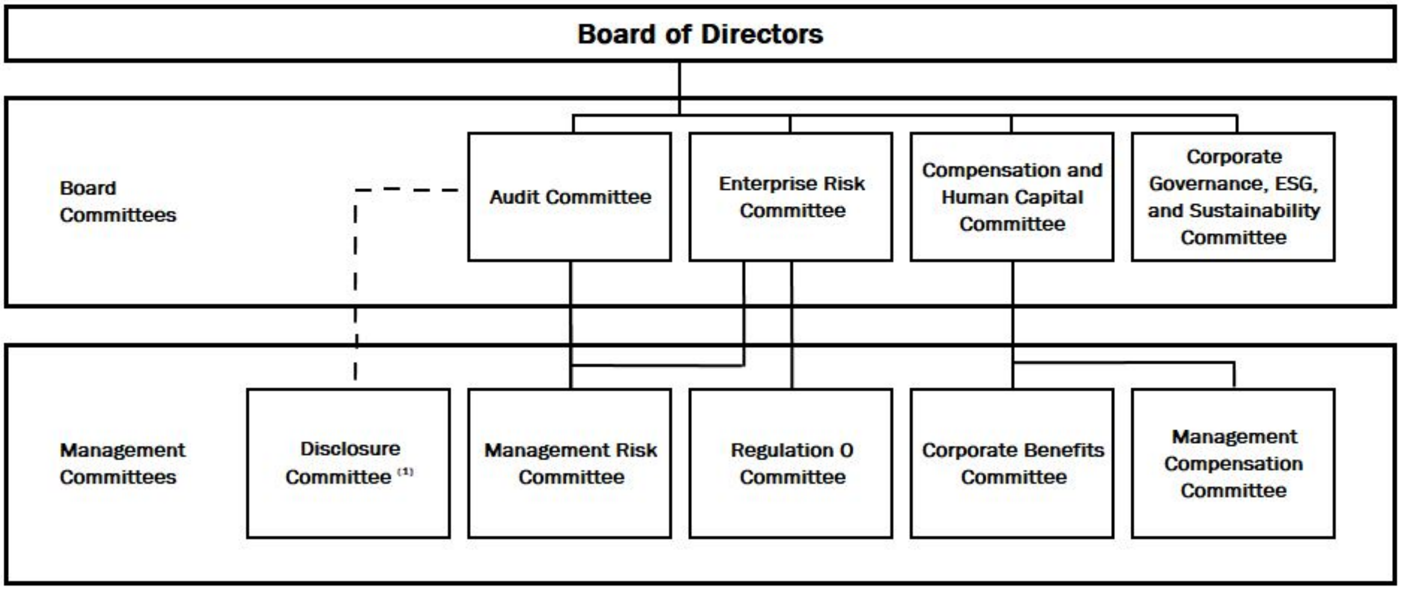
Our lines of business operate with risk limits that align with the Corporation's risk appetite. Senior management is responsible for tracking and reporting performance measurements as well as any exceptions to risk appetite limits. The Board, and its committees when appropriate, oversee financial performance, execution of the strategic and financial operating plans, adherence to risk appetite limits and the adequacy of internal controls.

For a more detailed discussion of our risk management activities, see the discussion below and pages 47 through 82.

Risk Management Governance

The Risk Framework describes delegations of authority whereby the Board and its committees may delegate authority to management-level committees or executive officers. Such delegations may authorize certain decision-making and approval functions, which may be evidenced in documents such as committee charters, job descriptions, meeting minutes and resolutions.

The chart below illustrates the interrelationship among the Board, Board committees and management committees that have the majority of risk oversight responsibilities for the Corporation.



(1) Reports to the CEO and CFO with oversight by the Audit Committee

Board of Directors and Board Committees

The Board is composed of 15 directors, all but one of whom are independent. The Board authorizes management to maintain an effective Risk Framework and oversees compliance with safe and sound banking practices. In addition, the Board or its committees conduct inquiries of, and receive reports from senior management on, risk-related matters to assess scope or resource limitations that could impede the ability of Global Risk Management (GRM) and/or Corporate Audit to execute its responsibilities. The Board committees discussed below have the principal responsibility for enterprise-wide oversight of our risk management activities. Through these activities, the Board and applicable committees are provided with information on our risk profile and oversee senior management addressing key risks we face. Other Board committees, as described below, provide additional oversight of specific risks.

Each of the committees shown on the above chart regularly reports to the Board on risk-related matters within the committee's responsibilities, which is intended to collectively provide the Board with integrated insight about our management of enterprise-wide risks.

Audit Committee

The Audit Committee oversees the qualifications, performance and independence of the Independent Registered Public Accounting Firm, the performance of our corporate audit function, the integrity of our consolidated financial statements, our compliance with legal and regulatory requirements, and makes inquiries of senior management or the Chief Audit Executive (CAE) to determine whether there are scope or resource limitations that impede the ability of Corporate Audit to execute its responsibilities. The Audit Committee is also responsible for overseeing compliance risks pursuant to the New York Stock Exchange listing standards.

Enterprise Risk Committee

The ERC oversees the Corporation's Risk Framework, risk appetite and senior management's responsibilities for the identification, measurement, monitoring and control of key risks facing the Corporation. The ERC may consult with other Board committees on risk-related matters.

Other Board Committees

Our Corporate Governance, ESG, and Sustainability Committee oversees our Board's governance processes, identifies and reviews the qualifications of potential Board members, leads Board and committee succession planning and their formal self-evaluation, and reviews our ESG activities, shareholder input and shareholder engagement process.

Our Compensation and Human Capital Committee oversees establishing, maintaining and administering our compensation programs and employee benefit plans, including approving and recommending our Chief Executive Officer's (CEO) compensation to our Board for further approval by all independent directors; reviewing and approving our executive officers' compensation, as well as compensation for non-management directors; and reviewing certain other human capital management topics, including pay equity.

Management Committees

Management committees receive their authority from the Board, a Board committee, or another management committee. Our primary management risk committee is the MRC. Subject to Board oversight, the MRC is responsible for management oversight of key risks facing the Corporation, including an integrated evaluation of risk, earnings, capital and liquidity.

Lines of Defense

We have clear ownership and accountability for managing risk across three lines of defense: Front Line Units (FLUs), GRM and Corporate Audit. We also have control functions outside of FLUs and GRM (e.g., Legal and Global Human Resources). The three lines of defense are integrated into our management-level governance structure. Each of these functional roles is further described in this section.

Executive Officers

Executive officers lead various functions representing the functional roles. Authority for functional roles may be delegated to executive officers from the Board, Board committees or management-level committees. Executive officers, in turn, may further delegate responsibilities, as appropriate, to management-level committees, management routines or individuals. Executive officers review our activities for consistency with our Risk Framework, risk appetite, and applicable strategic, capital and financial operating plans, as well as applicable policies and standards. Executive officers and other employees make decisions individually on a day-to-day basis, consistent with the authority they have been delegated. Executive officers and other employees may also serve on committees and participate in committee decisions.

Front Line Units

FLUs, which include the lines of business as well as Global Technology and Global Operations, are responsible for appropriately assessing and effectively managing all of the risks associated with their activities.

Three organizational units that include FLU activities and control function activities, but are not part of GRM are (1) the Chief Financial Officer Group; (2) the Chief Administrative Officer Group; and (3) Global Strategy and Enterprise Platforms.

Global Risk Management

GRM is part of our control functions and operates as our independent risk management function. GRM, led by the Chief Risk Officer (CRO), is responsible for independently assessing and overseeing risks within FLUs and other control functions. GRM establishes written enterprise policies and procedures outlining how aggregate risks are identified, measured, monitored and controlled.

The CRO has the stature, authority and independence needed to develop and implement a meaningful risk management framework and practices to guide the Corporation in managing risk. The CRO has unrestricted access to the Board and reports directly to both the ERC and the CEO. GRM is organized into horizontal risk teams that cover a specific risk area and vertical CRO teams that cover a particular FLU or control function. These teams work collaboratively in executing their respective duties.

Corporate Audit

Corporate Audit and the CAE maintain their independence from the FLUs, GRM and other control functions by reporting directly to the Audit Committee. The CAE administratively reports to the CEO. Corporate Audit provides independent assessment and validation through testing of key processes and controls across the Corporation. Corporate Audit includes Credit Review, which provides an independent assessment of credit lending decisions and the effectiveness of credit processes across the Corporation's credit platform through examinations and monitoring.

Risk Management Processes

The Risk Framework requires that strong risk management practices are integrated in key strategic, capital and financial planning processes and in day-to-day business processes across the Corporation, thereby ensuring risks are appropriately considered, evaluated and responded to in a timely manner. We employ an effective risk management process, referred to as Identify, Measure, Monitor and Control, as part of our daily activities.

Identify – To be effectively managed, risks must be proactively identified and well understood. Proper risk identification focuses on recognizing and understanding key risks inherent in our business activities or key risks that may arise from external factors. Each employee is expected to identify and escalate risks promptly. Risk identification is an ongoing process that incorporates input from FLUs and control functions. It is designed to be forward-looking and to capture relevant risk factors across all of our lines of business.

Measure – Once a risk is identified, it must be prioritized and accurately measured through a systematic process including qualitative statements and quantitative limits. Risk is measured at various levels, including, but not limited to, risk type, FLU and legal entity, and also on an aggregate basis. This risk measurement process helps to capture changes in our risk profile due to changes in strategic direction, concentrations, portfolio quality and the overall economic environment. Senior management considers how risk exposures might evolve under a variety of stress scenarios.

Monitor – We monitor risk levels regularly to track adherence to risk appetite, policies and standards. We also regularly update risk assessments and review risk exposures. Through our monitoring, we know our level of risk relative to limits and can take action in a timely manner. We also know when risk limits are breached and have processes to appropriately report and escalate exceptions. This includes timely requests for approval to managers and alerts to executive management, management-level committees or the Board (directly or through an appropriate committee).

Control – We establish and communicate risk limits and controls through policies, standards, procedures and processes. The limits and controls can be adjusted by senior management or the Board when conditions or risk tolerances warrant. These limits may be absolute (e.g., loan amount, trading volume, operational loss) or relative (e.g., percentage of loan book in higher-risk categories). Our FLUs are held accountable for performing within the established limits.

The formal processes used to manage risk represent a part of our overall risk management process. We instill a strong and comprehensive culture of managing risk well through communications, training, policies, procedures and organizational roles and responsibilities. Establishing a culture reflective of our purpose to help make our customers' financial lives better and delivering on Responsible Growth is also critical to effective risk management. We are committed to the highest principles of ethical and professional conduct. Conduct risk is the risk of improper actions, behaviors or practices by the Corporation, its employees or representatives that are illegal, unethical and/or contrary to our core values that could result in harm to the Corporation, our shareholders or our customers, damage the integrity of the financial markets, or negatively impact our reputation. We have established protocols and structures so that conduct risk is governed and reported across the Corporation appropriately. All employees are held accountable for adhering to the Code of Conduct, operating within our risk appetite and managing risk in their daily business activities. In addition, our performance management and compensation practices encourage responsible risk-taking that is consistent with our Risk Framework and risk appetite.

Corporation-wide Stress Testing

Integral to our Capital Planning, Financial Planning and Strategic Planning processes, we conduct capital scenario management and stress forecasting on a regular basis to better understand balance sheet, earnings and capital sensitivities to a wide range of economic and business scenarios, including economic and market conditions that are more severe than anticipated. These stress forecasts provide an understanding of the potential impacts from our risk profile on the balance sheet, earnings and capital, and serve as a key component of our capital and risk management practices. The intent of stress testing is to develop a comprehensive understanding of potential impacts of on- and off-balance sheet risks at the Corporation and certain subsidiaries and how they impact financial resiliency, which provides confidence to management, regulators and our investors.

Contingency Planning

We have developed and maintain comprehensive contingency plans that are designed to prepare us in advance to respond in the event of potential adverse economic, operational, financial or market stress conditions. These contingency plans include our Financial Contingency and Recovery Plan, which provides monitoring, escalation, actions and routines designed to enable us to increase capital and/or liquidity, access funding sources and reduce risk through consideration of potential options that include asset sales, business sales, capital or debt issuances, and other risk reducing strategies at various levels of capital or liquidity depletion during a period of stress. We also maintain a Resolution Plan to limit adverse systemic impacts that could be associated with a potential resolution of Bank of America.

Strategic Risk Management

Strategic risk is embedded in every business and is one of the major risk categories along with credit, market, liquidity, compliance, operational and reputational risks. This risk results from incorrect assumptions about external or internal factors, inappropriate business plans, ineffective business strategy execution, or failure to respond in a timely manner to changes in the regulatory, macroeconomic or competitive environments in the geographic locations in which we operate, such as competitor actions, changing customer preferences, product obsolescence and technology developments.

An aspect of strategic risk is the risk that the Corporation's capital levels are not adequate to meet minimum regulatory requirements and support execution of business activities or absorb losses from risks during normal or adverse economic and market conditions. As such, capital risk is managed in parallel to strategic risk.

We manage strategic risk through the Strategic Risk Enterprise Policy and integration into the strategic planning process, among other activities. Our strategic plan is consistent with our risk appetite, capital plan and liquidity requirements, and specifically addresses strategic risks impacting each business.

On an annual basis, the Board reviews and approves the strategic plan, capital plan, financial operating plan and Risk Appetite Statement. With oversight by the Board, senior management directs the lines of business to execute our strategic plan consistent with our core operating principles and risk appetite. The executive management team monitors business performance throughout the year and provides the Board with regular progress reports on whether strategic objectives and timelines are being met, including reports on strategic risks and if additional or alternative actions need to be considered or implemented. The regular executive reviews focus on assessing forecasted earnings and returns on capital, the current risk profile, current capital and liquidity requirements, staffing levels and changes required to support the strategic plan, stress testing results, and other qualitative factors such as market growth rates and peer analysis.

Significant strategic actions, such as capital actions, material acquisitions or divestitures, and resolution plans are reviewed and approved by the Board. At the business level, processes are in place to discuss the strategic risk implications of new, expanded or modified businesses, products or services, regulatory change and other strategic initiatives, and to provide formal review and approval where required. With oversight by the Board and the ERC, executive management performs similar analyses throughout the year, and evaluates changes to the financial forecast or the risk, capital or liquidity positions as deemed appropriate to balance and optimize achieving the targeted risk appetite, shareholder returns and maintaining the targeted financial strength. Proprietary models are used to measure the capital requirements for credit, country, market, operational and strategic risks. The allocated capital assigned to each business is based on its unique risk profile. With oversight by the Board, executive management assesses the risk-adjusted returns of each business in approving strategic and financial operating plans. The businesses use allocated capital to define business strategies, and price products and transactions.

Capital Management

The Corporation manages its capital position so that its capital is more than adequate to support its business activities and aligns with risk, risk appetite and strategic planning. Additionally, we seek to maintain safety and soundness at all times, even under adverse scenarios, take advantage of organic growth opportunities, meet obligations to creditors and counterparties, maintain ready access to financial markets, continue to serve as a credit intermediary, remain a source of strength for our subsidiaries, and satisfy current and future regulatory capital requirements. Capital management is integrated into our risk and governance processes, as capital is a key consideration in the development of our strategic plan, risk appetite and risk limits.

We conduct an Internal Capital Adequacy Assessment Process (ICAAP) on a periodic basis. The ICAAP is a forward-looking assessment of our projected capital needs and resources, incorporating earnings, balance sheet and risk forecasts under baseline and adverse economic and market conditions. We utilize periodic stress tests to assess the potential impacts to our balance sheet, earnings, regulatory capital and liquidity under a variety of stress scenarios. We perform qualitative risk assessments to identify and assess material risks not fully captured in our forecasts or stress tests. We assess the potential capital impacts of proposed changes to regulatory capital requirements. Management assesses ICAAP results and provides documented quarterly assessments of the adequacy of our capital guidelines and capital position to the Board or its committees.

We periodically review capital allocated to our businesses and allocate capital annually during the strategic and capital planning processes. For more information, see Business Segment Operations on page 34.

CCAR and Capital Planning

The Federal Reserve requires BHCs to submit a capital plan and planned capital actions on an annual basis, consistent with the rules governing the Comprehensive Capital Analysis and Review (CCAR) capital plan, which includes supervisory stress testing by the Federal Reserve. Based on 2023 stress test results, our stress capital buffer (SCB) is 2.5 percent effective October 1, 2023 through September 30, 2024.

In October 2021, the Board authorized the Corporation's $25 billion common stock repurchase program (October 2021 Authorization). Additionally, the Board authorized common stock repurchases to offset shares awarded under the Corporation's equity-based compensation plans. In September 2023, the Board modified the October 2021 Authorization, effective

October 1, 2023, to include repurchases to offset shares awarded under equity-based compensation plans when determining the remaining repurchase authority. Pursuant to the Board's authorizations, during 2023, we repurchased $4.6 billion of common stock, including repurchases to offset shares awarded under equity-based compensation plans. As of December 31, 2023, the remaining repurchase authority was approximately $12.7 billion (including repurchases to offset shares awarded under equity-based compensation plans).

The timing and amount of common stock repurchases are subject to various factors, including the Corporation's capital position, liquidity, financial performance and alternative uses of capital, stock trading price, regulatory requirements and general market conditions, and may be suspended at any time. Such repurchases may be effected through open market purchases or privately negotiated transactions, including repurchase plans that satisfy the conditions of Rule 10b5-1 of the Securities Exchange Act of 1934, as amended (Exchange Act).

Regulatory Capital

As a BHC, we are subject to regulatory capital rules, including Basel 3, issued by U.S. banking regulators. Basel 3 established minimum capital ratios and buffer requirements and outlined two methods of calculating risk-weighted assets (RWA), the Standardized approach and the Advanced approaches. The Standardized approach relies primarily on supervisory risk weights based on exposure type, and the Advanced approaches determine risk weights based on internal models.

The Corporation's depository institution subsidiaries are also subject to the Prompt Corrective Action (PCA) framework. The Corporation and its primary affiliated banking entity, BANA, are Advanced approaches institutions under Basel 3 and are required to report regulatory risk-based capital ratios and RWA under both the Standardized and Advanced approaches. The lower of the capital ratios under Standardized or Advanced approaches compared to their respective regulatory capital ratio requirements is used to assess capital adequacy, including under the PCA framework. As of December 31, 2023, the common equity tier 1 (CET1) capital, Tier 1 capital and Total capital ratios under the Standardized approach were the binding ratios.

Minimum Capital Requirements

In order to avoid restrictions on capital distributions and discretionary bonus payments to executive officers, the Corporation must meet risk-based capital ratio requirements that include a capital conservation buffer of 2.5 percent (under the Advanced approaches only), an SCB (under the Standardized approach only), plus any applicable countercyclical capital buffer and a global systemically important bank (G-SIB) surcharge. The buffers and surcharge must be comprised solely of CET1 capital. For the period from October 1, 2022 through September 30, 2023, the Corporation's minimum CET1 capital ratio requirements were 10.4 percent under the Standardized approach and 9.5 percent under the Advanced approaches. Effective October 1, 2023 through December 31, 2023, our CET1 minimum requirement was 9.5 percent under both the Standardized and Advanced approaches.

The Corporation is required to calculate its G-SIB surcharge on an annual basis under two methods and is subject to the higher of the resulting two surcharges. Method 1 is consistent with the approach prescribed by the Basel Committee's assessment methodology and is calculated using specified indicators of systemic importance. Method 2 modifies the Method 1 approach by, among other factors, including a measure of the Corporation's reliance on short-term wholesale funding. Effective January 1, 2024, the Corporation's G-SIB surcharge, which is higher under Method 2, increased 50 bps, resulting in an increase in our minimum CET1 capital ratio requirement to 10.0 percent from 9.5 percent. At December 31, 2023, the Corporation's CET1 capital ratio of 11.8 percent under the Standardized approach exceeded its CET1 capital ratio requirement as well as the new minimum requirement in place as of January 1, 2024.

The Corporation is also required to maintain a minimum supplementary leverage ratio (SLR) of 3.0 percent plus a leverage buffer of 2.0 percent in order to avoid certain restrictions on capital distributions and discretionary bonus payments to executive officers. At December 31, 2023, our insured depository institution subsidiaries exceeded their requirement to maintain a minimum 6.0 percent SLR to be considered well capitalized under the PCA framework. The numerator of the SLR is quarter-end Basel 3 Tier 1 capital. The denominator is total leverage exposure based on the daily average of the sum of on-balance sheet exposures less permitted deductions and the simple average of certain off-balance sheet exposures, as of the end of each month in a quarter.

Capital Composition and Ratios

Table 10 presents Bank of America Corporation's capital ratios and related information in accordance with Basel 3 Standardized and Advanced approaches as measured at December 31, 2023 and 2022. For the periods presented herein, the Corporation met the definition of well capitalized under current regulatory requirements.

Table 10 Bank of America Corporation Regulatory Capital under Basel 3

(Dollars in millions, except as noted)	Standardized Approach [1]	Advanced Approaches [1]	Regulatory Minimum [2]
	December 31, 2023		
Risk-based capital metrics:			
Common equity tier 1 capital	**$ 194,928**	**$ 194,928**	
Tier 1 capital	**223,323**	**223,323**	
Total capital [3]	**251,399**	**241,449**	
Risk-weighted assets (in billions)	**1,651**	**1,459**	
Common equity tier 1 capital ratio	**11.8 %**	**13.4 %**	**9.5 %**
Tier 1 capital ratio	**13.5**	**15.3**	**11.0**
Total capital ratio	**15.2**	**16.6**	**13.0**
Leverage-based metrics:			
Adjusted quarterly average assets (in billions) [4]	**$ 3,135**	**$ 3,135**	
Tier 1 leverage ratio	**7.1 %**	**7.1 %**	**4.0**
Supplementary leverage exposure (in billions)		**$ 3,676**	
Supplementary leverage ratio		**6.1 %**	**5.0**
	December 31, 2022		
Risk-based capital metrics:			
Common equity tier 1 capital	$ 180,060	$ 180,060	
Tier 1 capital	208,446	208,446	
Total capital [3]	238,773	230,916	
Risk-weighted assets (in billions)	1,605	1,411	
Common equity tier 1 capital ratio	11.2 %	12.8 %	10.4 %
Tier 1 capital ratio	13.0	14.8	11.9
Total capital ratio	14.9	16.4	13.9
Leverage-based metrics:			
Adjusted quarterly average assets (in billions) [4]	$ 2,997	$ 2,997	
Tier 1 leverage ratio	7.0 %	7.0 %	4.0
Supplementary leverage exposure (in billions)		$ 3,523	
Supplementary leverage ratio		5.9 %	5.0

(1) Capital ratios as of December 31, 2023 and 2022 are calculated using the regulatory capital rule that allows a five-year transition period related to the adoption of the current expected credit losses (CECL) accounting standard on January 1, 2020.
(2) The CET1 capital regulatory minimum is the sum of the CET1 capital ratio minimum of 4.5 percent, our G-SIB surcharge of 2.5 percent and our capital conservation buffer of 2.5 percent (under the Advanced approaches) or the SCB of 2.5 percent at December 31, 2023 and 3.4 percent at December 31, 2022 (under the Standardized approach), as applicable. The countercyclical capital buffer was zero for both periods. The SLR regulatory minimum includes a leverage buffer of 2.0 percent.
(3) Total capital under the Advanced approaches differs from the Standardized approach due to differences in the amount permitted in Tier 2 capital related to the qualifying allowance for credit losses.
(4) Reflects total average assets adjusted for certain Tier 1 capital deductions.

