

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q

(Mark One)

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

For the Quarterly Period Ended September 30, 2022

or

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

For the transition period from to

Commission file number:
1-6523

Exact name of registrant as specified in its charter:
Bank of America Corporation

State or other jurisdiction of incorporation or organization:
Delaware

IRS Employer Identification No.:
56-0906609

Address of principal executive offices:
Bank of America Corporate Center
100 N. Tryon Street
Charlotte, North Carolina 28255

Registrant's telephone number, including area code:
(704) 386-5681

Former name, former address and former fiscal year, if changed since last report:

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

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value \$0.01 per share	BAC	New York Stock Exchange
Depositary Shares, each representing a 1/1,000th interest in a share of Floating Rate Non-Cumulative Preferred Stock, Series E	BAC PrE	New York Stock Exchange
Depositary Shares, each representing a 1/1,000th interest in a share of 6.000% Non-Cumulative Preferred Stock, Series GG	BAC PrB	New York Stock Exchange
Depositary Shares, each representing a 1/1,000th interest in a share of 5.875% Non-Cumulative Preferred Stock, Series HH	BAC PrK	New York Stock Exchange
7.25% Non-Cumulative Perpetual Convertible Preferred Stock, Series L	BAC PrL	New York Stock Exchange
Depositary Shares, each representing a 1/1,200th interest in a share of Bank of America Corporation Floating Rate Non-Cumulative Preferred Stock, Series 1	BML PrG	New York Stock Exchange

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Depository Shares, each representing a 1/1,200th interest in a share of Bank of America Corporation Floating Rate Non-Cumulative Preferred Stock, Series 2	BML PrH	New York Stock Exchange
Depository Shares, each representing a 1/1,200th interest in a share of Bank of America Corporation Floating Rate Non-Cumulative Preferred Stock, Series 4	BML PrJ	New York Stock Exchange
Depository Shares, each representing a 1/1,200th interest in a share of Bank of America Corporation Floating Rate Non-Cumulative Preferred Stock, Series 5	BML PrL	New York Stock Exchange
Floating Rate Preferred Hybrid Income Term Securities of BAC Capital Trust XIII (and the guarantee related thereto)	BAC/PF	New York Stock Exchange
5.63% Fixed to Floating Rate Preferred Hybrid Income Term Securities of BAC Capital Trust XIV (and the guarantee related thereto)	BAC/PG	New York Stock Exchange
Income Capital Obligation Notes initially due December 15, 2066 of Bank of America Corporation	MER PrK	New York Stock Exchange
Senior Medium-Term Notes, Series A, Step Up Callable Notes, due November 28, 2031 of BofA Finance LLC (and the guarantee of the Registrant with respect thereto)	BAC/31B	New York Stock Exchange
Depository Shares, each representing a 1/1,000th interest in a share of 5.375% Non-Cumulative Preferred Stock, Series KK	BAC PrM	New York Stock Exchange
Depository Shares, each representing a 1/1,000th interest in a share of 5.000% Non-Cumulative Preferred Stock, Series LL	BAC PrN	New York Stock Exchange
Depository Shares, each representing a 1/1,000th interest in a share of 4.375% Non-Cumulative Preferred Stock, Series NN	BAC PrO	New York Stock Exchange
Depository Shares, each representing a 1/1,000th interest in a share of 4.125% Non-Cumulative Preferred Stock, Series PP	BAC PrP	New York Stock Exchange
Depository Shares, each representing a 1/1,000th interest in a share of 4.250% Non-Cumulative Preferred Stock, Series QQ	BAC PrQ	New York Stock Exchange
Depository Shares, each representing a 1/1,000th interest in a share of 4.750% Non-Cumulative Preferred Stock, Series SS	BAC PrS	New York Stock Exchange

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

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

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

Indicate by check mark whether the registrant is a shell company (as defined in Exchange Act Rule 12b-2).

Yes ☐ No ☒

On October 27, 2022, there were 8,022,432,239 shares of Bank of America Corporation Common Stock outstanding.