At December 31, 2023, CET1 capital was $194.9 billion, an increase of $14.9 billion from December 31, 2022, primarily due to earnings, partially offset by capital distributions. Tier 1 capital increased $14.9 billion primarily driven by the same factors as CET1 capital. Total capital under the Standardized approach increased $12.6 billion primarily due to the same factors driving the increase in Tier 1 capital and an increase in the adjusted allowance for credit losses included in Tier 2 capital, partially offset by a decrease in subordinated debt. RWA under the Standardized approach, which yielded the lower CET1 capital ratio at December 31, 2023, increased $46.4 billion during 2023 to $1,651 billion primarily due to higher counterparty and market risk exposures in *Global Markets* and consumer loan growth. Supplementary leverage exposure at December 31, 2023 increased $152.9 billion primarily due to higher cash held at central banks, partially offset by lower debt securities balances.

Table 11 shows the capital composition at December 31, 2023 and 2022.

Table 11 Capital Composition under Basel 3

	December 31	
(Dollars in millions)	**2023**	2022
Total common shareholders' equity	**$ 263,249**	$ 244,800
CECL transitional amount [1]	**1,254**	1,881
Goodwill, net of related deferred tax liabilities	**(68,648)**	(68,644)
Deferred tax assets arising from net operating loss and tax credit carryforwards	**(7,912)**	(7,776)
Intangibles, other than mortgage servicing rights, net of related deferred tax liabilities	**(1,496)**	(1,554)
Defined benefit pension plan net assets	**(764)**	(867)
Cumulative unrealized net (gain) loss related to changes in fair value of financial liabilities attributable to own creditworthiness, net-of-tax	**1,342**	496
Accumulated net (gain) loss on certain cash flow hedges [2]	**8,025**	11,925
Other	**(122)**	(201)
Common equity tier 1 capital	**194,928**	180,060
Qualifying preferred stock, net of issuance cost	**28,396**	28,396
Other	**(1)**	(10)
Tier 1 capital	**223,323**	208,446
Tier 2 capital instruments	**15,340**	18,751
Qualifying allowance for credit losses [3]	**12,920**	11,739
Other	**(184)**	(163)
Total capital under the Standardized approach	**251,399**	238,773
Adjustment in qualifying allowance for credit losses under the Advanced approaches [3]	**(9,950)**	(7,857)
Total capital under the Advanced approaches	**$ 241,449**	$ 230,916

(1) December 31, 2023 and 2022 include 50 percent and 75 percent of the CECL transition provision's impact as of December 31, 2021.
(2) Includes amounts in accumulated OCI related to the hedging of items that are not recognized at fair value on the Consolidated Balance Sheet.
(3) Includes the impact of transition provisions related to the CECL accounting standard.

Table 12 shows the components of RWA as measured under Basel 3 at December 31, 2023 and 2022.

Table 12 Risk-weighted Assets under Basel 3

	Standardized Approach	**Advanced Approaches**	Standardized Approach	Advanced Approaches
	December 31			
(Dollars in billions)	**2023**		2022	
Credit risk	**$ 1,580**	**$ 983**	$ 1,538	$ 939
Market risk	**71**	**71**	67	67
Operational risk	**n/a**	**361**	n/a	364
Risks related to credit valuation adjustments	**n/a**	**44**	n/a	41
Total risk-weighted assets	**$ 1,651**	**$ 1,459**	$ 1,605	$ 1,411

n/a = not applicable

Bank of America, N.A. Regulatory Capital

Table 13 presents regulatory capital information for BANA in accordance with Basel 3 Standardized and Advanced approaches as measured at December 31, 2023 and 2022. BANA met the definition of well capitalized under the PCA framework for both periods.

Table 13 Bank of America, N.A. Regulatory Capital under Basel 3

(Dollars in millions, except as noted)	Standardized Approach [1]	Advanced Approaches [1]	Regulatory Minimum [2]
	December 31, 2023		
Risk-based capital metrics:			
Common equity tier 1 capital	**$ 187,621**	**$ 187,621**	
Tier 1 capital	**187,621**	**187,621**	
Total capital [3]	**201,932**	**192,175**	
Risk-weighted assets (in billions)	**1,395**	**1,114**	
Common equity tier 1 capital ratio	**13.5 %**	**16.8 %**	**7.0 %**
Tier 1 capital ratio	**13.5**	**16.8**	**8.5**
Total capital ratio	**14.5**	**17.2**	**10.5**
Leverage-based metrics:			
Adjusted quarterly average assets (in billions) [4]	**$ 2,471**	**$ 2,471**	
Tier 1 leverage ratio	**7.6 %**	**7.6 %**	**5.0**
Supplementary leverage exposure (in billions)		**$ 2,910**	
Supplementary leverage ratio		**6.4 %**	**6.0**
	December 31, 2022		
Risk-based capital metrics:			
Common equity tier 1 capital	$ 181,089	$ 181,089	
Tier 1 capital	181,089	181,089	
Total capital [3]	194,254	186,648	
Risk-weighted assets (in billions)	1,386	1,087	
Common equity tier 1 capital ratio	13.1 %	16.7 %	7.0 %
Tier 1 capital ratio	13.1	16.7	8.5
Total capital ratio	14.0	17.2	10.5
Leverage-based metrics:			
Adjusted quarterly average assets (in billions) [4]	$ 2,358	$ 2,358	
Tier 1 leverage ratio	7.7 %	7.7 %	5.0
Supplementary leverage exposure (in billions)		$ 2,785	
Supplementary leverage ratio		6.5 %	6.0

(1) Capital ratios as of December 31, 2023 and 2022 are calculated using the regulatory capital rule that allows a five-year transition period related to the adoption of the CECL accounting standard on January 1, 2020.
(2) Risk-based capital regulatory minimums at both December 31, 2023 and 2022 are the minimum ratios under Basel 3 including a capital conservation buffer of 2.5 percent. The regulatory minimums for the leverage ratios as of both period ends are the percent required to be considered well capitalized under the PCA framework.
(3) Total capital under the Advanced approaches differs from the Standardized approach due to differences in the amount permitted in Tier 2 capital related to the qualifying allowance for credit losses.
(4) Reflects total average assets adjusted for certain Tier 1 capital deductions.

Total Loss-Absorbing Capacity Requirements

Total loss-absorbing capacity (TLAC) consists of the Corporation’s Tier 1 capital and eligible long-term debt issued directly by the Corporation. Eligible long-term debt for TLAC ratios is comprised of unsecured debt that has a remaining maturity of at least one year and satisfies additional requirements as prescribed in the TLAC final rule. As with the risk-based capital ratios and SLR, the Corporation is required to maintain TLAC ratios in excess of minimum requirements plus applicable buffers to avoid restrictions on capital distributions and discretionary bonus payments to executive officers. Table 14 presents the Corporation's TLAC and long-term debt ratios and related information as of December 31, 2023 and 2022.

Table 14 Bank of America Corporation Total Loss-Absorbing Capacity and Long-Term Debt

(Dollars in millions)	TLAC (1)	Regulatory Minimum (2)	Long-term Debt	Regulatory Minimum (3)
	December 31, 2023			
Total eligible balance	$ 479,156		$ 239,892	
Percentage of risk-weighted assets (4)	29.0 %	22.0 %	14.5 %	8.5 %
Percentage of supplementary leverage exposure	13.0	9.5	6.5	4.5
	December 31, 2022			
Total eligible balance	$ 465,451		$ 243,833	
Percentage of risk-weighted assets (4)	29.0 %	22.0 %	15.2 %	8.5 %
Percentage of supplementary leverage exposure	13.2	9.5	6.9	4.5

(1) As of December 31, 2023 and 2022, TLAC ratios are calculated using the regulatory capital rule that allows a five-year transition period related to the adoption of the CECL accounting standard on January 1, 2020.
(2) The TLAC RWA regulatory minimum consists of 18.0 percent plus a TLAC RWA buffer comprised of 2.5 percent plus the Method 1 G-SIB surcharge of 1.5 percent. The countercyclical buffer is zero for both periods. The TLAC supplementary leverage exposure regulatory minimum consists of 7.5 percent plus a 2.0 percent TLAC leverage buffer. The TLAC RWA and leverage buffers must be comprised solely of CET1 capital and Tier 1 capital, respectively.
(3) The long-term debt RWA regulatory minimum is comprised of 6.0 percent plus an additional 2.5 percent requirement based on the Corporation's Method 2 G-SIB surcharge. The long-term debt leverage exposure regulatory minimum is 4.5 percent. Effective January 1, 2024, the Corporation's G-SIB surcharge, which is higher under Method 2, increased 50 bps, resulting in an increase in our long-term debt RWA regulatory minimum requirement to 9.0 percent from 8.5 percent.
(4) The approach that yields the higher RWA is used to calculate TLAC and long-term debt ratios, which was the Standardized approach as of December 31, 2023 and 2022.

Regulatory Developments

On July 27, 2023, U.S. banking regulators issued proposed rules that would update future U.S. regulatory capital requirements. Under the capital proposal, the Advanced approaches would be replaced with a new standardized approach, referred to as the expanded risk-based approach, which would be phased in over a three-year period beginning July 1, 2025. U.S. banking regulators also issued proposed rules to revise the risk-based capital surcharge for G-SIBs, which would be effective two calendar quarters after finalization. On August 29, 2023, U.S. banking regulators issued proposed rules that would change the criteria for debt instruments included in the Corporation's eligible long-term debt and TLAC. Any final rules issued are subject to change from the current proposals. The Corporation is evaluating the potential impact of the proposed rules on its regulatory capital, eligible long-term debt and TLAC requirements.

Regulatory Capital and Securities Regulation

The Corporation's principal U.S. broker-dealer subsidiaries are BofA Securities, Inc. (BofAS) and Merrill Lynch, Pierce, Fenner & Smith Incorporated (MLPF&S). On August 13, 2023, Merrill Lynch Professional Clearing Corp. (MLPCC) merged into its immediate parent, BofAS. Prior to that date, MLPCC was a fully-guaranteed subsidiary of BofAS and provided clearing and settlement services as well as prime brokerage and arranged financing services for institutional clients. Following the merger, client services previously provided by MLPCC are now being provided by or through BofAS.

The Corporation's principal European subsidiaries undertaking broker-dealer activities are Merrill Lynch International (MLI) and BofA Securities Europe SA (BofASE).

The U.S. broker-dealer subsidiaries are subject to the net capital requirements of Rule 15c3-1 under the Exchange Act. BofAS computes its capital requirements as an alternative net capital broker-dealer under Rule 15c3-1e, and MLPF&S computes its capital requirements in accordance with the alternative standard under Rule 15c3-1. BofAS is registered as a futures commission merchant and is subject to Commodity Futures Trading Commission (CFTC) Regulation 1.17. The U.S. broker-dealer subsidiaries are also registered with the Financial Industry Regulatory Authority, Inc. (FINRA). Pursuant to FINRA Rule 4110, FINRA may impose higher net capital requirements than Rule 15c3-1 under the Exchange Act with respect to each of the broker-dealers.

BofAS provides institutional services, and in accordance with the alternative net capital requirements, is required to maintain tentative net capital in excess of $5.0 billion and net capital in excess of the greater of $1.0 billion or a certain percentage of its reserve requirement in addition to a certain percentage of securities-based swap risk margin. BofAS must also notify the SEC in the event its tentative net capital is less than $6.0 billion. BofAS is also required to hold a certain percentage of its customers' and affiliates' risk-based margin in order to meet its CFTC minimum net capital requirement. At December 31, 2023, BofAS had tentative net capital of $21.4 billion. BofAS also had regulatory net capital of $19.4 billion, which exceeded the minimum requirement of $4.6 billion.

MLPF&S provides retail services. At December 31, 2023, MLPF&S' regulatory net capital was $5.8 billion, which exceeded the minimum requirement of $134 million.

Our European broker-dealers are subject to requirements from U.S. and non-U.S. regulators. MLI, a U.K. investment firm, is regulated by the Prudential Regulation Authority and the Financial Conduct Authority and is subject to certain regulatory capital requirements. At December 31, 2023, MLI's capital resources were $33.9 billion, which exceeded the minimum Pillar 1 requirement of $11.4 billion.

BofASE, an authorized credit institution with its head office located in France, is regulated by the Autorité de Contrôle Prudentiel et de Résolution and the Autorité des Marchés Financiers, and supervised under the Single Supervisory Mechanism by the European Central Bank. At December 31, 2023, BofASE's capital resources were $9.6 billion, which exceeded the minimum Pillar 1 requirement of $3.6 billion.

In addition, MLI and BofASE became conditionally registered with the SEC as security-based swap dealers in the fourth quarter of 2021, and maintained net liquid assets at December 31, 2023 that exceeded the applicable minimum requirements under the Exchange Act.

Liquidity Risk

Funding and Liquidity Risk Management

Our primary liquidity risk management objective is to meet expected or unexpected cash flow and collateral requirements, including payments under long-term debt agreements, commitments to extend credit and customer deposit withdrawals, while continuing to support our businesses and customers under a range of economic conditions. To achieve that objective, we analyze and monitor our liquidity risk under expected and stressed conditions, maintain liquidity and access to diverse funding sources, including our stable deposit base, and seek to align liquidity-related incentives and risks. These liquidity risk management practices have allowed us to effectively manage the market stress from increased volatility due to the failure of certain financial institutions in the first half of 2023. Our practices have also allowed us to effectively manage market fluctuations from the rising interest rate environment, inflationary pressures and changes in the macroeconomic environment.

We define liquidity as readily available assets, limited to cash and high-quality, liquid, unencumbered securities that we can use to meet our contractual and contingent financial obligations as they arise. We manage our liquidity position through line-of-business and ALM activities, as well as through our legal entity funding strategy, on both a forward and current (including intraday) basis under both expected and stressed conditions. We believe that a centralized approach to funding and liquidity management enhances our ability to monitor liquidity requirements, maximizes access to funding sources, minimizes borrowing costs and facilitates timely responses to liquidity events.

The Board approves our liquidity risk policy and the Financial Contingency and Recovery Plan. The ERC establishes our liquidity risk tolerance levels. The MRC is responsible for overseeing liquidity risks and directing management to maintain exposures within the established tolerance levels. The MRC reviews and monitors our liquidity position and stress testing results, approves certain liquidity risk limits and reviews the impact of strategic decisions on our liquidity. For more information, see Managing Risk on page 44. Under this governance framework, we developed certain funding and liquidity risk management practices which include: maintaining liquidity at Bank of America Corporation (Parent) and selected subsidiaries, including our bank subsidiaries and other regulated entities; determining what amounts of liquidity are appropriate for these entities based on analysis of debt maturities and other potential cash outflows, including those that we may experience during stressed market conditions; diversifying funding sources, considering our asset profile and legal entity structure; and performing contingency planning.

NB Holdings Corporation

The Parent, which is a separate and distinct legal entity from our bank and nonbank subsidiaries, has an intercompany arrangement with our wholly-owned holding company subsidiary, NB Holdings Corporation (NB Holdings). We have transferred, and agreed to transfer, additional Parent assets not required to satisfy anticipated near-term expenditures to NB Holdings. The Parent is expected to continue to have access to the same flow of dividends, interest and other amounts of cash necessary to service its debt, pay dividends and perform other obligations as it would have had it not entered into these arrangements and transferred any assets. These arrangements support our preferred single point of entry resolution strategy, under which only the Parent would be resolved under the U.S. Bankruptcy Code.

In consideration for the transfer of assets, NB Holdings issued a subordinated note to the Parent in a principal amount equal to the value of the transferred assets. The aggregate principal amount of the note will increase by the amount of any future asset transfers. NB Holdings also provided the Parent with a committed line of credit that allows the Parent to draw funds necessary to service near-term cash needs. These arrangements support our preferred single point of entry resolution strategy, under which only the Parent would be resolved under the U.S. Bankruptcy Code. These arrangements include provisions to terminate the line of credit, forgive the subordinated note and require the Parent to transfer its remaining financial assets to NB Holdings if our projected liquidity resources deteriorate so severely that resolution of the Parent becomes imminent.

Global Liquidity Sources and Other Unencumbered Assets

We maintain liquidity available to the Corporation, including the Parent and selected subsidiaries, in the form of cash and high-quality, liquid, unencumbered securities. Our liquidity buffer, referred to as Global Liquidity Sources (GLS), is comprised of assets that are readily available to the Parent and selected subsidiaries, including holding company, bank and broker-dealer subsidiaries, even during stressed market conditions. Our cash is primarily on deposit with the Federal Reserve Bank and, to a lesser extent, central banks outside of the U.S. We limit the composition of high-quality, liquid, unencumbered securities to U.S. government securities, U.S. agency securities, U.S. agency MBS and other investment-grade securities, and a select group of non-U.S. government securities. We can obtain cash for these securities, even in stressed conditions, through repurchase agreements or outright sales. We hold our GLS in legal entities that allow us to meet the liquidity requirements of our global businesses, and we consider the impact of potential regulatory, tax, legal and other restrictions that could limit the transferability of funds among entities.

Table 15 presents average GLS for the three months ended December 31, 2023 and 2022.

Table 15 Average Global Liquidity Sources

	Three Months Ended December 31	
(Dollars in billions)	**2023**	2022
Bank entities	**$ 735**	$ 694
Nonbank and other entities [1]	**162**	174
Total Average Global Liquidity Sources	**$ 897**	$ 868

[1] Nonbank includes Parent, NB Holdings and other regulated entities.

Our bank subsidiaries' liquidity is primarily driven by deposit and lending activity, as well as securities valuation and net debt activity. Bank subsidiaries can also generate incremental liquidity by pledging a range of unencumbered loans and securities to certain FHLBs and the Federal Reserve Discount Window. The cash we could have obtained by borrowing against this pool of specifically-identified eligible assets was $312 billion and $348 billion at December 31, 2023 and 2022. We have established operational procedures to enable us to borrow against these assets, including regularly monitoring our total pool of eligible loans and securities collateral. Eligibility is defined in guidelines from the FHLBs and the Federal Reserve and is subject to change at their discretion. Due to regulatory restrictions, liquidity generated by the bank subsidiaries can generally be used only to fund obligations within the bank subsidiaries, and transfers to the Parent or nonbank subsidiaries may be subject to prior regulatory approval.

Liquidity is also held in nonbank entities, including the Parent, NB Holdings and other regulated entities. The Parent and NB Holdings liquidity is typically in the form of cash deposited at BANA, which is excluded from the liquidity at bank subsidiaries, and high-quality, liquid, unencumbered securities. Liquidity held in other regulated entities, comprised primarily of broker-dealer subsidiaries, is primarily available to meet the obligations of that entity, and transfers to the Parent or to any other subsidiary may be subject to prior regulatory approval due to regulatory restrictions and minimum requirements. Our other regulated entities also hold unencumbered investment-grade securities and equities that we believe could be used to generate additional liquidity.

Table 16 presents the composition of average GLS for the three months ended December 31, 2023 and 2022.

Table 16 Average Global Liquidity Sources Composition

(Dollars in billions)	Three Months Ended December 31 2023	2022
Cash on deposit	$ 380	$ 174
U.S. Treasury securities	197	252
U.S. agency securities, mortgage-backed securities, and other investment-grade securities	299	427
Non-U.S. government securities	21	15
Total Average Global Liquidity Sources	$ 897	$ 868

Our GLS are substantially the same in composition to what qualifies as High Quality Liquid Assets (HQLA) under the final U.S. Liquidity Coverage Ratio (LCR) rules. However, HQLA for purposes of calculating LCR is not reported at market value, but at a lower value that incorporates regulatory deductions and the exclusion of excess liquidity held at certain subsidiaries. The LCR is calculated as the amount of a financial institution's unencumbered HQLA relative to the estimated net cash outflows the institution could encounter over a 30-day period of significant liquidity stress, expressed as a percentage. Our average consolidated HQLA, on a net basis, was $590 billion and $605 billion for the three months ended December 31, 2023 and 2022. For the same periods, the average consolidated LCR was 115 percent and 120 percent. Our LCR fluctuates due to normal business flows from customer activity.

Liquidity Stress Analysis

We utilize liquidity stress analysis to assist us in determining the appropriate amounts of liquidity to maintain at the Parent and our subsidiaries to meet contractual and contingent cash outflows under a range of scenarios. The scenarios we consider and utilize incorporate market-wide and Corporation-specific events, including potential credit rating downgrades for the Parent and our subsidiaries, and more severe events including potential resolution scenarios. The scenarios are based on our historical experience, experience of distressed and failed financial institutions, regulatory guidance, and both expected and unexpected future events.

The types of potential contractual and contingent cash outflows we consider in our scenarios may include, but are not limited to, upcoming contractual maturities of unsecured debt and reductions in new debt issuances; diminished access to secured financing markets; potential deposit withdrawals; increased draws on loan commitments, liquidity facilities and letters of credit; additional collateral that counterparties could call if our credit ratings were downgraded; collateral and margin requirements arising from market value changes; and potential liquidity required to maintain businesses and finance customer activities. Changes in certain market factors, including, but not limited to, credit rating downgrades, could negatively impact potential contractual and contingent outflows and the related financial instruments, and in some cases these impacts could be material to our financial results.

We consider all sources of funds that we could access during each stress scenario and focus particularly on matching available sources with corresponding liquidity requirements by legal entity. We also use the stress modeling results to manage our asset and liability profile and establish limits and guidelines on certain funding sources and businesses.

Net Stable Funding Ratio

The Net Stable Funding Ratio (NSFR) is a liquidity requirement for large banks to maintain a minimum level of stable funding over a one-year period. The requirement is intended to support the ability of banks to lend to households and businesses in both normal and adverse economic conditions and is complementary to the LCR, which focuses on short-term liquidity risks. The U.S. NSFR applies to the Corporation on a consolidated basis and to our insured depository institutions. For the three months ended September 30, 2023 and December 31, 2023, the average consolidated NSFR was 119 percent and 120 percent.

Diversified Funding Sources

We fund our assets primarily with a mix of deposits, and secured and unsecured liabilities through a centralized, globally coordinated funding approach diversified across products, programs, markets, currencies and investor groups.

The primary benefits of our centralized funding approach include greater control, reduced funding costs, wider name recognition by investors and greater flexibility to meet the variable funding requirements of subsidiaries. Where regulations, time zone differences or other business considerations make Parent funding impractical, certain other subsidiaries may issue their own debt.

We fund a substantial portion of our lending activities through our deposits, which were $1.92 trillion and $1.93 trillion at December 31, 2023 and 2022. Deposits are primarily generated by our *Consumer Banking, GWIM* and *Global Banking* segments. These deposits are diversified by clients, product type and geography, and the majority of our U.S. deposits are insured by the FDIC.

At December 31, 2023, 50 percent of our deposits were in *Consumer Banking*, 16 percent in *GWIM* and 27 percent in *Global Banking*. As of the same period, approximately 68 percent of consumer and small business deposits and 79 percent of U.S. deposits in *Global Banking* were held by clients who have had accounts with us for 10 or more years. In addition, at December 31, 2023 and 2022, 28 percent and 34 percent of our deposits were noninterest-bearing and included operating accounts of our consumer and commercial clients.

We consider a substantial portion of our deposits to be a stable, low-cost and consistent source of funding. We believe this deposit funding is generally less sensitive to interest rate changes, market volatility or changes in our credit ratings than wholesale funding sources. Our lending activities may also be financed through secured borrowings, including credit card securitizations and securitizations with government-sponsored enterprises (GSE), the Federal Housing Administration (FHA) and private-label investors, as well as FHLB loans.

Our trading activities in other regulated entities are primarily funded on a secured basis through securities lending and repurchase agreements, and these amounts will vary based on customer activity and market conditions. We believe funding these activities in the secured financing markets is more cost-efficient and less sensitive to changes in our credit ratings than unsecured financing. Repurchase agreements are generally short-term and often overnight. Disruptions in secured financing markets for financial institutions have occurred in prior market cycles which resulted in adverse changes in terms or significant reductions in the availability of such financing. We manage the liquidity risks arising from secured funding by sourcing funding globally from a diverse group of counterparties, providing a range of securities collateral and pursuing longer durations, when appropriate. For more information on secured financing agreements, see *Note 10 – Securities Financing Agreements, Short-term Borrowings, Collateral and Restricted Cash* to the Consolidated Financial Statements.

Total long-term debt increased $26.2 billion to $302.2 billion during 2023, primarily due to debt issuances and valuation adjustments, partially offset by debt maturities and redemptions. We may, from time to time, purchase outstanding debt instruments in various transactions, depending on market conditions, liquidity and other factors. Our other regulated entities may also make markets in our debt instruments to provide liquidity for investors.

During 2023, we issued $62.0 billion of long-term debt consisting of $24.0 billion of notes issued by Bank of America Corporation, substantially all of which were TLAC compliant, $25.1 billion of notes issued by Bank of America, N.A. and $12.9 billion of other debt. During 2022, we issued $66.0 billion of long-term debt consisting of $44.2 billion of notes issued by Bank of America Corporation, substantially all of which were TLAC compliant, $10.0 billion of notes issued by Bank of America, N.A. and $11.8 billion of other debt.

During 2023, we had total long-term debt maturities and redemptions in the aggregate of $42.7 billion consisting of $25.3 billion for Bank of America Corporation, $10.5 billion for Bank of America, N.A. and $6.9 billion of other debt. During 2022, we had total long-term debt maturities and redemptions in the aggregate of $33.3 billion consisting of $19.8 billion for Bank of America Corporation, $9.9 billion for Bank of America, N.A. and $3.6 billion of other debt.

At December 31, 2023, Bank of America Corporation's senior notes of $208.4 billion included $187.7 billion of outstanding notes that are both TLAC eligible and callable at least one year before their stated maturities. Of these senior notes, $22.1 billion will be callable and become TLAC ineligible during 2024, and $22.0 billion, $21.4 billion, $25.0 billion and $19.9 billion will do so during each of 2025 through 2028, respectively, and $77.3 billion thereafter.

We issue long-term unsecured debt in a variety of maturities and currencies to achieve cost-efficient funding and to maintain an appropriate maturity profile. While the cost and availability of unsecured funding may be negatively impacted by general market conditions or by matters specific to the financial services industry or the Corporation, we seek to mitigate refinancing risk by actively managing the amount of our borrowings that we anticipate will mature within any month or quarter. We may issue unsecured debt in the form of structured notes for client purposes, certain of which qualify as TLAC-eligible debt. During 2023, we issued $15.7 billion of structured notes, which are debt obligations that pay investors returns linked to other debt or equity securities, indices, currencies or commodities. We typically hedge the returns we are obligated to pay on these liabilities with derivatives and/or investments in the underlying instruments, so that from a funding perspective, the cost is similar to our other unsecured long-term debt. We could be required to settle certain structured note obligations for cash or other securities prior to maturity under certain circumstances, which we consider for liquidity planning purposes. We believe, however, that a portion of such borrowings will remain outstanding beyond the earliest put or redemption date.

Substantially all of our senior and subordinated debt obligations contain no provisions that could trigger a requirement for an early repayment, require additional collateral support, result in changes to terms, accelerate maturity or create additional financial obligations upon an adverse change in our credit ratings, financial ratios, earnings, cash flows or stock price. For more information on long-term debt funding, including issuances and maturities and redemptions, see *Note 11 – Long-term Debt* to the Consolidated Financial Statements.

We use derivative transactions to manage the duration, interest rate and currency risks of our borrowings, considering the characteristics of the assets they are funding. For more information on our ALM activities, see Interest Rate Risk Management for the Banking Book on page 77.

Uninsured Deposits

The FDIC insures the Corporation's U.S. deposits up to $250,000 per depositor, per insured bank for each account ownership category, and various country-specific funds insure non-U.S. deposits up to specified limits. Deposits that exceed insurance limits are uninsured. At December 31, 2023, the Corporation's deposits totaled $1.92 trillion, of which total estimated uninsured U.S. and non-U.S. deposits were $606.8 billion and $116.6 billion. At December 31, 2022, the Corporation's deposits totaled $1.93 trillion, of which total estimated uninsured U.S. and non-U.S. deposits were $617.6 billion and $102.8 billion. Deposit balances exclude $14.8 billion and $15.2 billion of collateral received on certain derivative contracts that are netted against the derivative asset in the Consolidated Balance Sheet at December 31, 2023 and 2022. Estimated uninsured deposits presented in this section reflect amounts disclosed in our regulatory reports, adjusted to exclude related accrued interest and intercompany deposit balances.

Table 17 presents information about the Corporation's total estimated uninsured time deposits. For more information on our liquidity sources, see Global Liquidity Sources and Other Unencumbered Assets, and for more information on deposits, see Diversified Funding Sources in this section. For more information on contractual time deposit maturities, see *Note 9 – Deposits* to the Consolidated Financial Statements.

Table 17 Uninsured Time Deposits [(1)]

	December 31, 2023		
(Dollars in millions)	U.S.	Non-U.S.	Total
Uninsured time deposits with a maturity of:			
3 months or less	$ 8,797	$ 7,744	**$ 16,541**
Over 3 months through 6 months	6,154	1,629	**7,783**
Over 6 months through 12 months	7,885	280	**8,165**
Over 12 months	848	2,985	**3,833**
Total	**$ 23,684**	**$ 12,638**	**$ 36,322**

(1) Amounts are estimated based on the regulatory methodologies defined by each local jurisdiction.

Contingency Planning

We maintain contingency funding plans that outline our potential responses to liquidity stress events at various levels of severity. These policies and plans are based on stress scenarios and include potential funding strategies and communication and notification procedures that we would implement in the event we experienced stressed liquidity conditions. We periodically review and test the contingency funding plans to validate efficacy and assess readiness.

Our U.S. bank subsidiaries can access contingency funding through the Federal Reserve Discount Window. Certain non-U.S. subsidiaries have access to central bank facilities in the jurisdictions in which they operate. While we do not rely on these sources in our liquidity modeling, we maintain the policies, procedures and governance processes that would enable us to access these sources if necessary.

Credit Ratings

Our borrowing costs and ability to raise funds are impacted by our credit ratings. In addition, credit ratings may be important to customers or counterparties when we compete in certain markets and when we seek to engage in certain transactions, including over-the-counter (OTC) derivatives. Thus, it is our objective to maintain high-quality credit ratings, and management maintains an active dialogue with the major rating agencies.

Credit ratings and outlooks are opinions expressed by rating agencies on our creditworthiness and that of our obligations or securities, including long-term debt, short-term borrowings, preferred stock and other securities, including asset securitizations. Our credit ratings are subject to ongoing review by the rating agencies, and they consider a number of factors, including our own financial strength, performance, prospects and operations as well as factors not under our control. The rating agencies could make adjustments to our ratings at any time, and they provide no assurances that they will maintain our ratings at current levels.

Other factors that influence our credit ratings include changes to the rating agencies' methodologies for our industry or certain security types; the rating agencies' assessment of the general operating environment for financial services companies; our relative positions in the markets in which we compete; our various risk exposures and risk management policies and activities; pending litigation and other contingencies or potential tail risks; our reputation; our liquidity position, diversity of funding sources and funding costs; the current and expected level and volatility of our earnings; our capital position and capital management practices; our corporate governance; the sovereign credit ratings of the U.S. government; current or future regulatory and legislative initiatives; and the agencies' views on whether the U.S. government would provide meaningful support to the Corporation or its subsidiaries in a crisis.

On May 3, 2023, Moody's Investors Service (Moody's) upgraded its long-term senior debt ratings of the Corporation by one notch to A1 from A2, and also upgraded the long-term senior debt ratings of BANA to Aa1 from Aa2. Moody's concurrently affirmed its Prime-1 short-term ratings of the Corporation and BANA. Moody's cited the Corporation's strengthened capital, improved earnings profile and ongoing commitment to maintaining a restrained risk appetite as rationale for the upgrade. These actions concluded the review for upgrade that Moody's initiated on January 23, 2023. Separately, on November 13, 2023, Moody's placed its ratings for BANA on negative outlook, reflecting the agency's recent move to a negative outlook on its ratings for the government of the United States of America and the potentially weaker capacity for the government to support systemically important U.S. banks. The Corporation's ratings and stable outlook were not affected by this action.

On March 31, 2023, Standard & Poor's Global Ratings (S&P) affirmed the current ratings of the Corporation and its subsidiaries, while at the same time revising its rating outlook to Stable from Positive. S&P concurrently changed its outlooks on three other large U.S. bank holding companies to Stable from Positive, noting that the agency has reduced its upside expectations for bank ratings in the near term.

The ratings and outlooks from Fitch Ratings for the Corporation and its subsidiaries have not changed during 2023.

Table 18 presents the Corporation's current long-term/short-term senior debt ratings and outlooks expressed by the rating agencies.

Table 18 Senior Debt Ratings

	Moody's Investors Service			Standard & Poor's Global Ratings			Fitch Ratings		
	Long-term	Short-term	Outlook	Long-term	Short-term	Outlook	Long-term	Short-term	Outlook
Bank of America Corporation	A1	P-1	Stable	A-	A-2	Stable	AA-	F1+	Stable
Bank of America, N.A.	Aa1	P-1	Negative	A+	A-1	Stable	AA	F1+	Stable
Bank of America Europe Designated Activity Company	NR	NR	NR	A+	A-1	Stable	AA	F1+	Stable
Merrill Lynch, Pierce, Fenner & Smith Incorporated	NR	NR	NR	A+	A-1	Stable	AA	F1+	Stable
BofA Securities, Inc.	NR	NR	NR	A+	A-1	Stable	AA	F1+	Stable
Merrill Lynch International	NR	NR	NR	A+	A-1	Stable	AA	F1+	Stable
BofA Securities Europe SA	NR	NR	NR	A+	A-1	Stable	AA	F1+	Stable

NR = not rated

A reduction in certain of our credit ratings or the ratings of certain asset-backed securitizations may have a material adverse effect on our liquidity, potential loss of access to credit markets, the related cost of funds, our businesses and on certain revenues, particularly in those businesses where counterparty creditworthiness is critical. In addition, under the terms of certain OTC derivative contracts and other trading agreements, in the event of downgrades of our or our rated subsidiaries' credit ratings, the counterparties to those agreements may require us to provide additional collateral, or to terminate these contracts or agreements, which could cause us to sustain losses and/or adversely impact our liquidity. If the short-term credit ratings of our Parent, bank or broker-dealer subsidiaries were downgraded by one or more levels, the potential loss of access to short-term funding sources such as repo financing and the effect on our incremental cost of funds could be material.

While certain potential impacts are contractual and quantifiable, the full scope of the consequences of a credit rating downgrade to a financial institution is inherently uncertain, as it depends upon numerous dynamic, complex and inter-related factors and assumptions, including whether any downgrade of a company's long-term credit ratings precipitates downgrades to its short-term credit ratings, and assumptions about the potential behaviors of various customers, investors and counterparties. For more information on potential impacts of credit rating downgrades, see Liquidity Risk – Liquidity Stress Analysis on page 54.

For more information on additional collateral and termination payments that could be required in connection with certain over-the-counter derivative contracts and other trading agreements in the event of a credit rating downgrade, see *Note 3 – Derivatives* to the Consolidated Financial Statements and Item 1A. Risk Factors.

Common Stock Dividends

For a summary of our declared quarterly cash dividends on common stock during 2023 and through February 20, 2024, see *Note 13 – Shareholders' Equity* to the Consolidated Financial Statements.

Finance Subsidiary Issuers and Parent Guarantor

BofA Finance LLC, a Delaware limited liability company (BofA Finance), is a consolidated finance subsidiary of the Corporation that has issued and sold, and is expected to continue to issue and sell, its senior unsecured debt securities (Guaranteed Notes) that are fully and unconditionally guaranteed by the Corporation. The Corporation guarantees the due and punctual payment, on demand, of amounts payable on the Guaranteed Notes if not paid by BofA Finance. In addition, each of BAC Capital Trust XIII, BAC Capital Trust XIV and BAC Capital Trust XV, Delaware statutory trusts (collectively, the Trusts) is a 100 percent owned finance subsidiary of the Corporation that has issued and sold trust preferred securities (the Trust Preferred Securities) or capital securities (the Capital Securities and, together with the Guaranteed Notes and the Trust Preferred Securities, the Guaranteed Securities), as applicable, that remained outstanding at December 31, 2023. The Corporation guarantees the payment of amounts and distributions with respect to the Trust Preferred Securities and Capital Securities if not paid by the Trusts, to the extent of funds held by the Trusts. This guarantee, together with the Corporation's other obligations with respect to the Trust Preferred Securities and Capital Securities, effectively constitutes a full and unconditional guarantee of the Trusts' payment obligations on the Trust Preferred Securities or Capital Securities, as applicable. No other subsidiary of the Corporation guarantees the Guaranteed Securities.

BofA Finance and each of the Trusts are finance subsidiaries, have no independent assets, revenues or operations and are dependent upon the Corporation and/or the Corporation's other subsidiaries to meet their respective obligations under the Guaranteed Securities in the ordinary course. If holders of the Guaranteed Securities make claims on their Guaranteed Securities in a bankruptcy, resolution or similar proceeding, any recoveries on those claims will be limited to those available under the applicable guarantee by the Corporation, as described above.

The Corporation is a holding company and depends upon its subsidiaries for liquidity. Applicable laws and regulations and intercompany arrangements entered into in connection with the Corporation's resolution plan could restrict the availability of funds from subsidiaries to the Corporation, which could adversely affect the Corporation's ability to make payments under its guarantees. In addition, the obligations of the Corporation under the guarantees of the Guaranteed Securities will be structurally subordinated to all existing and future liabilities of its subsidiaries, and claimants should look only to assets of the Corporation for payments. If the Corporation, as guarantor of the Guaranteed Notes, transfers all or substantially all of its assets to one or more direct or indirect majority-owned subsidiaries, under the indenture governing the Guaranteed Notes, the subsidiary or subsidiaries will not be required to assume the Corporation's obligations under its guarantee of the Guaranteed Notes.

For more information on factors that may affect payments to holders of the Guaranteed Securities, see Liquidity Risk – NB Holdings Corporation in this section, Item 1. Business – Insolvency and the Orderly Liquidation Authority on page 6 and Part I. Item 1A. Risk Factors – Liquidity on page 9.

Representations and Warranties Obligations

For information on representations and warranties obligations in connection with the sale of mortgage loans, see *Note 12 – Commitments and Contingencies* to the Consolidated Financial Statements.

Credit Risk Management

Credit risk is the risk of loss arising from the inability or failure of a borrower or counterparty to meet its obligations. Credit risk can also arise from operational failures that result in an erroneous advance, commitment or investment of funds. We define the credit exposure to a borrower or counterparty as the loss potential arising from all product classifications including loans and leases, deposit overdrafts, derivatives, assets held-for-sale and unfunded lending commitments, which include loan commitments, letters of credit and financial guarantees. Derivative positions are recorded at fair value, and assets held-for-sale are recorded at either fair value or the lower of cost or fair value. Certain loans and unfunded commitments are accounted for under the fair value option. Credit risk for categories of assets carried at fair value is not accounted for as part of the allowance for credit losses but as part of the fair value adjustments recorded in earnings. For derivative positions, our credit risk is measured as the net cost in the event the counterparties with contracts in which we are in a gain position fail to perform under the terms of those contracts. We use the current fair value to represent credit exposure without giving consideration to future mark-to-market changes. The credit risk amounts take into consideration the effects of legally enforceable master netting agreements and cash collateral. Our consumer and commercial credit extension and review procedures encompass funded and unfunded credit exposures. For more information on derivatives and credit extension commitments, see *Note 3 – Derivatives* and *Note 12 – Commitments and Contingencies* to the Consolidated Financial Statements.

We manage credit risk based on the risk profile of the borrower or counterparty, repayment sources, the nature of underlying collateral and other support given current events, conditions and expectations. We classify our portfolios as either consumer or commercial and monitor credit risk in each as discussed below.

We refine our underwriting and credit risk management practices as well as credit standards to meet the changing economic environment. To mitigate losses and enhance customer support in our consumer businesses, we have in place collection programs and loan modification and customer assistance infrastructures. We utilize a number of actions to mitigate losses in the commercial businesses including increasing the frequency and intensity of portfolio monitoring, hedging activity and our practice of transferring management of deteriorating commercial exposures to independent special asset officers as credits enter criticized categories.

For information on our credit risk management activities, see the following: Consumer Portfolio Credit Risk Management on page 58, Commercial Portfolio Credit Risk Management on page 62, Non-U.S. Portfolio on page 68, Allowance for Credit Losses on page 71, and *Note 5 – Outstanding Loans and Leases and Allowance for Credit Losses* to the Consolidated Financial Statements. For information on the Corporation's loan modification programs, see *Note 1 – Summary of Significant Accounting Principles* and *Note 5 – Outstanding Loans and Leases and Allowance for Credit Losses* to the Consolidated Financial Statements. For more information on the Corporation's credit risks, see the Credit section within Item 1A. Risk Factors of this Annual Report on Form 10-K.

During 2023, our asset quality remained relatively stable. Our net charge-off ratio increased primarily driven by credit card loans, as delinquency trends continued to slowly increase off of historic lows. Nonperforming loans increased compared to 2022 driven by the commercial real estate office property type, while commercial reservable criticized exposure increased driven by both office as well as other industries that have been impacted by the current environment. Uncertainty remains regarding broader economic impacts as a result of inflationary pressures, elevated rates and the current geopolitical environment and could lead to adverse impacts to credit quality metrics in future periods.

Consumer Portfolio Credit Risk Management

Credit risk management for the consumer portfolio begins with initial underwriting and continues throughout a borrower's credit cycle. Statistical techniques in conjunction with experiential judgment are used in all aspects of portfolio management including underwriting, product pricing, risk appetite, setting credit limits, and establishing operating processes and metrics to quantify and balance risks and returns. Statistical models are built using detailed behavioral information from external sources, such as credit bureaus, and/or internal historical experience and are a component of our consumer credit risk management process. These models are used in part to assist in making both new and ongoing credit decisions as well as portfolio management strategies, including authorizations and line management, collection practices and strategies, and determination of the allowance for loan and lease losses and allocated capital for credit risk.

Consumer Credit Portfolio

During 2023, the U.S. unemployment rate remained relatively stable and home prices increased compared to 2022. Net charge-offs increased $1.2 billion to $3.1 billion in 2023 primarily due to late-stage delinquent credit card loans that were charged off.

The consumer allowance for loan and lease losses increased $1.3 billion during 2023 to $8.5 billion. For more information, see Allowance for Credit Losses on page 71.

For more information on our accounting policies regarding delinquencies, nonperforming status, charge-offs and loan modifications for the consumer portfolio, see *Note 1 – Summary of Significant Accounting Principles* and *Note 5 – Outstanding Loans and Leases and Allowance for Credit Losses* to the Consolidated Financial Statements.

Table 19 presents our outstanding consumer loans and leases, consumer nonperforming loans and accruing consumer loans past due 90 days or more.