Bank of America Corporation and Subsidiaries
September 30, 2022
Form 10-Q

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Item 2. 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, provision for credit losses, expenses, efficiency ratio, capital measures, strategy, 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 the Corporation's 2021 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 the London Interbank Offered Rate and other 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 and macroeconomic environment on the Corporation's business, financial condition and results of operations; 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 the Coronavirus Aid, Relief, and Economic Security Act and any similar or related rules and regulations; a failure or disruption in or breach of the Corporation's operational or security systems or infrastructure, or those of third parties, including as a result of cyberattacks or campaigns; 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 of widespread health emergencies or pandemics, including the magnitude and duration of the COVID-19 pandemic and its impact on U.S. and/or global financial market conditions and our business, results of operations, financial condition and prospects; the impact of

natural disasters, extreme weather events, military conflict (including the Russia/Ukraine conflict, the possible expansion of such conflict 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 Management's Discussion and Analysis of Financial Condition and Results of Operations (MD&A) are incorporated by reference into the MD&A. Certain prior-period amounts have been reclassified to conform to current-period 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, "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 September 30, 2022, the Corporation had \$3.1 trillion in assets and a headcount of approximately 213,000 employees.

As of September 30, 2022, we served clients through operations across the U.S., its territories and approximately 35 countries. Our retail banking footprint covers all major markets in the U.S., and we serve approximately 68 million consumer and small business clients with approximately 3,900 retail financial centers, approximately 16,000 ATMs, and leading digital banking platforms (www.bankofamerica.com) with approximately 43 million active users, including approximately 35 million active mobile users. We offer industry-leading support to approximately three million small business households. Our GWIM businesses, with client balances of \$3.2 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.

The Corporation's website is www.bankofamerica.com, and the Investor Relations portion of our website is <https://investor.bankofamerica.com>. We use our website to distribute company information, including as a means of disclosing material, non-public information and for complying with our disclosure obligations under Regulation FD. We routinely post and make accessible financial and other information, including environmental, social and governance (ESG) information, regarding the Corporation on our website. Investors should monitor our website, including the Investor Relations portion, in

addition to our press releases, U.S. Securities and Exchange Commission (SEC) filings, public conference calls and webcasts. Notwithstanding the foregoing, the information contained on our website as referenced in this paragraph is not incorporated by reference into this Quarterly Report on Form 10-Q.

Recent Developments

Monoline Insurance Litigation Settlement

As previously disclosed, on October 6, 2022, the Corporation and certain wholly owned subsidiaries entered into an agreement with Ambac Assurance Corporation (together with its subsidiaries, "Ambac") to resolve all pending Ambac lawsuits against the Corporation and its subsidiaries previously disclosed in the Corporation's 2021 Annual Report on Form 10-K and in prior SEC reports. Under the terms of the agreement, in exchange for the Corporation's payment of \$1.84 billion, Ambac, among other things, caused all pending litigation between the parties to be dismissed with prejudice, and released the Corporation and its subsidiaries from all outstanding claims related to Ambac's issuance of bond insurance policies for certain of the Corporation's and legacy entities' securitized pools of residential mortgage loans. The Corporation recorded litigation expense of \$354 million in the third quarter of 2022 for the portion of the settlement in excess of previously accrued amounts. For more information, see *Note 10 – Commitments and Contingencies* to the Consolidated Financial Statements.

Changes in U.S. Tax Law

On August 16, 2022, the U.S. enacted the Inflation Reduction Act of 2022, which contained a number of tax-related provisions. The tax changes included the extension and expansion of renewable energy tax credit programs, the establishment of a new 15 percent alternative minimum tax on adjusted financial statement income for large corporations and a one percent excise tax on stock repurchases. For more information, see *Financial Highlights – Income Tax Expense* on page 7.

Capital Management

In June 2022, the Board of Governors of the Federal Reserve System (Federal Reserve) announced the results of the 2022 Comprehensive Capital Analysis and Review (CCAR) supervisory stress tests, which included preliminary stress capital buffers (SCBs) that were finalized in August 2022. Based on the results, our SCB increased to 3.4 percent from 2.5 percent, resulting in a minimum Common equity tier 1 (CET1) capital ratio requirement of 10.4 percent under the Standardized approach, effective October 1, 2022 through September 30, 2023.

On October 19, 2022, the Corporation's Board of Directors (the Board) declared a quarterly common stock dividend of \$0.22 per share, payable on December 30, 2022 to shareholders of record as of December 2, 2022.

For more information on our capital resources, see *Capital Management* on page 23.