Table 19 Consumer Credit Quality

	Outstandings		Nonperforming		Accruing Past Due 90 Days or More	
			December 31			
(Dollars in millions)	**2023**	2022	**2023**	2022	**2023**	2022
Residential mortgage [(1)]	**$ 228,403**	$ 229,670	**$ 2,114**	$ 2,167	**$ 252**	$ 368
Home equity	**25,527**	26,563	**450**	510	**—**	—
Credit card	**102,200**	93,421	**n/a**	n/a	**1,224**	717
Direct/Indirect consumer [(2)]	**103,468**	106,236	**148**	77	**2**	2
Other consumer	**124**	156	**—**	—	**—**	—
Consumer loans excluding loans accounted for under the fair value option	**$ 459,722**	$ 456,046	**$ 2,712**	$ 2,754	**$ 1,478**	$ 1,087
Loans accounted for under the fair value option [(3)]	**243**	339				
Total consumer loans and leases	**$ 459,965**	$ 456,385				
Percentage of outstanding consumer loans and leases [(4)]	**n/a**	n/a	**0.59 %**	0.60 %	**0.32 %**	0.24 %
Percentage of outstanding consumer loans and leases, excluding fully-insured loan portfolios [(4)]	**n/a**	n/a	**0.60**	0.62	**0.27**	0.16

(1) Residential mortgage loans accruing past due 90 days or more are fully-insured loans. At December 31, 2023 and 2022, residential mortgage included $156 million and $260 million of loans on which interest had been curtailed by the FHA, and therefore were no longer accruing interest, although principal was still insured, and $96 million and $108 million of loans on which interest was still accruing.

(2) Outstandings primarily includes auto and specialty lending loans and leases of $53.9 billion and $51.8 billion, U.S. securities-based lending loans of $46.0 billion and $50.4 billion at December 31, 2023 and 2022, and non-U.S. consumer loans of $2.8 billion and $3.0 billion at December 31, 2023 and 2022.

(3) For more information on the fair value option, see *Note 21 – Fair Value Option* to the Consolidated Financial Statements.

(4) Excludes consumer loans accounted for under the fair value option. At December 31, 2023 and 2022, $4 million and $7 million of loans accounted for under the fair value option were past due 90 days or more and not accruing interest.

n/a = not applicable

Table 20 presents net charge-offs and related ratios for consumer loans and leases.

Table 20 Consumer Net Charge-offs and Related Ratios

(Dollars in millions)	Net Charge-offs 2023	Net Charge-offs 2022	Net Charge-off Ratios [1] 2023	Net Charge-off Ratios [1] 2022
Residential mortgage	**$ 16**	$ 72	**0.01 %**	0.03 %
Home equity	**(59)**	(90)	**(0.23)**	(0.33)
Credit card	**2,561**	1,334	**2.66**	1.60
Direct/Indirect consumer	**92**	18	**0.09**	0.02
Other consumer	**480**	521	n/m	n/m
Total	**$ 3,090**	$ 1,855	**0.68**	0.42

(1) Net charge-off ratios are calculated as net charge-offs divided by average outstanding loans and leases, excluding loans accounted for under the fair value option.
n/m = not meaningful

We believe that the presentation of information adjusted to exclude the impact of the fully-insured loan portfolio and loans accounted for under the fair value option is more representative of the ongoing operations and credit quality of the business. As a result, in the following tables and discussions of the residential mortgage and home equity portfolios, we exclude loans accounted for under the fair value option and provide information that excludes the impact of the fully-insured loan portfolio in certain credit quality statistics.

Residential Mortgage

The residential mortgage portfolio made up the largest percentage of our consumer loan portfolio at 50 percent of consumer loans and leases in 2023. Approximately 51 percent of the residential mortgage portfolio was in *Consumer Banking,* 46 percent was in *GWIM* and the remaining portion was in *All Other*.

Outstanding balances in the residential mortgage portfolio decreased $1.3 billion in 2023, as paydowns and payoffs outpaced new originations.

At December 31, 2023 and 2022, the residential mortgage portfolio included $11.0 billion and $11.7 billion of outstanding fully-insured loans, of which $2.2 billion for both periods had FHA insurance, with the remainder protected by Fannie Mae long-term standby agreements.

Table 21 presents certain residential mortgage key credit statistics on both a reported basis and excluding the fully-insured loan portfolio. The following discussion presents the residential mortgage portfolio excluding the fully-insured loan portfolio.

Table 21 Residential Mortgage – Key Credit Statistics

	Reported Basis [1]		Excluding Fully-insured Loans [1]	
	December 31			
(Dollars in millions)	2023	2022	2023	2022
Outstandings	**$ 228,403**	$ 229,670	**$ 217,439**	$ 217,976
Accruing past due 30 days or more	**1,513**	1,471	**986**	844
Accruing past due 90 days or more	**252**	368	**—**	—
Nonperforming loans [2]	**2,114**	2,167	**2,114**	2,167
Percent of portfolio				
Refreshed LTV greater than 90 but less than or equal to 100	**1%**	1 %	**1%**	1 %
Refreshed LTV greater than 100	**—**	—	**—**	—
Refreshed FICO below 620	**1**	1	**1**	1

(1) Outstandings, accruing past due, nonperforming loans and percentages of portfolio exclude loans accounted for under the fair value option.
(2) Includes loans that are contractually current that have not yet demonstrated a sustained period of payment performance following a modification.

Nonperforming outstanding balances in the residential mortgage portfolio decreased $53 million in 2023 primarily due to payoffs and paydowns, returns to performing and loan sales outpacing new additions. Of the nonperforming residential mortgage loans at December 31, 2023, $1.3 billion, or 62 percent, were current on contractual payments. Excluding fully-insured loans, loans accruing past due 30 days or more increased $142 million.

Of the $217.4 billion in total residential mortgage loans outstanding at December 31, 2023, $63.1 billion, or 29 percent, of loans were originated as interest-only. The outstanding balance of interest-only residential mortgage loans that had entered the amortization period was $3.6 billion, or six percent, at December 31, 2023. Residential mortgage loans that have entered the amortization period generally experience a higher rate of early stage delinquencies and nonperforming status compared to the residential mortgage portfolio as a whole. At December 31, 2023, $80 million, or two percent, of outstanding interest-only residential mortgages that had entered the amortization period were accruing past due 30 days or more compared to $986 million, or less than one percent, for the entire residential mortgage portfolio. In addition, at December 31, 2023, $180 million, or five percent, of outstanding interest-only residential mortgage loans that had entered the amortization period were nonperforming, of which $61 million were contractually current. Loans that have yet to enter the amortization period in our interest-only residential mortgage portfolio are primarily well-collateralized loans to our wealth management clients and have an interest-only period of three years to 10 years. Substantially all of these loans that have yet to enter the amortization period will not be required to make a fully-amortizing payment until 2025 or later.

Table 22 presents outstandings, nonperforming loans and net charge-offs by certain state concentrations for the residential mortgage portfolio. In the New York area, the New York-Northern New Jersey-Long Island Metropolitan Statistical Area (MSA) made up 15 percent of outstandings at both December 31, 2023 and 2022. The Los Angeles-Long Beach-Santa Ana MSA within California represented 14 percent of outstandings at both December 31, 2023 and 2022.

Table 22 Residential Mortgage State Concentrations

	Outstandings [1]		Nonperforming [1]		Net Charge-offs	
	December 31 2023	December 31 2022	December 31 2023	December 31 2022	2023	2022
(Dollars in millions)						
California	**$ 81,085**	$ 80,878	**$ 641**	$ 656	**$ 3**	$ 37
New York	**25,975**	26,228	**320**	328	**4**	7
Florida	**15,450**	15,225	**131**	145	**(2)**	(2)
Texas	**9,361**	9,399	**88**	88	**1**	—
New Jersey	**8,671**	8,810	**97**	96	**—**	3
Other	**76,897**	77,436	**837**	854	**10**	27
Residential mortgage loans	**$ 217,439**	$ 217,976	**$ 2,114**	$ 2,167	**$ 16**	$ 72
Fully-insured loan portfolio	**10,964**	11,694				
Total residential mortgage loan portfolio	**$ 228,403**	$ 229,670				

(1) Outstandings and nonperforming loans exclude loans accounted for under the fair value option.

Home Equity

At December 31, 2023, the home equity portfolio made up six percent of the consumer portfolio and was comprised of home equity lines of credit (HELOCs), home equity loans and reverse mortgages. HELOCs generally have an initial draw period of 10 years, and after the initial draw period ends, the loans generally convert to 15- or 20-year amortizing loans. We no longer originate home equity loans or reverse mortgages.

At December 31, 2023, 84 percent of the home equity portfolio was in *Consumer Banking*, seven percent was in *All Other* and the remainder of the portfolio was primarily in *GWIM*. Outstanding balances in the home equity portfolio decreased $1.0 billion in 2023 primarily due to paydowns outpacing draws on existing lines and new originations. Of the total home equity portfolio at December 31, 2023 and 2022, $10.1 billion and $11.1 billion, or 39 percent and 42 percent, were in first-lien positions. At December 31, 2023, outstanding balances in the home equity portfolio that were in a second-lien or more junior-lien position and where we also held the first-lien loan totaled $4.4 billion, or 17 percent, of our total home equity portfolio.

Unused HELOCs totaled $45.1 billion and $42.4 billion at December 31, 2023 and 2022. The HELOC utilization rate was 35 percent and 38 percent at December 31, 2023 and 2022.

Table 23 presents certain home equity portfolio key credit statistics.

Table 23 Home Equity – Key Credit Statistics [1]

	December 31	
(Dollars in millions)	2023	2022
Outstandings	**$ 25,527**	$ 26,563
Accruing past due 30 days or more	**95**	96
Nonperforming loans [2]	**450**	510
Percent of portfolio		
Refreshed CLTV greater than 90 but less than or equal to 100	**—%**	— %
Refreshed CLTV greater than 100	**—**	—
Refreshed FICO below 620	**3**	2

(1) Outstandings, accruing past due, nonperforming loans and percentages of the portfolio exclude loans accounted for under the fair value option.
(2) Includes loans that are contractually current that have not yet demonstrated a sustained period of payment performance following a modification.

Nonperforming outstanding balances in the home equity portfolio decreased $60 million to $450 million at December 31, 2023, primarily driven by loan sales, payoffs and returns to performing status outpacing new additions. Of the nonperforming home equity loans at December 31, 2023, $256 million, or 57 percent, were current on contractual payments. In addition, $113 million, or 25 percent, were 180 days or more past due and had been written down to the estimated fair value of the collateral, less costs to sell. Accruing loans that were 30 days or more past due remained relatively unchanged in 2023 compared to 2022.

Of the $25.5 billion in total home equity portfolio outstandings at December 31, 2023, as shown in Table 23, 11 percent require interest-only payments. The outstanding balance of HELOCs that had reached the end of their draw period and entered the amortization period was $4.0 billion at December 31, 2023. The HELOCs that have entered the amortization period have experienced a higher percentage of early stage delinquencies and nonperforming status when compared to the HELOC portfolio as a whole. At December 31, 2023, $41 million, or one percent, of outstanding HELOCs that had entered the amortization period were accruing past due 30 days or more. In addition, at December 31, 2023, $283 million, or seven percent, were nonperforming.

For our interest-only HELOC portfolio, we do not actively track how many of our home equity customers pay only the minimum amount due on their home equity loans and lines; however, we can infer some of this information through a review of our HELOC portfolio that we service and is still in its revolving period. During 2023, 13 percent of these customers with an outstanding balance did not pay any principal on their HELOCs.

Table 24 presents outstandings, nonperforming balances and net recoveries by certain state concentrations for the home equity portfolio. In the New York area, the New York-Northern New Jersey-Long Island MSA made up 11 percent and 12 percent of the outstanding home equity portfolio at December 31, 2023 and 2022. The Los Angeles-Long Beach-Santa Ana MSA within California made up 10 percent and 11 percent of the outstanding home equity portfolio at December 31, 2023 and 2022.

Table 24 Home Equity State Concentrations

	Outstandings [(1)]		Nonperforming [(1)]		Net Charge-offs	
	December 31					
(Dollars in millions)	**2023**	2022	**2023**	2022	**2023**	2022
California	**$ 6,966**	$ 7,406	**$ 109**	$ 119	**$ (6)**	$ (20)
Florida	**2,576**	2,743	**53**	63	**(12)**	(21)
New Jersey	**1,870**	2,047	**46**	53	**(5)**	(3)
New York	**1,590**	1,806	**71**	80	**(10)**	(4)
Texas	**1,410**	1,284	**16**	14	**—**	—
Other	**11,115**	11,277	**155**	181	**(26)**	(42)
Total home equity loan portfolio	**$ 25,527**	$ 26,563	**$ 450**	$ 510	**$ (59)**	$ (90)

(1) Outstandings and nonperforming loans exclude loans accounted for under the fair value option.

Credit Card

At December 31, 2023, 97 percent of the credit card portfolio was managed in *Consumer Banking* with the remainder in *GWIM*. Outstandings in the credit card portfolio increased $8.8 billion during 2023 to $102.2 billion as purchase volume and card transfers more than offset payments. Net charge-offs increased $1.2 billion to $2.6 billion in 2023 compared to 2022, primarily due to late-stage delinquent credit card loans that were charged off. Credit card loans 30 days or more past due and still accruing interest increased $914 million, and 90 days or more past due and still accruing interest increased $507 million at December 31, 2023.

Unused lines of credit for credit card increased to $390.2 billion at December 31, 2023 from $370.1 billion at December 31, 2022.

Table 25 presents certain state concentrations for the credit card portfolio.

Table 25 Credit Card State Concentrations

	Outstandings		Accruing Past Due 90 Days or More		Net Charge-offs	
	December 31					
(Dollars in millions)	**2023**	2022	**2023**	2022	**2023**	2022
California	**$ 16,952**	$ 15,363	**$ 216**	$ 126	**$ 457**	$ 232
Florida	**10,521**	9,512	**168**	100	**343**	183
Texas	**8,978**	8,125	**125**	72	**245**	123
New York	**5,788**	5,381	**84**	56	**197**	99
Washington	**5,352**	4,844	**41**	21	**77**	36
Other	**54,609**	50,196	**590**	342	**1,242**	661
Total credit card portfolio	**$ 102,200**	$ 93,421	**$ 1,224**	$ 717	**$ 2,561**	$ 1,334

Direct/Indirect Consumer

At December 31, 2023, 52 percent of the direct/indirect portfolio was included in *Consumer Banking* (consumer auto and recreational vehicle lending) and 48 percent was included in *GWIM* (principally securities-based lending loans). Outstandings in the direct/indirect portfolio decreased $2.8 billion in 2023 to $103.5 billion driven by declines in securities-based lending stemming from higher paydown activity due to higher interest rates, partially offset by growth in our auto portfolio.

Table 26 presents certain state concentrations for the direct/indirect consumer loan portfolio.

Table 26 Direct/Indirect State Concentrations

	Outstandings		Nonperforming		Net Charge-offs	
	December 31					
(Dollars in millions)	**2023**	2022	**2023**	2022	**2023**	2022
California	**$ 15,416**	$ 15,516	**$ 27**	$ 12	**$ 21**	$ 6
Florida	**13,550**	13,783	**18**	10	**14**	4
Texas	**9,668**	9,837	**14**	9	**12**	3
New York	**7,335**	7,891	**11**	5	**6**	2
New Jersey	**4,376**	4,456	**5**	3	**2**	1
Other	**53,123**	54,753	**73**	38	**37**	2
Total direct/indirect loan portfolio	**$ 103,468**	$ 106,236	**$ 148**	$ 77	**$ 92**	$ 18

Other Consumer

Other consumer primarily consists of deposit overdraft balances. Net charge-offs decreased $41 million in 2023 to $480 million, primarily driven by lower overdraft losses.

Nonperforming Consumer Loans, Leases and Foreclosed Properties Activity

Table 27 presents nonperforming consumer loans, leases and foreclosed properties activity during 2023 and 2022. During 2023, nonperforming consumer loans decreased $42 million to $2.7 billion.

At December 31, 2023, $531 million, or 20 percent, of nonperforming loans were 180 days or more past due and had been written down to their estimated property value less costs to sell. In addition, at December 31, 2023, $1.6 billion, or 60 percent, of nonperforming consumer loans were current and classified as nonperforming loans in accordance with applicable policies.

Foreclosed properties decreased $18 million in 2023 to $103 million.

Table 27 Nonperforming Consumer Loans, Leases and Foreclosed Properties Activity

(Dollars in millions)	2023	2022
Nonperforming loans and leases, January 1	**$ 2,754**	$ 2,989
Additions	**1,055**	1,453
Reductions:		
Paydowns and payoffs	**(480)**	(535)
Sales	**(63)**	(402)
Returns to performing status [(1)]	**(475)**	(661)
Charge-offs	**(53)**	(56)
Transfers to foreclosed properties	**(26)**	(34)
Total net reductions to nonperforming loans and leases	**(42)**	(235)
Total nonperforming loans and leases, December 31	**2,712**	2,754
Foreclosed properties, December 31	**103**	121
Nonperforming consumer loans, leases and foreclosed properties, December 31 [(2)]	**$ 2,815**	$ 2,875
Nonperforming consumer loans and leases as a percentage of outstanding consumer loans and leases [(3)]	**0.59 %**	0.60 %
Nonperforming consumer loans, leases and foreclosed properties as a percentage of outstanding consumer loans, leases and foreclosed properties [(3)]	**0.61**	0.63

(1) Consumer loans may be returned to performing status when all principal and interest is current and full repayment of the remaining contractual principal and interest is expected, or when the loan otherwise becomes well-secured and is in the process of collection.
(2) Includes repossessed non-real estate assets of $20 million and $0 at December 31, 2023 and 2022.
(3) Outstanding consumer loans and leases exclude loans accounted for under the fair value option.

Commercial Portfolio Credit Risk Management

Credit risk management for the commercial portfolio begins with an assessment of the credit risk profile of the borrower or counterparty based on an analysis of its financial position. As part of the overall credit risk assessment, our commercial credit exposures are assigned a risk rating and are subject to approval based on defined credit approval standards. Subsequent to loan origination, risk ratings are monitored on an ongoing basis, and if necessary, adjusted to reflect changes in the financial condition, cash flow, risk profile or outlook of a borrower or counterparty. In making credit decisions, we consider risk rating, collateral, country, industry and single-name concentration limits while also balancing these considerations with the total borrower or counterparty relationship. We use a variety of tools to continuously monitor the ability of a borrower or counterparty to perform under its obligations. We use risk rating aggregations to measure and evaluate concentrations within portfolios. In addition, risk ratings are a factor in determining the level of allocated capital and the allowance for credit losses.

As part of our ongoing risk mitigation initiatives, we attempt to work with clients experiencing financial difficulty to modify their loans to terms that better align with their current ability to pay. For more information on our accounting policies regarding delinquencies, nonperforming status and net charge-offs for the commercial portfolio, see *Note 1 – Summary of Significant Accounting Principles* to the Consolidated Financial Statements.

Management of Commercial Credit Risk Concentrations

Commercial credit risk is evaluated and managed with the goal that concentrations of credit exposure continue to be aligned with our risk appetite. We review, measure and manage concentrations of credit exposure by industry, product, geography, customer relationship and loan size. We also review, measure and manage commercial real estate loans by geographic location and property type. In addition, within our non-U.S. portfolio, we evaluate exposures by region and by country. Tables 32, 34 and 37 summarize our concentrations. We also utilize syndications of exposure to third parties, loan sales, hedging and other risk mitigation techniques to manage the size and risk profile of the commercial credit portfolio. For more information on our industry concentrations, see Table 34 and Commercial Portfolio Credit Risk Management – Industry Concentrations on page 66.

We account for certain large corporate loans and loan commitments, including issued but unfunded letters of credit which are considered utilized for credit risk management purposes, that exceed our single-name credit risk concentration guidelines under the fair value option. Lending commitments, both funded and unfunded, are actively managed and monitored, and as appropriate, credit risk for these lending relationships may be mitigated through the use of credit derivatives, with our credit view and market perspectives determining the size and timing of the hedging activity. In addition, we purchase credit protection to cover the funded portion as well as the unfunded portion of certain other credit exposures. To lessen the cost of obtaining our desired credit protection levels, credit exposure may be added within an industry, borrower or counterparty group by selling protection. These credit derivatives do not meet the requirements for treatment as accounting hedges. They are carried at fair value with changes in fair value recorded in other income.

In addition, we are a member of various securities and derivative exchanges and clearinghouses, both in the U.S. and other countries. As a member, we may be required to pay a pro-rata share of the losses incurred by some of these organizations as a result of another member default and under other loss scenarios. For more information, see *Note 12 – Commitments and Contingencies* to the Consolidated Financial Statements.

Commercial Credit Portfolio

Outstanding commercial loans and leases increased $4.4 billion during 2023 due to growth in commercial real estate, primarily in *Global Banking,* and U.S. small business commercial. During 2023, commercial credit quality deteriorated as nonperforming commercial loans and reservable criticized utilized exposure increased primarily driven by the commercial real estate office property type; however, the commercial net charge-off ratio of 0.12 percent during 2023 remained low.

With the exception of the office property type, which is further discussed in the Commercial Real Estate section herein, credit quality of commercial real estate borrowers has remained relatively stable since December 31, 2022; however, we are closely monitoring emerging trends and borrower performance in the increased rate environment and challenging capital markets. Recent demand for office space has been stagnant, and future demand for office space continues to be uncertain as companies evaluate space needs with employment models that utilize a mix of remote and conventional office use.

The commercial allowance for loan and lease losses decreased $623 million during 2023 to $4.8 billion, primarily driven by improved macroeconomic conditions. For more information, see Allowance for Credit Losses on page 71.

Total commercial utilized credit exposure decreased $8.6 billion during 2023 to $696.3 billion primarily driven by lower derivative assets. The utilization rate for loans and leases, standby letters of credit (SBLCs) and financial guarantees, and commercial letters of credit, in the aggregate, was 55 percent and 56 percent at December 31, 2023 and 2022.

Table 28 presents commercial credit exposure by type for utilized, unfunded and total binding committed credit exposure. Commercial utilized credit exposure includes SBLCs and financial guarantees and commercial letters of credit that have been issued and for which we are legally bound to advance funds under prescribed conditions during a specified time period, and excludes exposure related to trading account assets. Although funds have not yet been advanced, these exposure types are considered utilized for credit risk management purposes.