Russia/Ukraine Conflict

As previously disclosed, due to the Russia/Ukraine conflict, there has been significant volatility in financial and commodities markets, and multiple jurisdictions have implemented various economic sanctions. At September 30, 2022, June 30, 2022 and December 31, 2021, our direct net country exposure to Russia was \$461 million, \$550 million and \$733 million,

primarily consisting of outstanding loans and leases totaling \$390 million, \$468 million and \$686 million, respectively, and our net country exposure to Ukraine was not significant. While the Corporation's direct exposure to Russia is limited, the potential duration, course and impact of the Russia/Ukraine conflict remain uncertain and could adversely affect macroeconomic and geopolitical conditions, which could negatively impact the Corporation's businesses, results of operations and financial position. For more information on the Russia/Ukraine conflict, including related risks, see Recent Developments – Russia/Ukraine in the MD&A of the Corporation's quarterly reports on Form 10-Q for the quarters ended June 30, 2022 and March 31, 2022, and the Market and Geopolitical sections within Item 1A. Risk Factors of the Corporation's 2021 Annual Report on Form 10-K.

LIBOR and Other Benchmark Rates

Immediately after December 31, 2021, ICE Benchmark Administration ceased publishing British Pound Sterling (GBP), Euro, Swiss Franc, and Japanese Yen (JPY) London Interbank Offered Rate (LIBOR) settings and one-week and two-month U.S. dollar (USD) LIBOR settings. However, certain GBP and JPY LIBOR settings that became no longer representative of the underlying market that such rates sought to measure are being published using a modified calculation (i.e., on a "synthetic" basis). The remaining USD LIBOR settings (i.e., overnight, one month, three month, six month and 12 month) will cease or become non-representative immediately after June 30, 2023.

The Corporation continues to execute its enterprise-wide transition program with respect to LIBOR and other impacted benchmark rates. The Corporation has ceased entering into new contracts that use USD LIBOR as a reference rate, subject to limited exceptions, including those consistent with supervisory guidance issued by the Federal Reserve, the Office of the Comptroller of the Currency and the Federal Deposit Insurance

Corporation (FDIC). The Corporation also continues to monitor a variety of market scenarios as part of its transition efforts, including risks associated with insufficient preparation by individual market participants or the overall market ecosystem, ability of market participants to transition away from impacted benchmarks, and access and demand by clients and market participants to liquidity in certain products, including LIBOR products.

As previously disclosed, the Corporation has remediated a significant majority of its notional contractual exposure to LIBOR products referencing USD LIBOR settings that will cease or become non-representative immediately after June 30, 2023 (i.e., updated to include fallback provisions to alternative reference rates (ARRs), such as the Secured Overnight Financing Rate for USD LIBOR, that are based on market-driven protocols, regulatory guidance, and industry-recommended fallback provisions and related mechanisms). The remaining non-remediated USD LIBOR exposure, a majority of which is made up of derivatives and commercial loans, represents a small minority of outstanding USD LIBOR notional contractual exposure of the Corporation and requires active dialogue with clients to modify such contracts. For any residual exposures after June 2023 that continue to have no fallback provisions, the Corporation is assessing and planning to leverage relevant contractual and statutory solutions, including the Adjustable Interest Rate (LIBOR) Act, enacted in March 2022 at the federal level in the U.S. and subject to the issuance of final implementing rules by the Federal Reserve, and other relevant legislation, to transition such exposure to ARRs.

For more information on the expected replacement of LIBOR and other benchmark rates, see Executive Summary – Recent Developments – LIBOR and Other Benchmark Rates in the MD&A and Item 1A. Risk Factors – Other of the Corporation's 2021 Annual Report on Form 10-K.