Table 28 Commercial Credit Exposure by Type

	Commercial Utilized (1)		Commercial Unfunded (2, 3, 4)		Total Commercial Committed	
	December 31					
(Dollars in millions)	**2023**	2022	**2023**	2022	**2023**	2022
Loans and leases	**$ 593,767**	$ 589,362	**$ 507,641**	$ 487,772	**$ 1,101,408**	$ 1,077,134
Derivative assets (5)	**39,323**	48,642	**—**	—	**39,323**	48,642
Standby letters of credit and financial guarantees	**31,348**	33,376	**1,953**	1,266	**33,301**	34,642
Debt securities and other investments	**20,422**	20,195	**3,083**	2,551	**23,505**	22,746
Loans held-for-sale	**4,338**	6,112	**4,904**	3,729	**9,242**	9,841
Operating leases	**5,312**	5,509	**—**	—	**5,312**	5,509
Commercial letters of credit	**943**	973	**232**	28	**1,175**	1,001
Other	**846**	698	**—**	—	**846**	698
Total	**$ 696,299**	$ 704,867	**$ 517,813**	$ 495,346	**$ 1,214,112**	$ 1,200,213

(1) Commercial utilized exposure includes loans of $3.3 billion and $5.4 billion accounted for under the fair value option at December 31, 2023 and 2022.
(2) Commercial unfunded exposure includes commitments accounted for under the fair value option with a notional amount of $2.6 billion and $3.0 billion at December 31, 2023 and 2022.
(3) Excludes unused business card lines, which are not legally binding.
(4) Includes the notional amount of unfunded legally binding lending commitments, net of amounts distributed (i.e., syndicated or participated) to other financial institutions. The distributed amounts were $10.3 billion and $10.4 billion at December 31, 2023 and 2022.
(5) Derivative assets are carried at fair value, reflect the effects of legally enforceable master netting agreements and have been reduced by cash collateral of $29.4 billion and $33.8 billion at December 31, 2023 and 2022. Not reflected in utilized and committed exposure is additional non-cash derivative collateral held of $56.1 billion and $51.6 billion at December 31, 2023 and 2022, which consists primarily of other marketable securities.

Nonperforming commercial loans increased $1.7 billion during 2023, primarily in commercial real estate. Table 29 presents our commercial loans and leases portfolio and related credit quality information at December 31, 2023 and 2022.

Table 29 Commercial Credit Quality

(Dollars in millions)	Outstandings 2023	Outstandings 2022	Nonperforming 2023	Nonperforming 2022	Accruing Past Due 90 Days or More 2023	Accruing Past Due 90 Days or More 2022
	December 31					
Commercial and industrial:						
U.S. commercial	**$ 358,931**	$ 358,481	**$ 636**	$ 553	**$ 51**	$ 190
Non-U.S. commercial	**124,581**	124,479	**175**	212	**4**	25
Total commercial and industrial	**483,512**	482,960	**811**	765	**55**	215
Commercial real estate	**72,878**	69,766	**1,927**	271	**32**	46
Commercial lease financing	**14,854**	13,644	**19**	4	**7**	8
	571,244	566,370	**2,757**	1,040	**94**	269
U.S. small business commercial [1]	**19,197**	17,560	**16**	14	**184**	355
Commercial loans excluding loans accounted for under the fair value option	**$ 590,441**	$ 583,930	**$ 2,773**	$ 1,054	**$ 278**	$ 624
Loans accounted for under the fair value option [2]	**3,326**	5,432				
Total commercial loans and leases	**$ 593,767**	$ 589,362				

(1) Includes card-related products.
(2) Commercial loans accounted for under the fair value option includes U.S. commercial of $2.2 billion and $2.9 billion and non-U.S. commercial of $1.2 billion and $2.5 billion at December 31, 2023 and 2022. For more information on the fair value option, see *Note 21 – Fair Value Option* to the Consolidated Financial Statements.

Table 30 presents net charge-offs and related ratios for our commercial loans and leases for 2023 and 2022.

Table 30 Commercial Net Charge-offs and Related Ratios

(Dollars in millions)	Net Charge-offs 2023	Net Charge-offs 2022	Net Charge-off Ratios [1] 2023	Net Charge-off Ratios [1] 2022
Commercial and industrial:				
U.S. commercial	**$ 124**	$ 71	**0.03 %**	0.02%
Non-U.S. commercial	**19**	21	**0.02**	0.02
Total commercial and industrial	**143**	92	**0.03**	0.02
Commercial real estate	**245**	66	**0.34**	0.10
Commercial lease financing	**2**	5	**0.02**	0.03
	390	163	**0.07**	0.03
U.S. small business commercial	**319**	154	**1.71**	0.86
Total commercial	**$ 709**	$ 317	**0.12**	0.06

(1) Net charge-off ratios are calculated as net charge-offs divided by average outstanding loans and leases, excluding loans accounted for under the fair value option.

Table 31 presents commercial reservable criticized utilized exposure by loan type. Criticized exposure corresponds to the Special Mention, Substandard and Doubtful asset categories as defined by regulatory authorities. Total commercial reservable criticized utilized exposure increased $4.0 billion during 2023 driven by the commercial real estate office property type and U.S. commercial, partially offset by non-U.S. commercial. At December 31, 2023 and 2022, 89 percent and 88 percent of commercial reservable criticized utilized exposure was secured.

Table 31 Commercial Reservable Criticized Utilized Exposure [1, 2]

(Dollars in millions)	December 31 2023		2022	
Commercial and industrial:				
U.S. commercial	**$ 12,006**	**3.12 %**	$ 10,724	2.78%
Non-U.S. commercial	**1,787**	**1.37**	2,665	2.04
Total commercial and industrial	**13,793**	**2.68**	13,389	2.59
Commercial real estate	**8,749**	**11.80**	5,201	7.30
Commercial lease financing	**166**	**1.12**	240	1.76
	22,708	**3.76**	18,830	3.13
U.S. small business commercial	**592**	**3.08**	444	2.53
Total commercial reservable criticized utilized exposure	**$ 23,300**	**3.74**	$ 19,274	3.12

(1) Total commercial reservable criticized utilized exposure includes loans and leases of $22.5 billion and $18.5 billion and commercial letters of credit of $795 million and $817 million at December 31, 2023 and 2022.
(2) Percentages are calculated as commercial reservable criticized utilized exposure divided by total commercial reservable utilized exposure for each exposure category.

Commercial and Industrial

Commercial and industrial loans include U.S. commercial and non-U.S. commercial portfolios.

U.S. Commercial

At December 31, 2023, 62 percent of the U.S. commercial loan portfolio, excluding small business, was managed in *Global Banking,* 22 percent in *Global Markets*, 14 percent in *GWIM* (loans that provide financing for asset purchases, business investments and other liquidity needs for high net worth clients) and the remainder primarily in *Consumer Banking*. U.S. commercial loans remained largely unchanged during 2023. Reservable criticized utilized exposure increased $1.3 billion, or 12 percent, driven by a broad range of industries.

Non-U.S. Commercial

At December 31, 2023, 62 percent of the non-U.S. commercial loan portfolio was managed in *Global Banking and* 38 percent in *Global Markets.* Non-U.S. commercial loans remained largely unchanged during 2023. Reservable criticized utilized exposure decreased $878 million, or 33 percent, due to upgrades and sales of Russian exposure. For information on the non-U.S. commercial portfolio, see Non-U.S. Portfolio on page 68.

Commercial Real Estate

Commercial real estate primarily includes commercial loans secured by non-owner-occupied real estate and is dependent on the sale or lease of the real estate as the primary source of repayment. Outstanding loans increased $3.1 billion, or four percent, during 2023 to $72.9 billion with increases across multiple property types. The commercial real estate portfolio is primarily managed in *Global Banking* and consists of loans made primarily to public and private developers, and commercial real estate firms. The portfolio remains diversified across property types and geographic regions. California represented the largest state concentration at 20 percent and 19 percent of commercial real estate at December 31, 2023 and 2022.

Reservable criticized utilized exposure increased $3.5 billion, or 68 percent, during 2023, primarily driven by office loans. Office loans represented the largest property type concentration at 25 percent of the commercial real estate portfolio at December 31, 2023, but only represented approximately two percent of total loans for the Corporation. This property type is roughly 75 percent Class A and had an origination loan-to-value of approximately 55 percent. Although we have seen collateral value declines in this property type, the majority of these loans remained adequately secured as of December 31, 2023.

Reservable criticized exposure for the office property type was $5.5 billion at December 31, 2023, and approximately $7.6 billion of office loans are scheduled to mature by the end of 2024.

During 2023 and 2022, we continued to see relatively low default rates. We use a number of proactive risk mitigation initiatives to reduce adversely rated exposure in the commercial real estate portfolio, including transfers of deteriorating exposures for management by independent special asset officers and the pursuit of loan restructurings or asset sales to achieve the best results for our customers and the Corporation.

Table 32 presents outstanding commercial real estate loans by geographic region, based on the geographic location of the collateral, and by property type.

Table 32 Outstanding Commercial Real Estate Loans

	December 31	
(Dollars in millions)	2023	2022
By Geographic Region		
Northeast	**$ 15,920**	$ 15,601
California	**14,551**	13,360
Southwest	**9,318**	8,723
Southeast	**8,368**	7,713
Florida	**4,986**	5,374
Illinois	**3,361**	3,327
Midwest	**3,149**	3,419
Midsouth	**2,785**	2,716
Northwest	**2,095**	1,959
Non-U.S.	**6,052**	5,518
Other	**2,293**	2,056
Total outstanding commercial real estate loans	**$ 72,878**	$ 69,766
By Property Type		
Non-residential		
Office	**$ 17,976**	$ 18,230
Industrial / Warehouse	**14,746**	13,775
Multi-family rental	**10,606**	10,412
Shopping centers / Retail	**5,756**	5,830
Hotel / Motels	**5,665**	5,696
Multi-use	**2,681**	2,403
Other	**14,201**	12,241
Total non-residential	**71,631**	68,587
Residential	**1,247**	1,179
Total outstanding commercial real estate loans	**$ 72,878**	$ 69,766

U.S. Small Business Commercial

The U.S. small business commercial loan portfolio is comprised of small business card loans and small business loans primarily managed in *Consumer Banking,* and included $329 million and $1.0 billion of Paycheck Protection Program (PPP) loans outstanding at December 31, 2023 and 2022. PPP loans decreased $679 million primarily due to repayment of the loans by the Small Business Administration (SBA) under the terms of the program. Excluding PPP, credit card-related products were 54 percent and 53 percent of the U.S. small business commercial portfolio at December 31, 2023 and 2022 and represented 99 percent of the net charge-offs compared to 100 percent for 2022. Accruing past due 90 days or more decreased $171 million in 2023 driven by the repayment of PPP loans, which are fully guaranteed by the SBA.

Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity

Table 33 presents the nonperforming commercial loans, leases and foreclosed properties activity during 2023 and 2022. Nonperforming loans do not include loans accounted for under the fair value option. During 2023, nonperforming commercial loans and leases increased $1.7 billion to $2.8 billion. At December 31, 2023, 96 percent of commercial nonperforming loans, leases and foreclosed properties were secured, and 62 percent were contractually current. Commercial nonperforming loans were carried at 89 percent of their unpaid principal balance, as the carrying value of these loans has been reduced to the estimated collateral value less costs to sell.

Table 33 Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity [1, 2]

(Dollars in millions)	2023	2022
Nonperforming loans and leases, January 1	**$ 1,054**	$ 1,578
Additions	**2,863**	952
Reductions:		
Paydowns	**(517)**	(825)
Sales	**(4)**	(57)
Returns to performing status [3]	**(106)**	(334)
Charge-offs	**(428)**	(221)
Transfers to foreclosed properties	**(23)**	—
Transfers to loans held-for-sale	**(66)**	(39)
Total net additions / (reductions) to nonperforming loans and leases	**1,719**	(524)
Total nonperforming loans and leases, December 31	**2,773**	1,054
Foreclosed properties, December 31	**42**	49
Nonperforming commercial loans, leases and foreclosed properties, December 31	**$ 2,815**	$ 1,103
Nonperforming commercial loans and leases as a percentage of outstanding commercial loans and leases [4]	**0.47 %**	0.18 %
Nonperforming commercial loans, leases and foreclosed properties as a percentage of outstanding commercial loans, leases and foreclosed properties [4]	**0.48**	0.19

(1) Balances do not include nonperforming loans held-for-sale of $161 million and $219 million at December 31, 2023 and 2022.
(2) Includes U.S. small business commercial activity. Small business card loans are excluded as they are not classified as nonperforming.
(3) Commercial loans and leases may be returned to performing status when all principal and interest is current and full repayment of the remaining contractual principal and interest is expected, when the loan otherwise becomes well-secured and is in the process of collection, or when a modified loan demonstrates a sustained period of payment performance.
(4) Outstanding commercial loans exclude loans accounted for under the fair value option.

Industry Concentrations

Table 34 presents commercial committed and utilized credit exposure by industry. For information on net notional credit protection purchased to hedge funded and unfunded exposures for which we elected the fair value option, as well as certain other credit exposures, see Commercial Portfolio Credit Risk Management – Risk Mitigation.

Commercial credit exposure is diversified across a broad range of industries. Total commercial committed exposure increased $13.9 billion during 2023 to $1.2 trillion. The increase in commercial committed exposure was concentrated in Capital goods, Finance companies and Asset managers and funds.

Industry limits are used internally to manage industry concentrations and are based on committed exposure that is determined on an industry-by-industry basis. A risk management framework is in place to set and approve industry limits as well as to provide ongoing monitoring.

Asset managers and funds, our largest industry concentration with committed exposure of $169.3 billion, increased $4.2 billion, primarily driven by exposure to the Capital markets industry group during 2023.

Real estate, our second largest industry concentration with committed exposure of $100.3 billion remained relatively unchanged during 2023. For more information on the commercial real estate and related portfolios, see Commercial Portfolio Credit Risk Management – Commercial Real Estate on page 65.

Capital goods, our third largest industry concentration with committed exposure of $97.0 billion, increased $9.7 billion, or 11 percent, during 2023. The increase in committed exposure occurred primarily as a result of increases in Trading companies and distributors as well as Machinery, partially offset by a decrease in Industrial conglomerates.

The impact of various macroeconomic challenges, including geopolitical tensions, inflationary pressures and elevated interest rates, may lead to uncertainty in the U.S. and global economies, and may adversely impact a number of industries. We continue to monitor all industries, particularly higher risk industries that are experiencing or could experience a more significant impact to their financial condition.

Table 34 Commercial Credit Exposure by Industry [1]

(Dollars in millions)	Commercial Utilized 2023	Commercial Utilized 2022	Total Commercial Committed [2] 2023	Total Commercial Committed [2] 2022
	December 31			
Asset managers and funds	$ **103,138**	$ 106,842	$ **169,318**	$ 165,087
Real estate [3]	**73,150**	72,180	**100,269**	99,722
Capital goods	**49,698**	45,580	**97,044**	87,314
Finance companies	**62,906**	55,248	**89,119**	79,546
Healthcare equipment and services	**35,037**	33,554	**61,766**	58,761
Materials	**25,223**	26,304	**55,296**	55,589
Retailing	**24,561**	24,785	**54,523**	53,714
Food, beverage and tobacco	**23,865**	23,232	**49,426**	47,486
Consumer services	**27,355**	26,980	**49,105**	47,372
Government and public education	**31,051**	34,861	**45,873**	48,134
Individuals and trusts	**32,481**	34,897	**43,938**	45,572
Commercial services and supplies	**22,642**	23,628	**41,473**	41,596
Utilities	**18,610**	20,292	**39,481**	40,164
Energy	**12,450**	15,132	**36,996**	36,043
Transportation	**24,200**	22,273	**36,267**	33,858
Technology hardware and equipment	**11,951**	11,441	**29,160**	29,825
Global commercial banks	**22,749**	27,217	**25,684**	29,293
Media	**13,033**	14,781	**24,908**	28,216
Vehicle dealers	**16,283**	12,909	**22,570**	20,638
Software and services	**9,830**	12,961	**22,381**	25,633
Pharmaceuticals and biotechnology	**6,852**	7,547	**22,169**	26,208
Consumer durables and apparel	**9,184**	10,009	**20,732**	21,389
Insurance	**9,371**	10,224	**19,322**	19,444
Telecommunication services	**9,224**	9,679	**17,269**	17,349
Automobiles and components	**7,049**	8,774	**16,459**	16,911
Food and staples retailing	**7,423**	7,157	**12,496**	11,908
Financial markets infrastructure (clearinghouses)	**4,229**	3,913	**6,503**	8,752
Religious and social organizations	**2,754**	2,467	**4,565**	4,689
Total commercial credit exposure by industry	$ **696,299**	$ 704,867	$ **1,214,112**	$ 1,200,213

(1) Includes U.S. small business commercial exposure.
(2) Includes the notional amount of unfunded legally binding lending commitments, net of amounts distributed (i.e., syndicated or participated) to other financial institutions. The distributed amounts were $10.3 billion and $10.4 billion at December 31, 2023 and 2022.
(3) Industries are viewed from a variety of perspectives to best isolate the perceived risks. For purposes of this table, the real estate industry is defined based on the primary business activity of the borrowers or counterparties using operating cash flows and primary source of repayment as key factors.

Risk Mitigation

We purchase credit protection to cover the funded portion as well as the unfunded portion of certain credit exposures. To lower the cost of obtaining our desired credit protection levels, we may add credit exposure within an industry, borrower or counterparty group by selling protection.

At December 31, 2023 and 2022, net notional credit default protection purchased in our credit derivatives portfolio to hedge our funded and unfunded exposures for which we elected the fair value option, as well as certain other credit exposures, was $10.9 billion and $9.0 billion. We recorded net losses of $185 million in 2023 compared to net losses of $37 million in 2022. The gains and losses on these instruments were largely offset by gains and losses on the related exposures. The Value-at-Risk (VaR) results for these exposures are included in the fair value option portfolio information in Table 41. For more information, see Trading Risk Management on page 74.

Tables 35 and 36 present the maturity profiles and the credit exposure debt ratings of the net credit default protection portfolio at December 31, 2023 and 2022.

Table 35 Net Credit Default Protection by Maturity

	December 31 2023	December 31 2022
Less than or equal to one year	**36 %**	14 %
Greater than one year and less than or equal to five years	**64**	85
Greater than five years	**—**	1
Total net credit default protection	**100 %**	100 %

Table 36 Net Credit Default Protection by Credit Exposure Debt Rating

	Net Notional [1]	Percent of Total	Net Notional [1]	Percent of Total
	December 31			
(Dollars in millions)	2023		2022	
Ratings [2, 3]				
AAA	**$ (479)**	**4.4 %**	$ (379)	4.0 %
AA	**(1,080)**	**9.9**	(867)	10.0
A	**(5,237)**	**48.2**	(3,257)	36.0
BBB	**(2,912)**	**26.8**	(2,476)	28.0
BB	**(698)**	**6.4**	(1,049)	12.0
B	**(419)**	**3.9**	(676)	7.0
CCC and below	**(52)**	**0.5**	(93)	1.0
NR [4]	**2**	**(0.1)**	(182)	2.0
Total net credit default protection	**$ (10,875)**	**100.0 %**	$ (8,979)	100.0 %

(1) Represents net credit default protection purchased.
(2) Ratings are refreshed on a quarterly basis.
(3) Ratings of BBB- or higher are considered to meet the definition of investment grade.
(4) NR is comprised of index positions held and any names that have not been rated.

In addition to our net notional credit default protection purchased to cover the funded and unfunded portion of certain credit exposures, credit derivatives are used for market-making activities for clients and establishing positions intended to profit from directional or relative value changes. We execute the majority of our credit derivative trades in the OTC market with large, multinational financial institutions, including broker-dealers and, to a lesser degree, with a variety of other investors. Because these transactions are executed in the OTC market, we are subject to settlement risk. We are also subject to credit risk in the event that these counterparties fail to perform under the terms of these contracts. In order to properly reflect counterparty credit risk, we record counterparty credit risk valuation adjustments on certain derivative assets, including our purchased credit default protection. In most cases, credit derivative transactions are executed on a daily margin basis. Therefore, events such as a credit downgrade, depending on the ultimate rating level, or a breach of credit covenants would typically require an increase in the amount of collateral required by the counterparty, where applicable, and/or allow us to take additional protective measures such as early termination of all trades. For more information on credit derivatives and counterparty credit risk valuation adjustments, see *Note 3 – Derivatives* to the Consolidated Financial Statements.

Non-U.S. Portfolio

Our non-U.S. credit and trading portfolios are subject to country risk. We define country risk as the risk of loss from unfavorable economic and political conditions, currency fluctuations, social instability and changes in government policies. A risk management framework is in place to measure, monitor and manage non-U.S. risk and exposures. In addition to the direct risk of doing business in a country, we also are exposed to indirect country risks (e.g., related to the collateral received on secured financing transactions or related to client clearing activities). These indirect exposures are managed in the normal course of business through credit, market and operational risk governance rather than through country risk governance.

Table 37 presents our 20 largest non-U.S. country exposures at December 31, 2023. These exposures accounted for 89 percent of our total non-U.S. exposure at December 31, 2023 and 2022. Net country exposure for these 20 countries decreased $13.1 billion in 2023 primarily driven by decreases in Germany and Japan.

Non-U.S. exposure is presented on an internal risk management basis and includes sovereign and non-sovereign credit exposure, securities and other investments issued by or domiciled in countries other than the U.S.

Funded loans and loan equivalents include loans, leases, and other extensions of credit and funds, including letters of credit and due from placements. Unfunded commitments are the undrawn portion of legally binding commitments related to loans and loan equivalents. Net counterparty exposure includes the fair value of derivatives, including the counterparty risk associated with credit default swaps (CDS), and secured financing transactions. Securities and other investments are carried at fair value and long securities exposures are netted against short exposures with the same underlying issuer to, but not below, zero. Net country exposure represents country exposure less hedges and credit default protection purchased, net of credit default protection sold.