Financial Highlights

Table 1 Summary Income Statement and Selected Financial Data

	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
(Dollars in millions, except per share information)				
Income statement				
Net interest income	\$ 13,765	\$ 11,094	\$ 37,781	\$ 31,524
Noninterest income	10,737	11,672	32,637	35,529
Total revenue, net of interest expense	24,502	22,766	70,418	67,053
Provision for credit losses	898	(624)	1,451	(4,105)
Noninterest expense	15,303	14,440	45,895	45,000
Income before income taxes	8,301	8,950	23,072	26,158
Income tax expense	1,219	1,259	2,676	1,193
Net income	7,082	7,691	20,396	24,965
Preferred stock dividends	503	431	1,285	1,181
Net income applicable to common shareholders	\$ 6,579	\$ 7,260	\$ 19,111	\$ 23,784
Per common share information				
Earnings	\$ 0.81	\$ 0.86	\$ 2.35	\$ 2.77
Diluted earnings	0.81	0.85	2.34	2.75
Dividends paid	0.22	0.21	0.64	0.57
Performance ratios				
Return on average assets ⁽¹⁾	0.90 %	0.99 %	0.86 %	1.12 %
Return on average common shareholders' equity ⁽¹⁾	10.79	11.43	10.58	12.67
Return on average tangible common shareholders' equity ⁽²⁾	15.21	15.85	14.93	17.61
Efficiency ratio ⁽¹⁾	62.45	63.43	65.17	67.11
			September 30 2022	December 31 2021
Balance sheet				
Total loans and leases			\$ 1,032,466	\$ 979,124
Total assets			3,072,953	3,169,495
Total deposits			1,938,097	2,064,446
Total liabilities			2,803,429	2,899,429
Total common shareholders' equity			240,390	245,358
Total shareholders' equity			269,524	270,066

⁽¹⁾ For definitions, see Key Metrics on page 101.

⁽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 48.

Net income was \$7.1 billion and \$20.4 billion, or \$0.81 and \$2.34 per diluted share, for the three and nine months ended September 30, 2022 compared to \$7.7 billion and \$25.0 billion, or \$0.85 and \$2.75 per diluted share, for the same periods in 2021. The decrease in net income was primarily due to an increase in provision for credit losses, lower noninterest income and higher noninterest expense, partially offset by higher net interest income. In addition, the nine-month period in the prior year included a positive income tax adjustment related to the revaluation of U.K. net deferred tax assets.

Total assets decreased \$96.5 billion from December 31, 2021 to \$3.1 trillion primarily driven by lower cash and cash equivalents due to deposit outflows related to the rising interest rate environment and lower debt securities, partially offset by loan growth across commercial and consumer products, as well as higher trading account assets and derivative assets to support *Global Markets* activity.

Total liabilities decreased \$96.0 billion from December 31, 2021 to \$2.8 trillion primarily driven by deposit outflows related to the rising interest rate environment and customer tax payments.

Shareholders' equity decreased \$542 million from December 31, 2021 primarily due to market value decreases on derivatives and debt securities, as well as returns of capital to

shareholders through common and preferred stock dividends and common stock repurchases, partially offset by net income and the issuance of preferred stock.

Net Interest Income

Net interest income increased \$2.7 billion to \$13.8 billion, and \$6.3 billion to \$37.8 billion for the three and nine months ended September 30, 2022 compared to the same periods in 2021. Net interest yield on a fully taxable-equivalent (FTE) basis increased 38 basis points (bps) to 2.06 percent, and 21 bps to 1.87 percent for the same periods. The increase in net interest income for the three-month period was primarily driven by benefits from higher interest rates, including lower premium amortization expense, and loan growth, partially offset by lower deposits and securities. The increase in the nine-month period was primarily driven by lower premium amortization expense, loan growth and higher interest rates, partially offset by a decrease in the acceleration of net capitalized loan fees due to Paycheck Protection Program (PPP) loan forgiveness. For more information on net interest yield and the FTE basis, see Supplemental Financial Data on page 8, and for more information on interest rate risk management, see Interest Rate Risk Management for the Banking Book on page 45.

Noninterest Income

Table 2 Noninterest Income

(Dollars in millions)	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
Fees and commissions:				
Card income	\$ 1,573	\$ 1,583	\$ 4,531	\$ 4,604
Service charges	1,466	1,928	5,016	5,594
Investment and brokerage services	3,795	4,236	12,178	12,422
Investment banking fees	1,167	2,168	3,752	6,536
Total fees and commissions	8,001	9,915	25,477	29,156
Market making and similar activities	3,068	2,005	9,023	7,360
Other income	(332)	(248)	(1,863)	(987)
Total noninterest income	\$ 10,737	\$ 11,672	\$ 32,637	\$ 35,529

Noninterest income decreased \$935 million to \$10.7 billion and decreased \$2.9 billion to \$32.6 billion for the three and nine months ended September 30, 2022 compared to the same periods in 2021. The following highlights the significant changes.