Table 37 Top 20 Non-U.S. Countries Exposure

(Dollars in millions)	Funded Loans and Loan Equivalents	Unfunded Loan Commitments	Net Counterparty Exposure	Securities/ Other Investments	Country Exposure at December 31 2023	Hedges and Credit Default Protection	**Net Country Exposure at December 31 2023**	Increase (Decrease) from December 31 2022
United Kingdom	$ 28,805	$ 18,276	$ 5,416	$ 5,080	$ 57,577	$ (1,642)	**$ 55,935**	$ 590
Germany	24,051	10,098	2,105	2,013	38,267	(2,612)	**35,655**	(10,071)
Canada	11,653	10,079	1,280	5,490	28,502	(487)	**28,015**	2,442
France	13,997	8,429	1,111	2,585	26,122	(1,264)	**24,858**	(1,735)
Australia	14,179	4,654	383	2,358	21,574	(252)	**21,322**	1,105
Japan	9,553	1,895	1,194	5,124	17,766	(792)	**16,974**	(6,113)
Brazil	9,252	1,329	807	3,946	15,334	(51)	**15,283**	2,783
India	6,891	231	580	4,270	11,972	(47)	**11,925**	1,156
Singapore	4,955	505	125	5,303	10,888	(71)	**10,817**	1,210
Ireland	8,464	1,322	133	459	10,378	(45)	**10,333**	1,243
Switzerland	4,867	3,786	294	497	9,444	(215)	**9,229**	(1,459)
Mexico	5,499	1,652	489	1,332	8,972	(53)	**8,919**	1,527
China	5,299	334	331	2,781	8,745	(233)	**8,512**	(2,296)
South Korea	5,404	880	357	1,854	8,495	(35)	**8,460**	(666)
Netherlands	3,188	3,312	735	959	8,194	(1,045)	**7,149**	(2,134)
Italy	4,121	2,184	200	653	7,158	(543)	**6,615**	947
Hong Kong	3,722	556	464	1,137	5,879	(27)	**5,852**	(1,419)
Spain	2,893	2,035	163	902	5,993	(397)	**5,596**	(245)
Belgium	1,648	1,328	205	415	3,596	(149)	**3,447**	(416)
Sweden	1,223	1,857	155	152	3,387	(373)	**3,014**	410
Total top 20 non-U.S. countries exposure	$ 169,664	$ 74,742	$ 16,527	$ 47,310	$ 308,243	$ (10,333)	**$ 297,910**	$ (13,141)

Our largest non-U.S. country exposure at December 31, 2023 was the United Kingdom with net exposure of $55.9 billion, which represents an increase of $590 million from December 31, 2022. The increase was primarily driven by higher corporate exposure. Our second largest non-U.S. country exposure was Germany with net exposure of $35.7 billion at December 31, 2023, a decrease of $10.1 billion from December 31, 2022. The decrease was primarily driven by lower deposits with the central bank.

Loan and Lease Contractual Maturities

Table 38 disaggregates total outstanding loans and leases by remaining scheduled principal due dates and interest rates. The amounts provided do not reflect prepayment assumptions or hedging activities related to the loan portfolio. For information on the asset sensitivity of our total banking book balance sheet, see Interest Rate Risk Management for the Banking Book on page 77.

Table 38 Loan and Lease Contractual Maturities [1]

	December 31, 2023				
(Dollars in millions)	Due in One Year or Less	Due After One Year Through Five Years	Due After Five Years Through 15 Years	Due After 15 Years	Total
Residential mortgage	$ 5,675	$ 32,850	$ 95,399	$ 94,545	$ 228,469
Home equity	186	1,092	4,038	20,388	25,704
Credit card	102,200	—	—	—	102,200
Direct/Indirect consumer	61,888	35,663	4,941	976	103,468
Other consumer	124	—	—	—	124
Total consumer loans	**170,073**	**69,605**	**104,378**	**115,909**	**459,965**
U.S. commercial	105,690	233,802	19,659	1,935	361,086
Non-U.S. commercial	44,473	55,782	24,255	1,242	125,752
Commercial real estate	29,335	41,819	864	860	72,878
Commercial lease financing	3,234	9,112	1,052	1,456	14,854
U.S. small business commercial	11,764	4,459	2,878	96	19,197
Total commercial loans	**194,496**	**344,974**	**48,708**	**5,589**	**593,767**
Total loans and leases	**$ 364,569**	**$ 414,579**	**$ 153,086**	**$ 121,498**	**$ 1,053,732**

	Amount due in one year or less at:		Amount due after one year at:		
(Dollars in millions)	Variable Interest Rates	Fixed Interest Rates	Variable Interest Rates	Fixed Interest Rates	Total
Residential mortgage	$ 999	$ 4,676	$ 84,230	$ 138,564	$ 228,469
Home equity	161	25	21,871	3,647	25,704
Credit card	97,627	4,573	—	—	102,200
Direct/Indirect consumer	42,832	19,056	2,321	39,259	103,468
Other consumer	2	122	—	—	124
Total consumer loans	**141,621**	**28,452**	**108,422**	**181,470**	**459,965**
U.S. commercial	81,546	24,144	209,912	45,484	361,086
Non-U.S. commercial	34,632	9,841	79,019	2,260	125,752
Commercial real estate	26,836	2,499	42,226	1,317	72,878
Commercial lease financing	410	2,824	1,800	9,820	14,854
U.S. small business commercial	7,089	4,675	110	7,323	19,197
Total commercial loans	**150,513**	**43,983**	**333,067**	**66,204**	**593,767**
Total loans and leases	**$ 292,134**	**$ 72,435**	**$ 441,489**	**$ 247,674**	**$ 1,053,732**

[1] Includes loans accounted for under the fair value option.

Allowance for Credit Losses

The allowance for credit losses increased $329 million from December 31, 2022 to $14.6 billion at December 31, 2023, which included a $1.3 billion reserve increase related to the consumer portfolio and a $942 million reserve decrease related to the commercial portfolio. The increase in the allowance reflected a reserve build in our consumer portfolio primarily due to credit card loan growth and asset quality, partially offset by a reserve release in our commercial portfolio primarily driven by improved macroeconomic conditions applicable to the commercial portfolio. The allowance also includes the impact of the accounting change to remove the recognition and measurement guidance on troubled debt restructurings, which reduced the allowance for credit losses by $243 million on January 1, 2023. For more information on this change in accounting guidance, see *Note 1 – Summary of Significant Accounting Principles* to the Consolidated Financial Statements.

Table 39 presents an allocation of the allowance for credit losses by product type at December 31, 2023 and 2022.

Table 39 Allocation of the Allowance for Credit Losses by Product Type

(Dollars in millions)	Amount	Percent of Total	Percent of Loans and Leases Outstanding [1]	Amount	Percent of Total	Percent of Loans and Leases Outstanding [1]
	December 31, 2023			December 31, 2022		
Allowance for loan and lease losses						
Residential mortgage	$ 339	2.54 %	0.15 %	$ 328	2.59 %	0.14 %
Home equity	47	0.35	0.19	92	0.73	0.35
Credit card	7,346	55.06	7.19	6,136	48.38	6.57
Direct/Indirect consumer	715	5.36	0.69	585	4.61	0.55
Other consumer	73	0.55	n/m	96	0.76	n/m
Total consumer	8,520	63.86	1.85	7,237	57.07	1.59
U.S. commercial [2]	2,600	19.49	0.69	3,007	23.71	0.80
Non-U.S. commercial	842	6.31	0.68	1,194	9.41	0.96
Commercial real estate	1,342	10.06	1.84	1,192	9.40	1.71
Commercial lease financing	38	0.28	0.26	52	0.41	0.38
Total commercial	4,822	36.14	0.82	5,445	42.93	0.93
Allowance for loan and lease losses	13,342	100.00 %	1.27	12,682	100.00 %	1.22
Reserve for unfunded lending commitments	1,209			1,540		
Allowance for credit losses	$ 14,551			$ 14,222		

(1) Ratios are calculated as allowance for loan and lease losses as a percentage of loans and leases outstanding excluding loans accounted for under the fair value option.
(2) Includes allowance for loan and lease losses for U.S. small business commercial loans of $1.0 billion and $844 million at December 31, 2023 and 2022.
n/m = not meaningful

Net charge-offs for 2023 were $3.8 billion compared to $2.2 billion in 2022 primarily due to late-stage delinquent credit card loans that were charged off. The provision for credit losses increased $1.9 billion to $4.4 billion during 2023 compared to 2022. The provision for credit losses in 2023 was driven by our consumer portfolio primarily due to credit card loan growth and asset quality, partially offset by improved macroeconomic conditions that primarily benefited our commercial portfolio. The provision for credit losses for the consumer portfolio, including unfunded lending commitments, increased $2.5 billion to $4.5 billion during 2023 compared to 2022. The provision for credit losses for the commercial portfolio, including unfunded lending commitments, decreased $628 million to a $133 million benefit for 2023 compared to 2022. The decline was due primarily to an improved macroeconomic outlook.

Table 40 presents a rollforward of the allowance for credit losses, including certain loan and allowance ratios for 2023 and 2022. For more information on the Corporation's credit loss accounting policies and activity related to the allowance for credit losses, see *Note 1 – Summary of Significant Accounting Principles* and *Note 5 – Outstanding Loans and Leases and Allowance for Credit Losses* to the Consolidated Financial Statements.

Table 40 Allowance for Credit Losses

(Dollars in millions)	2023	2022
Allowance for loan and lease losses, December 31	**$ 12,682**	$ 12,387
January 1, 2023 adoption of credit loss standard	**(243)**	n/a
Allowance for loan and lease losses, January 1	**$ 12,439**	$ 12,387
Loans and leases charged off		
Residential mortgage	**(67)**	(161)
Home equity	**(36)**	(45)
Credit card	**(3,133)**	(1,985)
Direct/Indirect consumer	**(233)**	(232)
Other consumer	**(504)**	(538)
Total consumer charge-offs	**(3,973)**	(2,961)
U.S. commercial [1]	**(551)**	(354)
Non-U.S. commercial	**(37)**	(41)
Commercial real estate	**(254)**	(75)
Commercial lease financing	**(2)**	(8)
Total commercial charge-offs	**(844)**	(478)
Total loans and leases charged off	**(4,817)**	(3,439)
Recoveries of loans and leases previously charged off		
Residential mortgage	**51**	89
Home equity	**95**	135
Credit card	**572**	651
Direct/Indirect consumer	**141**	214
Other consumer	**24**	17
Total consumer recoveries	**883**	1,106
U.S. commercial [2]	**108**	129
Non-U.S. commercial	**18**	20
Commercial real estate	**9**	9
Commercial lease financing	**—**	3
Total commercial recoveries	**135**	161
Total recoveries of loans and leases previously charged off	**1,018**	1,267
Net charge-offs	**(3,799)**	(2,172)
Provision for loan and lease losses	**4,725**	2,460
Other	**(23)**	7
Allowance for loan and lease losses, December 31	**13,342**	12,682
Reserve for unfunded lending commitments, January 1	**1,540**	1,456
Provision for unfunded lending commitments	**(331)**	83
Other	**—**	1
Reserve for unfunded lending commitments, December 31	**1,209**	1,540
Allowance for credit losses, December 31	**$ 14,551**	$ 14,222
Loan and allowance ratios [3]:		
Loans and leases outstanding at December 31	**$ 1,050,163**	$ 1,039,976
Allowance for loan and lease losses as a percentage of total loans and leases outstanding at December 31	**1.27 %**	1.22 %
Consumer allowance for loan and lease losses as a percentage of total consumer loans and leases outstanding at December 31	**1.85**	1.59
Commercial allowance for loan and lease losses as a percentage of total commercial loans and leases outstanding at December 31	**0.82**	0.93
Average loans and leases outstanding	**$ 1,041,824**	$ 1,010,799
Net charge-offs as a percentage of average loans and leases outstanding	**0.36 %**	0.21 %
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases at December 31	**243**	333
Ratio of the allowance for loan and lease losses at December 31 to net charge-offs	**3.51**	5.84
Amounts included in allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases at December 31 [4]	**$ 8,357**	$ 6,998
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases, excluding the allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases at December 31 [4]	**91 %**	149 %

(1) Includes U.S. small business commercial charge-offs of $360 million in 2023 compared to $203 million in 2022.
(2) Includes U.S. small business commercial recoveries of $41 million in 2023 compared to $49 million in 2022.
(3) Ratios are calculated as allowance for loan and lease losses as a percentage of loans and leases outstanding excluding loans accounted for under the fair value option.
(4) Primarily includes amounts related to credit card and unsecured consumer lending portfolios in *Consumer Banking*.

Market Risk Management

Market risk is the risk that changes in market conditions may adversely impact the value of assets or liabilities, or otherwise negatively impact earnings. This risk is inherent in the financial instruments associated with our operations, primarily within our *Global Markets* segment. We are also exposed to these risks in other areas of the Corporation (e.g., our ALM activities). In the event of market stress, these risks could have a material impact on our results. For more information, see Interest Rate Risk Management for the Banking Book on page 77.

Our traditional banking loan and deposit products are non-trading positions and are generally reported at amortized cost for assets or the amount owed for liabilities (historical cost). However, these positions are still subject to changes in economic value based on varying market conditions, with one of the primary risks being changes in the levels of interest rates. The risk of adverse changes in the economic value of our non-trading positions arising from changes in interest rates is managed through our ALM activities. We have elected to account for certain assets and liabilities under the fair value option.

Our trading positions are reported at fair value with changes reflected in income. Trading positions are subject to various changes in market-based risk factors. The majority of this risk is generated by our activities in the interest rate, foreign exchange, credit, equity and commodities markets. In addition, the values of assets and liabilities could change due to market liquidity, correlations across markets and expectations of market volatility. We seek to manage these risk exposures by using a variety of techniques that encompass a broad range of financial instruments. The key risk management techniques are discussed in more detail in the Trading Risk Management section.

GRM is responsible for providing senior management with a clear and comprehensive understanding of the trading risks to which we are exposed. These responsibilities include ownership of market risk policy, developing and maintaining quantitative risk models, calculating aggregated risk measures, establishing and monitoring position limits consistent with risk appetite, conducting daily reviews and analysis of trading inventory, approving material risk exposures and fulfilling regulatory requirements. Market risks that impact businesses outside of *Global Markets* are monitored and governed by their respective governance functions.

Model risk is the potential for adverse consequences from decisions based on incorrect or misused model outputs and reports. Given that models are used across the Corporation, model risk impacts all risk types including credit, market and operational risks. The Enterprise Model Risk Policy defines model risk standards, consistent with our Risk Framework and risk appetite, prevailing regulatory guidance and industry best practice. All models, including risk management, valuation and regulatory capital models, must meet certain validation criteria, including effective challenge of the conceptual soundness of the model, independent model testing and ongoing monitoring through outcomes analysis and benchmarking. The Enterprise Model Risk Committee, a subcommittee of the MRC, oversees that model standards are consistent with model risk requirements and monitors the effective challenge in the model validation process across the Corporation.

Interest Rate Risk

Interest rate risk represents exposures to instruments whose values vary with the level or volatility of interest rates. These instruments include, but are not limited to, loans, debt securities, certain trading-related assets and liabilities, deposits, borrowings and derivatives. Hedging instruments used to mitigate these risks include derivatives such as options, futures, forwards and swaps.

Foreign Exchange Risk

Foreign exchange risk represents exposures to changes in the values of current holdings and future cash flows denominated in currencies other than the U.S. dollar. The types of instruments exposed to this risk include investments in non-U.S. subsidiaries, foreign currency-denominated loans and securities, future cash flows in foreign currencies arising from foreign exchange transactions, foreign currency-denominated debt and various foreign exchange derivatives whose values fluctuate with changes in the level or volatility of currency exchange rates or non-U.S. interest rates. Hedging instruments used to mitigate this risk include foreign exchange options, currency swaps, futures, forwards, and foreign currency-denominated debt and deposits.

Mortgage Risk

Mortgage risk represents exposures to changes in the values of mortgage-related instruments. The values of these instruments are sensitive to prepayment rates, mortgage rates, agency debt ratings, default, market liquidity, government participation and interest rate volatility. Our exposure to these instruments takes several forms. For example, we trade and engage in market-making activities in a variety of mortgage securities including whole loans, pass-through certificates, commercial mortgages and collateralized mortgage obligations including collateralized debt obligations using mortgages as underlying collateral. In addition, we originate a variety of MBS, which involves the accumulation of mortgage-related loans in anticipation of eventual securitization, and we may hold positions in mortgage securities and residential mortgage loans as part of the ALM portfolio. We also record MSRs as part of our mortgage origination activities. Hedging instruments used to mitigate this risk include derivatives such as options, swaps, futures and forwards as well as securities including MBS and U.S. Treasury securities. For more information, see Mortgage Banking Risk Management on page 79.

Equity Market Risk

Equity market risk represents exposures to securities that represent an ownership interest in a corporation in the form of domestic and foreign common stock or other equity-linked instruments. Instruments that would lead to this exposure include, but are not limited to, the following: common stock, exchange-traded funds, American Depositary Receipts, convertible bonds, listed equity options (puts and calls), OTC equity options, equity total return swaps, equity index futures and other equity derivative products. Hedging instruments used to mitigate this risk include options, futures, swaps, convertible bonds and cash positions.

Commodity Risk

Commodity risk represents exposures to instruments traded in the petroleum, natural gas, power and metals markets. These instruments consist primarily of futures, forwards, swaps and options. Hedging instruments used to mitigate this risk include options, futures and swaps in the same or similar commodity product, as well as cash positions.

Issuer Credit Risk

Issuer credit risk represents exposures to changes in the creditworthiness of individual issuers or groups of issuers. Our portfolio is exposed to issuer credit risk where the value of an asset may be adversely impacted by changes in the levels of credit spreads, by credit migration or by defaults. Hedging instruments used to mitigate this risk include bonds, CDS and other credit fixed-income instruments.

Market Liquidity Risk

Market liquidity risk represents the risk that the level of expected market activity changes dramatically and, in certain cases, may even cease. This exposes us to the risk that we will not be able to transact business and execute trades in an orderly manner which may impact our results. This impact could be further exacerbated if expected hedging or pricing correlations are compromised by disproportionate demand or lack of demand for certain instruments. We utilize various risk mitigating techniques as discussed in more detail in Trading Risk Management.

Trading Risk Management

To evaluate risks in our trading activities, we focus on the actual and potential volatility of revenues generated by individual positions as well as portfolios of positions. Various techniques and procedures are utilized to enable the most complete understanding of these risks. Quantitative measures of market risk are evaluated on a daily basis from a single position to the portfolio of the Corporation. These measures include sensitivities of positions to various market risk factors, such as the potential impact on revenue from a one basis point change in interest rates, and statistical measures utilizing both actual and hypothetical market moves, such as VaR and stress testing. Periods of extreme market stress influence the reliability of these techniques to varying degrees. Qualitative evaluations of market risk utilize the suite of quantitative risk measures while understanding each of their respective limitations. Additionally, risk managers independently evaluate the risk of the portfolios under the current market environment and potential future environments.

VaR is a common statistic used to measure market risk as it allows the aggregation of market risk factors, including the effects of portfolio diversification. A VaR model simulates the value of a portfolio under a range of scenarios in order to generate a distribution of potential gains and losses. VaR represents the loss a portfolio is not expected to exceed more than a certain number of times per period, based on a specified holding period, confidence level and window of historical data. We use one VaR model consistently across the trading portfolios and it uses a historical simulation approach based on a three-year window of historical data. Our primary VaR statistic is equivalent to a 99 percent confidence level, which means that for a VaR with a one-day holding period, there should not be losses in excess of VaR, on average, 99 out of 100 trading days.

Within any VaR model, there are significant and numerous assumptions that will differ from company to company. The accuracy of a VaR model depends on the availability and quality of historical data for each of the risk factors in the portfolio. A VaR model may require additional modeling assumptions for new products that do not have the necessary historical market data or for less liquid positions for which accurate daily prices are not consistently available. For positions with insufficient historical data for the VaR calculation, the process for establishing an appropriate proxy is based on fundamental and statistical analysis of the new product or less liquid position. This analysis identifies reasonable alternatives that replicate both the expected volatility and correlation to other market risk factors that the missing data would be expected to experience.

VaR may not be indicative of realized revenue volatility as changes in market conditions or in the composition of the portfolio can have a material impact on the results. In particular, the historical data used for the VaR calculation might indicate higher or lower levels of portfolio diversification than will be experienced. In order for the VaR model to reflect current market conditions, we update the historical data underlying our VaR model on a weekly basis, or more frequently during periods of market stress, and regularly review the assumptions underlying the model. A minor portion of risks related to our trading positions is not included in VaR. These risks are reviewed as part of our ICAAP. For more information regarding ICAAP, see Capital Management on page 47.

GRM continually reviews, evaluates and enhances our VaR model so that it reflects the material risks in our trading portfolio. Changes to the VaR model are reviewed and approved prior to implementation and any material changes are reported to management through the appropriate management committees.

Trading limits on quantitative risk measures, including VaR, are independently set by *Global Markets* Risk Management and reviewed on a regular basis so that trading limits remain relevant and within our overall risk appetite for market risks. Trading limits are reviewed in the context of market liquidity, volatility and strategic business priorities. Trading limits are set at both a granular level to allow for extensive coverage of risks as well as at aggregated portfolios to account for correlations among risk factors. All trading limits are approved at least annually. Approved trading limits are stored and tracked in a centralized limits management system. Trading limit excesses are communicated to management for review. Certain quantitative market risk measures and corresponding limits have been identified as critical in the Corporation's Risk Appetite Statement. These risk appetite limits are reported on a daily basis and are approved at least annually by the ERC and the Board.

In periods of market stress, *Global Markets* senior leadership communicates daily to discuss losses, key risk positions and any limit excesses. As a result of this process, the businesses may selectively reduce risk.

Table 41 presents the total market-based portfolio VaR, which is the combination of the total covered positions (and less liquid trading positions) portfolio and the fair value option portfolio. Covered positions are defined by regulatory standards as trading assets and liabilities, both on- and off-balance sheet, that meet a defined set of specifications. These specifications identify the most liquid trading positions which are intended to be held for a short-term horizon and where we are able to hedge the material risk elements in a two-way market. Positions in less liquid markets, or where there are restrictions on the ability to trade the positions, typically do not qualify as covered positions. Foreign exchange and commodity positions are always considered covered positions, except for structural foreign currency positions that are excluded with prior regulatory approval.

In addition, Table 41 presents the VaR for the fair value option portfolio, which includes substantially all of the funded and unfunded exposures for which we elect the fair value option, and their corresponding hedges. Market risk VaR for trading activities, as presented in Table 41, differs from VaR used for regulatory capital calculations due to the holding period used.

The holding period for VaR used for regulatory capital calculations is 10 days, while for the market risk VaR presented below, it is one day. Both measures utilize the same process and methodology.

The total market-based portfolio VaR results in Table 41 include market risk to which we are exposed from all business segments, excluding credit valuation adjustment (CVA), DVA and related hedges. The majority of this portfolio is within the *Global Markets* segment.

Table 41 presents year-end, average, high and low daily trading VaR for 2023 and 2022 using a 99 percent confidence level. The amounts disclosed in Table 41 and Table 42 align to the view of covered positions used in the Basel 3 capital calculations. Foreign exchange and commodity positions are always considered covered positions, regardless of trading or banking treatment for the trade, except for structural foreign currency positions that are excluded with prior regulatory approval.