- Service charges decreased \$462 million and \$578 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 \$441 million and \$244 million primarily driven by lower market valuations.
- Investment banking fees decreased \$1.0 billion and \$2.8 billion primarily driven by a decline in demand resulting in lower equity and debt issuance fees and lower advisory fees.
- Market making and similar activities increased \$1.1 billion and \$1.7 billion primarily driven by improved performance across macro products in fixed income, currencies and commodities (FICC) and derivative products in Equities.

- Other income decreased \$84 million and \$876 million primarily due to certain valuation adjustments.

Provision for Credit Losses

The provision for credit losses increased \$1.5 billion to \$898 million and \$5.6 billion to \$1.5 billion for the three and nine months ended September 30, 2022 compared to the same periods in 2021. The provision for credit losses for the three months ended September 30, 2022 was primarily driven by loan growth and a dampening macroeconomic outlook, and the nine-month period was driven by the same factors as well as a reserve build related to Russian exposure, partially offset by asset quality improvement and reduced COVID-19 pandemic (the pandemic) uncertainties. For the same periods in the prior year, the benefit in the provision for credit losses was due to an improved macroeconomic outlook. For more information on the provision for credit losses, see Allowance for Credit Losses on page 42.

Noninterest Expense

Table 3 Noninterest Expense

	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
(Dollars in millions)				
Compensation and benefits	\$ 8,887	\$ 8,714	\$ 27,286	\$ 27,103
Occupancy and equipment	1,777	1,764	5,285	5,353
Information processing and communications	1,546	1,416	4,621	4,289
Product delivery and transaction related	892	987	2,749	2,940
Marketing	505	347	1,365	1,528
Professional fees	525	434	1,493	1,263
Other general operating	1,171	778	3,096	2,524
Total noninterest expense	\$ 15,303	\$ 14,440	\$ 45,895	\$ 45,000

Noninterest expense increased \$863 million to \$15.3 billion and \$895 million to \$45.9 billion for the three and nine months ended September 30, 2022 compared to the same periods in 2021. The increase in the three-month period was primarily due to higher investments in people and technology and the settlement of the legacy monoline insurance litigation, partially

offset by lower net COVID-19 related costs. The increase in the nine-month period was primarily due to the same factors as described in the three-month period, as well as expenses recognized for certain regulatory matters during the second quarter of 2022.

Income Tax Expense

Table 4 Income Tax Expense

	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
(Dollars in millions)				
Income before income taxes	\$ 8,301	\$ 8,950	\$ 23,072	\$ 26,158
Income tax expense	1,219	1,259	2,676	1,193
Effective tax rate	14.7 %	14.1 %	11.6 %	4.6 %

Changes in the effective tax rates for the three and nine months ended September 30, 2022 compared to the same periods a year ago were primarily driven by changes in our recurring preference benefits. Also included in the nine months ended September 30, 2021 was the impact of the 2021 U.K. tax law change further discussed in this section. The majority of our recurring tax preference benefits consists of tax credits from ESG investments in affordable housing, where the recurring tax credits are recognized ratably over a term of up to 10 years, and wind and solar energy investments, where the tax credits are recognized either at inception for transactions electing Investment Tax Credits (ITCs) or as energy is produced if electing Production Tax Credits (PTCs), as further discussed below. Absent ESG tax credits and unusual items, the effective tax rates would have been approximately 25 percent.

On August 16, 2022, the U.S. enacted the Inflation Reduction Act of 2022, which contained a number of tax-related provisions, including the extension and expansion of renewable energy tax credit programs. In particular, partnerships are no longer limited to an ITC, but can now elect a PTC for solar energy production facilities placed in service after December 31, 2021. As a result, the Corporation changed its estimated impact of solar-related tax credits and reversed the impact of certain solar investment tax credits recognized in the first half of

2022, which increased income tax expense by \$152 million in the third quarter of 2022. If there is a change in the expected tax credit election, an income tax adjustment will be recognized in the quarter in which the change occurs.

Other notable tax law changes include the establishment of a new 15 percent alternative minimum tax (AMT) on adjusted financial statement income for large corporations and a one percent excise tax on net stock repurchases, both of which are effective for tax years beginning on or after January 1, 2023. The tax law changes for the new AMT permit business credits, including those from ESG investments in renewable energy and affordable housing, to offset potential AMT liability. The Corporation has assessed the potential impacts of these two U.S. tax law changes and does not expect the changes will have a significant effect on its future effective tax rate.

On June 10, 2021, the U.K. enacted the 2021 Finance Act, which increased the U.K. corporation income tax rate to 25 percent from 19 percent. This change is effective April 1, 2023 and unfavorably affects income tax expense on future U.K. earnings. As a result, during the three months ended June 30, 2021, the Corporation recorded a positive income tax adjustment of approximately \$2.0 billion with a corresponding write-up of U.K. net deferred tax assets, which reflected a reversal of previously recorded write-downs of net deferred tax assets for prior changes in the U.K. corporation income tax rate.

Supplemental Financial Data

Non-GAAP Financial Measures

In this Form 10-Q, 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.

We view net interest income and related ratios and analyses on an FTE basis, which when presented on a consolidated basis are non-GAAP financial measures. 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 Table 5 on page 9.

For more information on the reconciliation of these non-GAAP financial measures to the corresponding GAAP financial measures, see Non-GAAP Reconciliations on page 48.

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 101.

Our consolidated key performance indicators, which include various equity and credit metrics, are presented in Table 1 on page 5 and Table 5 on page 9.

For information on key segment performance metrics, see Business Segment Operations on page 12.

Table 5 Selected Financial Data

	2022 Quarters			2021 Quarters		Nine Months Ended September 30	
	Third	Second	First	Fourth	Third	2022	2021
(In millions, except per share information)							
Income statement							
Net interest income	\$ 13,765	\$ 12,444	\$ 11,572	\$ 11,410	\$ 11,094	\$ 37,781	\$ 31,524
Noninterest income	10,737	10,244	11,656	10,650	11,672	32,637	35,529
Total revenue, net of interest expense	24,502	22,688	23,228	22,060	22,766	70,418	67,053
Provision for credit losses	898	523	30	(489)	(624)	1,451	(4,105)
Noninterest expense	15,303	15,273	15,319	14,731	14,440	45,895	45,000
Income before income taxes	8,301	6,892	7,879	7,818	8,950	23,072	26,158
Income tax expense	1,219	645	812	805	1,259	2,676	1,193
Net income	7,082	6,247	7,067	7,013	7,691	20,396	24,965
Net income applicable to common shareholders	6,579	5,932	6,600	6,773	7,260	19,111	23,784
Average common shares issued and outstanding	8,107.7	8,121.6	8,136.8	8,226.5	8,430.7	8,122.2	8,583.1
Average diluted common shares issued and outstanding	8,160.8	8,163.1	8,202.1	8,304.7	8,492.8	8,173.3	8,702.2
Performance ratios							
Return on average assets ⁽¹⁾	0.90 %	0.79 %	0.89 %	0.88 %	0.99 %	0.86 %	1.12 %
Four-quarter trailing return on average assets ⁽²⁾	0.87	0.89	0.99	1.05	1.04	n/a	n/a
Return on average common shareholders' equity ⁽¹⁾	10.79	9.93	11.02	10.90	11.43	10.58	12.67