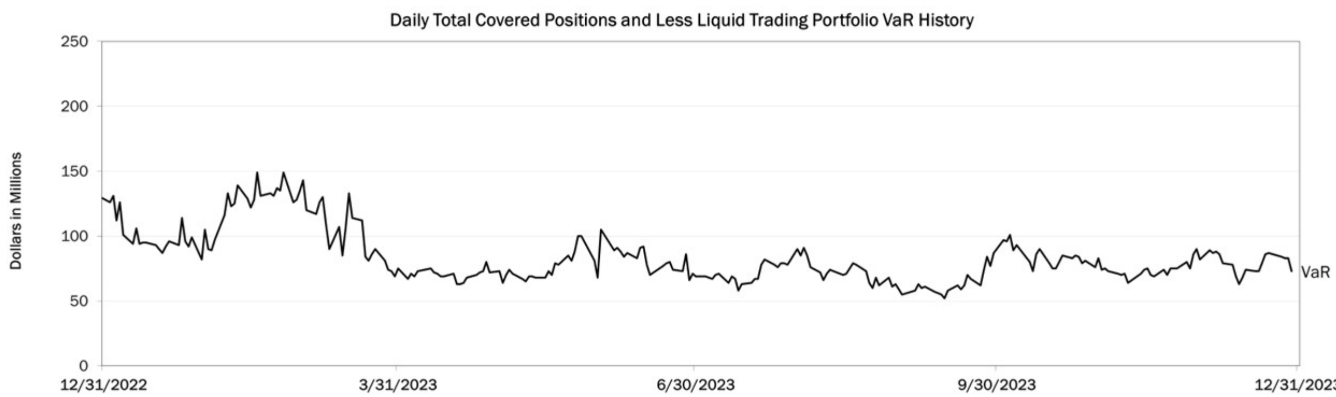
The annual average of total covered positions and less liquid trading positions portfolio VaR for 2023 decreased compared to 2022, primarily due to the roll off of March 2020 market volatility from the window of historical data used in the calibration of the VaR model.

Table 41 Market Risk VaR for Trading Activities

	2023				2022			
(Dollars in millions)	Year End	Average	High [1]	Low [1]	Year End	Average	High [1]	Low [1]
Foreign exchange	$ 29	$ 29	$ 43	$ 12	$ 38	$ 21	$ 39	$ 12
Interest rate	51	48	86	32	36	36	56	24
Credit	53	60	108	43	76	71	106	52
Equity	9	18	56	9	18	20	33	12
Commodities	9	9	14	6	8	13	27	7
Portfolio diversification	(90)	(100)	n/a	n/a	(81)	(91)	n/a	n/a
Total covered positions portfolio	61	64	92	41	95	70	140	42
Impact from less liquid exposures [2]	12	20	n/a	n/a	35	38	n/a	n/a
Total covered positions and less liquid trading positions portfolio	73	84	149	52	130	108	236	61
Fair value option loans	16	25	49	14	48	51	65	37
Fair value option hedges	11	14	20	9	16	17	24	13
Fair value option portfolio diversification	(12)	(23)	n/a	n/a	(38)	(36)	n/a	n/a
Total fair value option portfolio	15	16	30	10	26	32	44	23
Portfolio diversification	(9)	(8)	n/a	n/a	9	(11)	n/a	n/a
Total market-based portfolio	$ 79	$ 92	173	58	$ 165	$ 129	287	70

[1] The high and low for each portfolio may have occurred on different trading days than the high and low for the components. Therefore the impact from less liquid exposures and the amount of portfolio diversification, which is the difference between the total portfolio and the sum of the individual components, is not relevant.
[2] Impact is net of diversification effects between the covered positions and less liquid trading positions portfolios.
n/a = not applicable

The following graph presents the daily covered positions and less liquid trading positions portfolio VaR for 2023, corresponding to the data in Table 41.



Additional VaR statistics produced within our single VaR model are provided in Table 42 at the same level of detail as in Table 41. Evaluating VaR with additional statistics allows for an increased understanding of the risks in the portfolio, as the historical market data used in the VaR calculation does not necessarily follow a predefined statistical distribution. Table 42 presents average trading VaR statistics at 99 percent and 95 percent confidence levels for 2023 and 2022.

Table 42 Average Market Risk VaR for Trading Activities – 99 percent and 95 percent VaR Statistics

	December 31, 2023		December 31, 2022	
(Dollars in millions)	99 percent	95 percent	99 percent	95 percent
Foreign exchange	$ 29	$ 19	$ 21	$ 12
Interest rate	48	26	36	17
Credit	60	30	71	28
Equity	18	8	20	11
Commodities	9	5	13	7
Portfolio diversification	(100)	(54)	(91)	(46)
Total covered positions portfolio	64	34	70	29
Impact from less liquid exposures	20	7	38	7
Total covered positions and less liquid trading positions portfolio	84	41	108	36
Fair value option loans	25	12	51	14
Fair value option hedges	14	9	17	10
Fair value option portfolio diversification	(23)	(13)	(36)	(13)
Total fair value option portfolio	16	8	32	11
Portfolio diversification	(8)	(5)	(11)	(7)
Total market-based portfolio	$ 92	$ 44	$ 129	$ 40

Backtesting

The accuracy of the VaR methodology is evaluated by backtesting, which compares the daily VaR results, utilizing a one-day holding period, against a comparable subset of trading revenue. A backtesting excess occurs when a trading loss exceeds the VaR for the corresponding day. These excesses are evaluated to understand the positions and market moves that produced the trading loss with a goal to help confirm that the VaR methodology accurately represents those losses. We expect the frequency of trading losses in excess of VaR to be in line with the confidence level of the VaR statistic being tested. For example, with a 99 percent confidence level, we expect one trading loss in excess of VaR every 100 days or between two to three trading losses in excess of VaR over the course of a year. The number of backtesting excesses observed can differ from the statistically expected number of excesses if the current level of market volatility is materially different than the level of market volatility that existed during the three years of historical data used in the VaR calculation.

The trading revenue used for backtesting is defined by regulatory agencies in order to most closely align with the VaR component of the regulatory capital calculation. This revenue differs from total trading-related revenue in that it excludes revenue from trading activities that either do not generate market risk or the market risk cannot be included in VaR. Some examples of the types of revenue excluded for backtesting are fees, commissions, reserves, net interest income and intra-day trading revenues.

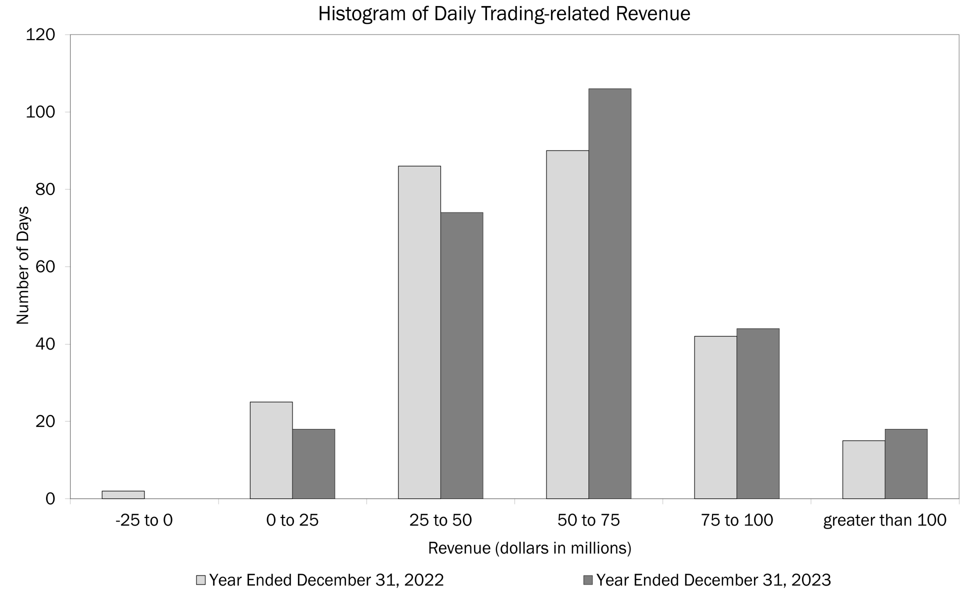
We conduct daily backtesting on the VaR results used for regulatory capital calculations as well as the VaR results for key legal entities, regions and risk factors. These results are reported to senior market risk management. Senior management regularly reviews and evaluates the results of these tests.

During 2023, there were no days where this subset of trading revenue had losses that exceeded our total covered portfolio VaR, utilizing a one-day holding period.

Total Trading-related Revenue

Total trading-related revenue, excluding brokerage fees, and CVA, DVA and funding valuation adjustment gains (losses), represents the total amount earned from trading positions, including market-based net interest income, which are taken in a diverse range of financial instruments and markets. For more information on fair value, see *Note 20 – Fair Value Measurements* to the Consolidated Financial Statements. Trading-related revenue can be volatile and is largely driven by general market conditions and customer demand. Also, trading-related revenue is dependent on the volume and type of transactions, the level of risk assumed, and the volatility of price and rate movements at any given time within the ever-changing market environment. Significant daily revenue by business is monitored and the primary drivers of these are reviewed.

The following histogram is a graphic depiction of trading volatility and illustrates the daily level of trading-related revenue for 2023 and 2022. During 2023, positive trading-related revenue was recorded for 100 percent of the trading days, of which 93 percent were daily trading gains of over $25 million. This compares to 2022 where positive trading-related revenue was recorded for 99 percent of the trading days, of which 90 percent were daily trading gains of over $25 million, and the largest loss was $9 million.



Trading Portfolio Stress Testing

Because the very nature of a VaR model suggests results can exceed our estimates and it is dependent on a limited historical window, we also stress test our portfolio using scenario analysis. This analysis estimates the change in the value of our trading portfolio that may result from abnormal market movements.

A set of scenarios, categorized as either historical or hypothetical, are computed daily for the overall trading portfolio and individual businesses. These scenarios include shocks to underlying market risk factors that may be well beyond the shocks found in the historical data used to calculate VaR. Historical scenarios simulate the impact of the market moves that occurred during a period of extended historical market stress. Generally, a multi-week period representing the most severe point during a crisis is selected for each historical scenario. Hypothetical scenarios provide estimated portfolio impacts from potential future market stress events. Scenarios are reviewed and updated in response to changing positions and new economic or political information. In addition, new or ad hoc scenarios are developed to address specific potential market events or particular vulnerabilities in the portfolio. The stress tests are reviewed on a regular basis and the results are presented to senior management.

Stress testing for the trading portfolio is integrated with enterprise-wide stress testing and incorporated into the limits framework. The macroeconomic scenarios used for enterprise-wide stress testing purposes differ from the typical trading portfolio scenarios in that they have a longer time horizon and the results are forecasted over multiple periods for use in consolidated capital and liquidity planning. For more information, see Managing Risk on page 44.

Interest Rate Risk Management for the Banking Book

The following discussion presents net interest income for banking book activities.

Interest rate risk represents the most significant market risk exposure to our banking book balance sheet. Interest rate risk is measured as the potential change in net interest income caused by movements in market interest rates. Client-facing activities, primarily lending and deposit-taking, create interest rate sensitive positions on our balance sheet.

We prepare forward-looking forecasts of net interest income. The baseline forecast takes into consideration expected future business growth, ALM positioning and the future direction of interest rate movements as implied by market-based forward curves.

We then measure and evaluate the impact that alternative interest rate scenarios have on the baseline forecast in order to assess interest rate sensitivity under varied conditions. The net interest income forecast is frequently updated for changing assumptions and differing outlooks based on economic trends, market conditions and business strategies. Thus, we continually monitor our banking book balance sheet position in order to maintain an acceptable level of exposure to interest rate changes.

The interest rate scenarios that we analyze incorporate balance sheet assumptions such as loan and deposit growth and pricing, changes in funding mix, product repricing, maturity characteristics and investment securities premium amortization. Our overall goal is to manage interest rate risk so that movements in interest rates do not significantly adversely affect earnings and capital.

Table 43 presents the spot and 12-month forward rates used in our baseline forecasts at December 31, 2023 and 2022.

Table 43 Forward Rates

	December 31, 2023		
	Federal Funds	**SOFR [1]**	**10-Year SOFR [1]**
Spot rates	**5.50 %**	**5.38 %**	**3.47 %**
12-month forward rates	**3.89**	**3.93**	**3.32**
	December 31, 2022		
	Federal Funds	Three-month LIBOR	10-Year Swap
Spot rates	4.50 %	4.77 %	3.84 %
12-month forward rates	4.75	4.78	3.62

(1) The Corporation uses SOFR in its baseline forecast as one of the primary alternative reference rates used as a result of the cessation of LIBOR in 2023.

Table 44 shows the pretax impact to forecasted net interest income over the next 12 months from December 31, 2023 and

2022 resulting from instantaneous parallel and non-parallel shocks to the market-based forward curve. Periodically, we evaluate the scenarios presented so that they are meaningful in the context of the current rate environment. The interest rate scenarios also assume U.S. dollar interest rates are floored at zero.

During 2023, the overall decrease in asset sensitivity of our balance sheet to higher and lower rate scenarios was primarily due to changes in deposit product mix and ALM portfolio activity. We continue to be asset sensitive to a parallel upward move in interest rates with the majority of that impact coming from the short end of the yield curve. Additionally, higher interest rates negatively impact the fair value of our debt securities classified as available for sale and adversely affect accumulated OCI and thus capital levels under the Basel 3 capital rules. Under instantaneous upward parallel shifts, the near-term adverse impact to Basel 3 capital would be reduced over time by offsetting positive impacts to net interest income generated from the banking book activities. For more information on Basel 3, see Capital Management – Regulatory Capital on page 48.

Table 44 Estimated Banking Book Net Interest Income Sensitivity to Curve Changes

(Dollars in millions)	Short Rate (bps)	Long Rate (bps)	December 31 2023	December 31 2022
Parallel Shifts				
+100 bps instantaneous shift	+100	+100	$ **3,476**	$ 3,829
-100 bps instantaneous shift	-100	-100	**(3,077)**	(4,591)
Flatteners				
Short-end instantaneous change	+100	—	**3,242**	3,698
Long-end instantaneous change	—	-100	**(257)**	(157)
Steepeners				
Short-end instantaneous change	-100	—	**(2,773)**	(4,420)
Long-end instantaneous change	—	+100	**272**	131

The sensitivity analysis in Table 44 assumes that we take no action in response to these rate shocks and does not assume any change in other macroeconomic variables normally correlated with changes in interest rates. As part of our ALM activities, we use securities, certain residential mortgages, and interest rate and foreign exchange derivatives in managing interest rate sensitivity.

The behavior of our deposit portfolio in the baseline forecast and in alternate interest rate scenarios is a key assumption in our projected estimates of net interest income. The sensitivity analysis in Table 44 assumes no change in deposit portfolio size or mix from the baseline forecast in alternate rate environments. In higher rate scenarios, the increase in net interest income would be impacted by any customer activity resulting in the replacement of low-cost or noninterest-bearing deposits with higher yielding deposits or market-based funding, as our benefit in those scenarios would be reduced. Conversely, in lower-rate scenarios, any customer activity that results in the replacement of higher yielding deposits or market-based funding with low-cost or noninterest-bearing deposits would reduce our exposure in those scenarios.

For interest rate scenarios larger than 100 bps shifts, it is expected that the interest rate sensitivity will illustrate non-linear behaviors as there are numerous estimates and assumptions, which require a high degree of judgment and are often interrelated, that could impact the outcome. Pertaining to the mortgage-backed securities and residential mortgage portfolio, if long-end interest rates were to significantly decrease over the next twelve months, for example over 200 bps, there would generally be an increase in customer prepayment behaviors with an incremental reduction to net interest income, noting that the extent of changes in customer prepayment activity can be impacted by multiple factors and is not necessarily limited to long-end interest rates. Conversely, if long-end interest rates were to significantly increase over the next twelve months, for example, over 200 bps, customer prepayments would likely modestly decrease and result in an incremental increase to net interest income. In addition, deposit pricing will have non-linear impacts to larger short-end rate movements. In decreasing interest rate scenarios, and particularly where interest rates have decreased to small amounts, the ability to further reduce rates paid is reduced as customer rates near zero. In higher short-end rate scenarios, deposit pricing will likely increase at a faster rate, leading to incremental interest expense and reducing asset sensitivity. While the impact related to the above assumptions used in the asset sensitivity analysis can provide directional analysis on how net interest income will be impacted in changing environments, the ultimate impact is dependent upon the interrelationship of the assumptions and factors, which vary in different macroeconomic scenarios.

Interest Rate and Foreign Exchange Derivative Contracts

We use interest rate and foreign exchange derivative contracts in our ALM activities to manage our interest rate and foreign exchange risks. Specifically, we use those derivatives to manage both the variability in cash flows and changes in fair value of various assets and liabilities arising from those risks. Our interest rate derivative contracts are generally non-leveraged swaps tied to various benchmark interest rates and foreign exchange basis swaps, options, futures and forwards, and our foreign exchange contracts include cross-currency interest rate swaps, foreign currency futures contracts, foreign currency forward contracts and options.

The derivatives used in our ALM activities can be split into two broad categories: designated accounting hedges and other risk management derivatives. Designated accounting hedges are primarily used to manage our exposure to interest rates as described in the Interest Rate Risk Management for the Banking Book section and are included in the sensitivities presented in Table 44. The Corporation also uses foreign currency derivatives in accounting hedges to manage substantially all of the foreign exchange risk of our foreign operations. By hedging the foreign exchange risk of our foreign operations, the Corporation's market risk exposure in this area is not significant.

Risk management derivatives are predominantly used to hedge foreign exchange risks related to various foreign currency-denominated assets and liabilities and eliminate substantially all foreign currency exposures in the cash flows of the Corporation’s non-trading foreign currency-denominated financial instruments. These foreign exchange derivatives are sensitive to other market risk exposures such as cross-currency basis spreads and interest rate risk. However, as these features are not a significant component of these foreign exchange derivatives, the market risk related to this exposure is not significant. For more information on the accounting for derivatives, see *Note 3 – Derivatives* to the Consolidated Financial Statements.

Mortgage Banking Risk Management

We originate, fund and service mortgage loans, which subject us to credit, liquidity and interest rate risks, among others. We determine whether loans will be held for investment or held for sale at the time of commitment and manage credit and liquidity risks by selling or securitizing a portion of the loans we originate.

Interest rate risk and market risk can be substantial in the mortgage business. Changes in interest rates and other market factors impact the volume of mortgage originations. Changes in interest rates also impact the value of interest rate lock commitments (IRLCs) and the related residential first mortgage loans held-for-sale between the date of the IRLC and the date the loans are sold to the secondary market. An increase in mortgage interest rates typically leads to a decrease in the value of these instruments. Conversely, when there is an increase in interest rates, the value of the MSRs will increase driven by lower prepayment expectations. Because the interest rate risks of these hedged items offset, we combine them into one overall hedged item with one combined economic hedge portfolio consisting of derivative contracts and securities.

During 2023, 2022, and 2021 we recorded gains of $127 million, $78 million and $39 million. For more information on MSRs, see *Note 20 – Fair Value Measurements* to the Consolidated Financial Statements.

Compliance and Operational Risk Management

Compliance risk is the risk of legal or regulatory sanctions, material financial loss or damage to the reputation of the Corporation arising from the failure of the Corporation to comply with the requirements of applicable laws, rules, regulations and our internal policies and procedures (collectively, applicable laws, rules and regulations). We are subject to comprehensive regulation under federal and state laws, rules and regulations in the U.S. and the laws of the various jurisdictions in which we operate, including those related to financial crimes and anti-money laundering, market conduct, trading activities, fair lending, privacy, data protection and unfair, deceptive or abusive acts or practices.

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, people or external events, and includes legal risk. Operational risk may occur anywhere in the Corporation, including third-party business processes, and is not limited to operations functions. The Corporation faces a number of key operational risks including third-party risk, model risk, conduct risk, technology risk, information security risk and data risk. Operational risk can result in financial losses and reputational impacts and is a component in the calculation of total RWA used in the Basel 3 capital calculation. For more information on Basel 3 calculations, see Capital Management on page 47.

FLUs and control functions are first and foremost responsible for managing all aspects of their businesses, including their compliance and operational risk. FLUs and control functions are required to understand their business processes and related risks and controls, including third-party dependencies and the related regulatory requirements, and monitor and report on the effectiveness of the control environment. In order to actively monitor and assess the performance of their processes and controls, they must conduct comprehensive quality assurance activities and identify issues and risks to remediate control gaps and weaknesses. FLUs and control functions must also adhere to compliance and operational risk appetite limits to meet strategic, capital and financial planning objectives. Finally, FLUs and control functions are responsible for the proactive identification, management and escalation of compliance and operational risks across the Corporation. Collectively, these efforts are important to strengthen their compliance and operational resiliency, which is the ability to deliver critical operations through disruption.

Global Compliance and Operational Risk teams independently assess compliance and operational risk, monitor business activities and processes and evaluate FLUs and control functions for adherence to applicable laws, rules and regulations, including identifying issues and risks, and reporting on the state of the control environment. Corporate Audit provides an independent assessment and validation through testing of key compliance and operational risk processes and controls across the Corporation.

The Corporation's Global Compliance – Enterprise Policy and Operational Risk Management – Enterprise Policy set the requirements for reporting compliance and operational risk information to executive management as well as the Board or appropriate Board-level committees and reflect Global Compliance and Operational Risk’s responsibilities for conducting independent oversight of the Corporation’s compliance and operational risk management activities. The Board provides oversight of compliance risk through its Audit Committee and the ERC, and operational risk through its ERC.

Cybersecurity

Risk Management and Strategy

Cybersecurity is a key operational risk facing the Corporation. We, our employees, customers, regulators and third parties are ongoing targets of an increasing number of cybersecurity threats and cyberattacks and, accordingly, the Corporation devotes considerable resources to the establishment and maintenance of processes for assessing, identifying and managing cybersecurity risk through its global workforce and 24/7 cyber operations centers around the world. The Corporation takes a cross-functional approach to addressing cybersecurity risk, with our Global Technology, Global Risk Management, Legal and Corporate Audit functions playing key roles. In addition, the Corporation’s processes related to cybersecurity risk are an element of and integrated with the Corporation’s comprehensive risk program, including our risk framework. For more information on the Corporation’s Cybersecurity risk, see Item 1A. Risk Factors – Business Operations beginning on page 14. For more information on our approach to risk management, including our risk management governance framework, see Managing Risk on page 44.