Return on average tangible common shareholders' equity ⁽³⁾	15.21	14.05	15.51	15.25	15.85	14.93	17.61
Return on average shareholders' equity ⁽¹⁾	10.37	9.34	10.64	10.27	11.08	10.12	12.15
Return on average tangible shareholders' equity ⁽³⁾	13.99	12.66	14.40	13.87	14.87	13.68	16.33
Total ending equity to total ending assets	8.77	8.65	8.23	8.52	8.83	8.77	8.83
Common equity ratio ⁽¹⁾	7.82	7.71	7.40	7.74	8.07	7.82	8.07
Total average equity to total average assets	8.73	8.49	8.40	8.56	8.95	8.54	9.19
Dividend payout ⁽¹⁾	27.06	28.68	25.86	25.33	24.10	27.15	20.43
Per common share data							
Earnings	\$ 0.81	\$ 0.73	\$ 0.81	\$ 0.82	\$ 0.86	\$ 2.35	\$ 2.77
Diluted earnings	0.81	0.73	0.80	0.82	0.85	2.34	2.75
Dividends paid	0.22	0.21	0.21	0.21	0.21	0.64	0.57
Book value ⁽¹⁾	29.96	29.87	29.70	30.37	30.22	29.96	30.22
Tangible book value ⁽³⁾	21.21	21.13	20.99	21.68	21.69	21.21	21.69
Market capitalization							
	\$ 242,338	\$ 250,136	\$ 332,320	\$ 359,383	\$ 349,841	\$ 242,338	\$ 349,841
Average balance sheet							
Total loans and leases	\$1,034,334	\$1,014,886	\$ 977,793	\$ 945,062	\$ 920,509		
Total assets	3,105,546	3,157,855	3,207,702	3,164,118	3,076,452		
Total deposits	1,962,775	2,012,079	2,045,811	2,017,223	1,942,705		
Long-term debt	250,204	245,781	246,042	248,525	248,988		
Common shareholders' equity	241,882	239,523	242,865	246,519	252,043		
Total shareholders' equity	271,017	268,197	269,309	270,883	275,484		
Asset quality							
Allowance for credit losses ⁽⁴⁾	\$ 13,817	\$ 13,434	\$ 13,483	\$ 13,843	\$ 14,693		
Nonperforming loans, leases and foreclosed properties ⁽⁵⁾	4,156	4,326	4,778	4,697	4,831		
Allowance for loan and lease losses as a percentage of total loans and leases outstanding ⁽⁵⁾	1.20 %	1.17 %	1.23 %	1.28 %	1.43 %		
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases ⁽⁵⁾	309	288	262	271	279		
Net charge-offs	\$ 520	\$ 571	\$ 392	\$ 362	\$ 463		
Annualized net charge-offs as a percentage of average loans and leases outstanding ⁽⁵⁾	0.20 %	0.23 %	0.16 %	0.15 %	0.20 %		
Capital ratios at period end ⁽⁶⁾							
Common equity tier 1 capital	11.0 %	10.5 %	10.4 %	10.6 %	11.1 %		
Tier 1 capital	12.8	12.3	12.0	12.1	12.6		
Total capital	14.7	14.2	14.0	14.1	14.7		
Tier 1 leverage	6.8	6.5	6.3	6.4	6.6		
Supplementary leverage ratio	5.8	5.5	5.4	5.5	5.6		
Tangible equity ⁽³⁾	6.6	6.5	6.2	6.4	6.7		
Tangible common equity ⁽³⁾	5.7	5.6	5.3	5.7	5.9		
Total loss-absorbing capacity and long-term debt metrics							
Total loss-absorbing capacity to risk-weighted assets	28.9 %	27.8 %	27.2 %	26.9 %	27.7 %		
Total loss-absorbing capacity to supplementary leverage exposure	13.0	12.6	12.2	12.1	12.4		
Eligible long-term debt to risk-weighted assets	15.2	14.7	14.4	14.1	14.4		
Eligible long-term debt to supplementary leverage exposure	6.8	6.6	6.5	6.3	6.4		