As part of the Corporation’s overall risk management program, the Corporation’s Global Information Security (GIS) Program is supported by three lines of defense. As the first line of defense, the GIS team is responsible for the day-to-day management of the GIS Program, which includes defining policies and procedures designed to safeguard the Corporation’s information systems and the information those systems collect, process, maintain, use, share, disseminate and dispose of. As the second line of defense, Global Compliance and Operational Risk independently assesses, monitors and tests cybersecurity risk across the Corporation, as well as the effectiveness of the GIS Program. As the third line of defense, Corporate Audit conducts additional independent review and validation of the first-line and second-line processes and functions.

The Corporation seeks to mitigate cybersecurity risk and associated legal, financial, reputational, operational and/or regulatory risks by employing a multi-faceted GIS Program, through various policies, procedures and playbooks, that are focused on governing, preparing for, identifying, preventing, detecting, mitigating, responding to and recovering from cybersecurity threats and cybersecurity incidents suffered by the Corporation and its third-party service providers, as well as effectively operating the Corporation's processes. Our business continuity policy, standards and procedures are designed to maintain the availability of business functions and enable impacted units within the Corporation and its third-party service providers to achieve strategic objectives in the event of a cybersecurity incident. In accordance with the Corporation's cyber incident response framework, GIS, including its incident response team, tracks, documents, responds to and analyzes cybersecurity threats and cybersecurity incidents, including those experienced by the Corporation's third-party service providers that may impact the Corporation. Additionally, the Corporation has a process for assembling multi-stakeholder executive response teams to monitor and coordinate cross-functional responses to certain cybersecurity incidents.

As part of the GIS Program, the Corporation leverages both internal and external assessments and partnerships with industry leaders. The Corporation engages third-party assessors, consultants, auditors and other third-party professionals to evaluate and test its cybersecurity program and provide guidance on operating and improving the GIS Program, including the design and operational effectiveness of the security and resiliency of our information systems.

The Corporation focuses on and has processes to oversee cybersecurity risk associated with its third-party service providers. As part of its cybersecurity risk management processes, the Corporation maintains an enterprise-wide program that defines standards for the planning, sourcing, management, and oversight of third-party relationships and third-party access to its information system, facilities, and/or confidential or proprietary data. The Corporation has established security requirements applicable to third-party service providers, and where permitted by contract, cybersecurity diligence is conducted to assess the alignment of third-party service providers' cybersecurity programs with the Corporation's cybersecurity requirements.

While we and our third parties have experienced cybersecurity incidents, as well as adverse impacts from such incidents, we have not experienced material losses or other material consequences relating to cybersecurity incidents experienced by us or our third parties. However, we expect to continue to experience cybersecurity incidents resulting in adverse impacts with increased frequency and severity due to the evolving threat environment, and there can be no assurance that future cybersecurity incidents, including incidents experienced by our third parties, will not have a material adverse impact on the Corporation, including its business strategy, results of operations and/or financial condition.

Governance

Through established governance structures, the Corporation has policies, processes and practices to help facilitate oversight of cybersecurity risk. In accordance with these policies, processes and practices, the Corporation's three lines of defense, and management, strive to prepare for, identify, prevent, detect, mitigate, respond to and recover from cybersecurity threats and incidents, monitor performance, and escalate to executive management, the committees of the Corporation's Board and/or to the Board, as appropriate. Additionally, GIS reports cybersecurity incidents that meet certain criteria to the Legal Department for further escalation and evaluation for materiality and potential disclosure, which includes the consideration of relevant quantitative and qualitative factors.

The Board is actively engaged in the oversight of the GIS Program and devotes considerable time and attention to the oversight and mitigation of cybersecurity risk. The Board, which includes members with technology and cybersecurity experience, oversees management's approach to staffing, policies, processes and practices to address cybersecurity risk. The Board and its ERC, which is responsible for reviewing cybersecurity risk, each receive regular presentations, memoranda and reports throughout the year from our Chief Technology and Information Officer (CTIO) and our Chief Information Security Officer (CISO) on internal and external cybersecurity developments, threats and risks. On a quarterly basis, GIS sends the Board a memorandum highlighting relevant cybersecurity developments and a document detailing the performance metrics for the GIS Program.

The Board receives prompt and timely information from management on cybersecurity incidents, including cybersecurity incidents experienced by the Corporation's third-party service providers, that may pose significant risk to the Corporation, and continues to receive regular reports on any such incidents until their conclusion. Additionally, the Board receives quarterly reports on the performance of the Corporation's cybersecurity risk appetite metrics, including metrics on vulnerabilities and third-party cybersecurity risks and incidents and is notified promptly if a Board-level cybersecurity risk limit is breached.

Our ERC also annually reviews and approves our GIS Program and our Information Security Policy, which establish administrative, technical, and physical safeguards designed to protect the security, confidentiality and integrity of customer records and information in accordance with the Gramm-Leach-Bliley Act and the interagency guidelines issued thereunder, and applicable laws globally.

Under the Board's oversight, management works closely with key stakeholders, including regulators, government agencies, law enforcement, peer institutions and industry groups, and develops and invests in talent and innovative technology in order to better manage cybersecurity risk.

Our most senior cybersecurity employees are the CTIO and CISO, who are primarily responsible for managing and assessing cybersecurity risk. The CISO oversees a team of more than 3,000 information security professionals spanning the globe. The CISO and the GIS senior leadership team of ten individuals have deep cybersecurity expertise, with over 100 years of collective experience working in the cybersecurity field, both at the Corporation and other companies in various industries. Additionally, certain members of the GIS leadership team hold leadership roles in sector-specific information and infrastructure security organizations, including the Financial Services Information Sharing and Analysis Center and the Financial Services Sector Coordinating Council. Employees across the Corporation also play a role in protecting the Corporation from cybersecurity threats and receive periodic training and education on cybersecurity-related topics.

Reputational Risk Management

Reputational risk is the risk that negative perception of the Corporation may adversely impact profitability or operations. Reputational risk may result from many of the Corporation's activities, including those related to the management of strategic, operational, compliance, liquidity, market (price and interest rate) and credit risks.

The Corporation manages reputational risk through established policies and controls embedded throughout its business and risk management processes. We proactively monitor and identify potential reputational risk events and have processes established to mitigate reputational risks in a timely manner. If reputational risk events occur, we focus on remediating the underlying issue and taking action to minimize damage to the Corporation's reputation. The Corporation has processes and procedures in place to respond to events that give rise to reputational risk, including educating individuals and organizations that influence public opinion, and implementing communication strategies to mitigate the risk. The Corporation's organization and governance structure provides oversight of reputational risks. Reputational risk reporting is provided regularly and directly to senior management and the ERC, which provides primary oversight of reputational risk. In addition, each FLU has a committee, which includes representatives from Legal and Risk, that is responsible for the oversight of reputational risk, including approval for business activities that present elevated levels of reputational risks.

Climate Risk

Climate Risk Management

Climate risk is the risk that climate change or actions taken to mitigate climate change expose the Corporation to economic, operational or reputational harm. Climate-related risks are divided into two major categories, both of which span across the seven key risk types discussed in Managing Risk on page 44: (1) Physical Risk: risks related to the physical impacts of climate change, driven by extreme weather events such as hurricanes and floods, as well as chronic longer-term shifts such as rising average global temperatures and sea levels, and (2) Transition Risk: risks related to the transition to a low-carbon economy, which may entail extensive policy, legal, technology and market changes.

Physical risks of climate change, such as more frequent and severe extreme weather events, can increase the Corporation's risks, including credit risk by diminishing borrowers' repayment capacity or collateral values, and operational risk by negatively impacting the Corporation's facilities, employees, or vendors. Transition risks of climate change may amplify credit risks through the financial impacts of changes in policy, technology or the market on the Corporation or our counterparties. Unanticipated market changes can lead to sudden price adjustments and give rise to heightened market risk. Reputational risk can arise if we do not meet our climate-related commitments and/or goals, or are perceived to be inadequately responsive to climate change or otherwise.

Our approach to managing climate risk is consistent with our risk management governance structure, from senior management to our Board and its committees, including the ERC and the Corporate Governance, ESG and Sustainability Committee (CGESC) of the Board, which regularly discuss climate-related topics. The ERC oversees climate risk as set forth in our Risk Framework and Risk Appetite Statement. The CGESC is responsible for overseeing the Corporation's environmental and social sustainability-related activities and practices, and regularly reviews the Corporation's climate-related work and policies. The Climate Risk Council consists of leaders across risk, FLU and control functions, and meets routinely to discuss our approach to managing climate-related risks.

Our climate risk management efforts are overseen by an officer who reports to the CRO. The Corporation has a Climate and Environmental Risk Management function that is responsible for overseeing climate risk management. They are responsible for establishing the Climate Risk Framework and governance structure, and providing independent assessment and challenge of enterprise-wide climate risks.

Based on the Corporation's Risk Framework, in 2023 we created our internal Climate Risk Framework, which addresses how the Corporation identifies, measures, monitors and controls climate risk by enhancing existing risk management processes and also includes examples of how it manifests across the seven risk types. It details the roles and responsibilities for climate risk management across our three lines of defense as noted above.

For more information on our governance framework, see Managing Risk on page 44. For more information on climate risk, see Item 1A. Risk Factors on page 8.

Climate-related Goals and Targets

In 2021, the Corporation committed to achieving net zero greenhouse gas emissions before 2050 in our financing activities, operations and supply chain (Net Zero goal), and in 2022, we released our Approach to Zero™, a framework for how we plan to achieve our Net Zero goal. In line with this approach, we have set interim 2030 targets across our financing activities (2030 Financing Activity Emissions Targets), operations and supply chain, all of which are further supported and complemented by our $1.5 trillion sustainable finance goal (which is aligned with the 17 UN Sustainable Development Goals) of which $1 trillion is dedicated to supporting the transition toward a low-carbon economy, including capital mobilized across clean energy sectors and tailored financial solutions for emerging areas of the low-carbon economy. In particular, we announced 2030 Financing Activity Emissions Targets for auto manufacturing, aviation, cement, energy, and power generation sectors and expect to continue to set targets for other sectors that are significant contributors to global greenhouse gas emissions and therefore prioritized by us.

Achieving our climate–related goals and targets, including our Net Zero goal and 2030 Financing Activity Emissions Targets, may require technological advances, clearly defined roadmaps for industry sectors, better emissions data reporting, new standards and public policies, including those that improve the cost of capital for the transition to a low-carbon economy, as well as strong and active engagement with customers, suppliers, investors, government officials and other stakeholders. Given the extended period of these and other climate-related goals we have established, our initiatives have not resulted in a significant effect on our results of operations or financial position in the relevant periods presented herein.

For more information on climate-related matters and the Corporation's climate-related goals and commitments, including plans to achieve its Net Zero goal and 2030 Financing Activity Emissions Targets and progress on its sustainable finance goals, see the Corporation's website, including its 2023 Task Force on Climate-related Financial Disclosures (TCFD) Report. The contents of the Corporation's website, including the 2023 TCFD Report is not incorporated by reference into this Annual Report on Form 10-K.

The foregoing discussion and the statements on the Corporations' website, including in the 2023 TCFD Report regarding its goals and commitments with respect to climate risk management, such as environmental transition considerations, contain "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are not guarantees of future results or performance and involve certain known and unknown risks, uncertainties and assumptions that are difficult to predict and are often beyond the Corporation's control. Actual outcomes and results may differ materially from those expressed in, or implied by, any of these forward-looking statements.

Complex Accounting Estimates

Our significant accounting principles, as described in *Note 1 – Summary of Significant Accounting Principles* to the Consolidated Financial Statements, are essential in understanding the MD&A. Many of our significant accounting principles require complex judgments to estimate the values of assets and liabilities. We have procedures and processes in place to facilitate making these judgments.

The more judgmental estimates are summarized in the following discussion. We have identified and described the development of the variables most important in the estimation processes that involve mathematical models to derive the estimates. In many cases, there are numerous alternative judgments that could be used in the process of determining the inputs to the models. Where alternatives exist, we have used the factors that we believe represent the most reasonable value in developing the inputs. Actual performance that differs from our estimates of the key variables could materially impact our results of operations. Separate from the possible future impact to our results of operations from input and model variables, the value of our lending portfolio and market-sensitive assets and liabilities may change subsequent to the balance sheet date, often significantly, due to the nature and magnitude of future credit and market conditions. Such credit and market conditions may change quickly and in unforeseen ways and the resulting volatility could have a significant, negative effect on future operating results. These fluctuations would not be indicative of deficiencies in our models or inputs.

Allowance for Credit Losses

The allowance for credit losses includes the allowance for loan and lease losses and the reserve for unfunded lending commitments. Our process for determining the allowance for credit losses is discussed in *Note 1 – Summary of Significant Accounting Principles* and *Note 5 – Outstanding Loans and Leases and Allowance for Credit Losses* to the Consolidated Financial Statements.

The determination of the allowance for credit losses is based on numerous estimates and assumptions, which require a high degree of judgment and are often interrelated. A critical judgment in the process is the weighting of our forward-looking macroeconomic scenarios that are incorporated into our quantitative models. As any one economic outlook is inherently uncertain, the Corporation uses multiple macroeconomic scenarios in its ECL calculation, which have included a baseline scenario derived from consensus estimates, an adverse scenario reflecting an extended moderate recession, a downside scenario reflecting persistent inflation and interest rates above the baseline scenario, a tail risk scenario similar to the severely adverse scenario used in stress testing and an upside scenario that considers the potential for improvement above the baseline scenario. The overall economic outlook is weighted towards a recessionary environment in the first half of 2024, with lower gross domestic product (GDP) growth and higher unemployment rate expectations as compared to what we experienced in the prior year. Generally, as the consensus estimates improve or deteriorate, the allowance for credit losses will change in a similar direction. There are multiple variables that drive the macroeconomic scenarios with the key variables including, but not limited to, U.S. GDP and unemployment rates. As of December 31, 2022, the weighted macroeconomic outlook for the U.S. average unemployment rate was forecasted at 5.6 percent, 5.0 percent and 4.5 percent in the fourth quarters of 2023, 2024 and 2025, respectively, and the weighted macroeconomic outlook for U.S. GDP was forecasted to contract 0.4 percent and grow 1.2 percent and 1.9 percent year-over-year in the fourth quarters of 2023, 2024 and 2025, respectively. As of December 31, 2023, the latest consensus estimates for the U.S. average unemployment rate for the fourth quarter of 2023 was 3.9 percent and U.S. GDP was forecasted to grow 2.6 percent year-over-year in the fourth quarter of 2023, reflecting a tighter labor market and healthy growth compared to our macroeconomic outlook as of December 31, 2022, and were factored into our allowance for credit losses estimate as of December 31, 2023. In addition, as of December 31, 2023, the weighted macroeconomic outlook for the U.S. average unemployment rate was forecasted at 4.9 percent in the fourth quarters of both 2024 and 2025, and the weighted macroeconomic outlook for U.S. GDP was forecasted to grow 0.3 percent and 1.4 percent year-over-year in the fourth quarters of 2024 and 2025.

In addition to the above judgments and estimates, the allowance for credit losses can also be impacted by unanticipated changes in asset quality of the portfolio, such as increases or decreases in credit and/or internal risk ratings in our commercial portfolio, improvement or deterioration in borrower delinquencies or credit scores in our credit card portfolio and increases or decreases in home prices, which is a primary driver of LTVs, in our consumer real estate portfolio, all of which have some degree of uncertainty. The allowance for credit losses increased to $14.6 billion from $14.2 billion at December 31, 2022, primarily due to a reserve build in our consumer portfolio driven by credit card loan growth and asset quality, partially offset by a reserve release in our commercial portfolio primarily driven by improved macroeconomic conditions applicable to the commercial portfolio.

To provide an illustration of the sensitivity of the macroeconomic scenarios and other assumptions on the estimate of our allowance for credit losses, the Corporation compared the December 31, 2023 modeled ECL from the baseline scenario and our adverse scenario. Relative to the baseline scenario, the adverse scenario assumed a peak U.S. unemployment rate of over two percentage points higher than the baseline scenario, a decline in U.S. GDP followed by a prolonged recovery and a lower home price outlook with a difference of approximately 16 percent at the trough. This sensitivity analysis resulted in a hypothetical increase in the allowance for credit losses of approximately $3.8 billion.

While the sensitivity analysis may be useful to understand how changes in macroeconomic assumptions could impact our modeled ECLs, it is not meant to forecast how our allowance for credit losses is expected to change in a different macroeconomic outlook. Importantly, the analysis does not incorporate a variety of factors, including qualitative reserves and the weighting of alternate scenarios, which could have offsetting effects on the estimate. Considering the variety of factors contemplated when developing and weighting macroeconomic outlooks such as recent economic events, leading economic indicators, views of internal and third-party economists and industry trends, in addition to other qualitative factors, the Corporation believes the allowance for credit losses at December 31, 2023 is appropriate.

Fair Value of Financial Instruments

Under applicable accounting standards, we are required to maximize the use of observable inputs and minimize the use of unobservable inputs in measuring fair value. We classify fair value measurements of financial instruments and MSRs based on the three-level fair value hierarchy in the accounting standards.

The fair values of assets and liabilities may include adjustments, such as market liquidity and credit quality, where appropriate. Valuations of products using models or other techniques are sensitive to assumptions used for the significant inputs. Where market data is available, the inputs used for valuation reflect that information as of our valuation date. Inputs to valuation models are considered unobservable if they are supported by little or no market activity. In periods of extreme volatility, lessened liquidity or in illiquid markets, there may be more variability in market pricing or a lack of market data to use in the valuation process. In keeping with the prudent application of estimates and management judgment in determining the fair value of assets and liabilities, we have in place various processes and controls that include: a model validation policy that requires review and approval of quantitative models used for deal pricing, financial statement fair value determination and risk quantification; a trading product valuation policy that requires verification of all traded product valuations; and a periodic review and substantiation of daily profit and loss reporting for all traded products. Primarily through validation controls, we utilize both broker and pricing service inputs which can and do include both market-observable and internally-modeled values and/or valuation inputs. Our reliance on this information is affected by our understanding of how the broker and/or pricing service develops its data with a higher degree of reliance applied to those that are more directly observable and lesser reliance applied to those developed through their own internal modeling. For example, broker quotes in less active markets may only be indicative and therefore less reliable. These processes and controls are performed independently of the business. For more information, see *Note 20 – Fair Value Measurements* and *Note 21 – Fair Value Option* to the Consolidated Financial Statements.

Level 3 Assets and Liabilities

Financial assets and liabilities, and MSRs, where values are based on valuation techniques that require inputs that are both unobservable and are significant to the overall fair value measurement are classified as Level 3 under the fair value hierarchy established in applicable accounting standards. The fair value of these Level 3 financial assets and liabilities and MSRs is determined using pricing models, discounted cash flow methodologies or similar techniques for which the determination of fair value requires significant management judgment or estimation.

Level 3 financial instruments may be hedged with derivatives classified as Level 1 or 2; therefore, gains or losses associated with Level 3 financial instruments may be offset by gains or losses associated with financial instruments classified in other levels of the fair value hierarchy. The Level 3 gains and losses recorded in earnings did not have a significant impact on our liquidity or capital. We conduct a review of our fair value hierarchy classifications on a quarterly basis. Transfers into or out of Level 3 are made if the significant inputs used in the financial models measuring the fair values of the assets and liabilities became unobservable or observable, respectively, in the current marketplace. For more information on transfers into and out of Level 3 during 2023, 2022 and 2021, see *Note 20 – Fair Value Measurements* to the Consolidated Financial Statements.

Accrued Income Taxes and Deferred Tax Assets

Accrued income taxes, reported as a component of either other assets or accrued expenses and other liabilities on the Consolidated Balance Sheet, represent the net amount of current income taxes we expect to pay to or receive from various taxing jurisdictions attributable to our operations to date. We currently file income tax returns in more than 100 jurisdictions and consider many factors, including statutory, judicial and regulatory guidance, in estimating the appropriate accrued income taxes for each jurisdiction.

Net deferred tax assets, reported as a component of other assets on the Consolidated Balance Sheet, represent the net decrease in taxes expected to be paid in the future because of net operating loss (NOL) and tax credit carryforwards and because of future reversals of temporary differences in the bases of assets and liabilities as measured by tax laws and their bases as reported in the financial statements. NOL and tax credit carryforwards result in reductions to future tax liabilities, and many of these attributes can expire if not utilized within certain periods. We consider the need for valuation allowances to reduce net deferred tax assets to the amounts that we estimate are more likely than not to be realized.

Consistent with the applicable accounting guidance, we monitor relevant tax authorities and change our estimates of accrued income taxes and/or net deferred tax assets due to changes in income tax laws and their interpretation by the courts and regulatory authorities. These revisions of our estimates, which also may result from our income tax planning and from the resolution of income tax audit matters, may be material to our operating results for any given period.

See *Note 19 – Income Taxes* to the Consolidated Financial Statements for a table of significant tax attributes and additional information. For more information, see page 17 under Item 1A. Risk Factors – Regulatory, Compliance and Legal.

Goodwill and Intangible Assets

The nature of and accounting for goodwill and intangible assets are discussed in *Note 1 – Summary of Significant Accounting Principles* and *Note 7 – Goodwill and Intangible Assets* to the Consolidated Financial Statements.

The Corporation tests its goodwill for impairment on June 30 of each year or more frequently if events or circumstances indicate a potential impairment. We completed our annual goodwill impairment test as of June 30, 2023, by performing a quantitative assessment to compare the fair value of each reporting unit to its carrying value as measured by allocated equity. Based on our assessment, we have concluded that goodwill was not impaired.

The Corporation chose to perform the quantitative assessment as compared to a qualitative assessment that was performed in the prior year due to the level of interest rates and other market conditions existing at June 30, 2023. The quantitative assessment used a combination of an income approach (which utilizes the present value of cash flows to estimate fair value) and a market multiplier approach (which utilizes observable market prices and metrics of peer companies to estimate fair value). The main assumptions used in the income approach are the Corporation’s three-year internal forecasts along with long-term terminal growth values. The main assumptions used in the market multiplier approach are primarily enterprise value and equity multiples from comparable publicly traded companies in industries similar to the reporting unit.

Certain Contingent Liabilities

For more information on the complex judgments associated with certain contingent liabilities, see *Note 12 – Commitments and Contingencies* to the Consolidated Financial Statements.