⁽¹⁾ For definitions, see Key Metrics on page 101.

⁽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 8 and Non-GAAP Reconciliations on page 48.

⁽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 35 and corresponding Table 25 and Commercial Portfolio Credit Risk Management – Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity on page 39 and corresponding Table 32.

⁽⁶⁾ For more information, including which approach is used to assess capital adequacy, see Capital Management on page 23.

n/a = not applicable

Table 6 Quarterly Average Balances and Interest Rates - FTE Basis

	Average Balance	Interest Income/ Expense ⁽¹⁾	Yield/ Rate	Average Balance	Interest Income/ Expense ⁽¹⁾	Yield/ Rate
(Dollars in millions)	Third Quarter 2022			Third Quarter 2021		
Earning assets						
Interest-bearing deposits with the Federal Reserve, non-U.S. central banks and other banks	\$ 184,263	\$ 848	1.83 %	\$ 240,054	\$ 50	0.08 %
Time deposits placed and other short-term investments	10,352	34	1.33	6,419	4	0.24
Federal funds sold and securities borrowed or purchased under agreements to resell	278,059	1,446	2.06	270,094	6	0.01
Trading account assets	163,744	1,465	3.55	147,196	979	2.64
Debt securities	901,654	4,259	1.88	949,009	3,296	1.39
Loans and leases ⁽²⁾						
Residential mortgage	228,474	1,616	2.83	215,652	1,487	2.76
Home equity	27,282	229	3.32	30,069	263	3.47
Credit card	85,009	2,187	10.20	75,569	1,952	10.25
Direct/Indirect and other consumer	108,300	923	3.38	98,148	578	2.34
Total consumer	449,065	4,955	4.39	419,438	4,280	4.06
U.S. commercial	377,183	3,427	3.60	323,659	2,315	2.84
Non-U.S. commercial	127,793	1,028	3.19	101,967	446	1.73
Commercial real estate ⁽³⁾	66,707	738	4.39	59,881	378	2.51
Commercial lease financing	13,586	124	3.65	15,564	116	2.98
Total commercial	585,269	5,317	3.61	501,071	3,255	2.58
Total loans and leases	1,034,334	10,272	3.94	920,509	7,535	3.25
Other earning assets	98,172	1,403	5.67	120,734	567	1.86
Total earning assets	2,670,578	19,727	2.94	2,654,015	12,437	1.86
Cash and due from banks	27,250			30,101		
Other assets, less allowance for loan and lease losses	407,718			392,336		
Total assets	\$ 3,105,546			\$ 3,076,452		
Interest-bearing liabilities						
U.S. interest-bearing deposits						
Demand and money market deposits	\$ 981,145	\$ 832	0.34 %	\$ 931,964	\$ 79	0.03 %
Time and savings deposits	164,313	193	0.47	162,337	41	0.10
Total U.S. interest-bearing deposits	1,145,458	1,025	0.35	1,094,301	120	0.04
Non-U.S. interest-bearing deposits	79,383	210	1.05	84,098	13	0.06
Total interest-bearing deposits	1,224,841	1,235	0.40	1,178,399	133	0.04
Federal funds purchased and securities loaned or sold under agreements to repurchase	211,346	1,338	2.51	216,869	147	0.27
Short-term borrowings and other interest-bearing liabilities ⁽⁴⁾	137,253	926	2.68	107,713	(188)	(0.69)
Trading account liabilities	46,507	383	3.27	56,496	285	2.00
Long-term debt	250,204	1,974	3.14	248,988	865	1.37
Total interest-bearing liabilities	1,870,151	5,856	1.24	1,808,465	1,242	0.27
Noninterest-bearing sources						
Noninterest-bearing deposits	737,934			764,306		
Other liabilities ⁽⁵⁾	226,444			228,197		
Shareholders' equity	271,017			275,484		
Total liabilities and shareholders' equity	\$ 3,105,546			\$ 3,076,452		
Net interest spread			1.70 %			1.59 %
Impact of noninterest-bearing sources			0.36			0.09
Net interest income/yield on earning assets ⁽⁶⁾		\$ 13,871	2.06 %		\$ 11,195	1.68 %

⁽¹⁾ Includes the impact of interest rate risk management contracts. For more information, see Interest Rate Risk Management for the Banking Book on page 45.

⁽²⁾ Nonperforming loans are included in the respective average loan balances. Income on these nonperforming loans is generally recognized on a cost recovery basis.

⁽³⁾ Includes U.S. commercial real estate loans of \$62.5 billion and \$56.0 billion, and non-U.S. commercial real estate loans of \$4.2 billion and \$3.9 billion for the third quarter of 2022 and 2021.

⁽⁴⁾ For more information on negative interest, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

⁽⁵⁾ Includes \$29.2 billion and \$29.6 billion of structured notes and liabilities for the third quarter of 2022 and 2021.

⁽⁶⁾ Net interest income includes FTE adjustments of \$106 million and \$101 million for the third quarter of 2022 and 2021.

Table 7 Year-to-Date Average Balances and Interest Rates - FTE Basis

	Average Balance	Interest Income/ Expense ⁽¹⁾	Yield/ Rate	Average Balance	Interest Income/ Expense ⁽¹⁾	Yield/ Rate
	Nine Months Ended September 30					
	2022			2021		
(Dollars in millions)						
Earning assets						
Interest-bearing deposits with the Federal Reserve, non-U.S. central banks and other banks	\$ 202,293	\$ 1,216	0.80 %	\$ 255,136	\$ 106	0.06 %
Time deposits placed and other short-term investments	9,091	58	0.86	7,738	8	0.14
Federal funds sold and securities borrowed or purchased under agreements to resell ⁽²⁾	293,971	1,835	0.83	263,581	(43)	(0.02)
Trading account assets	154,428	3,802	3.29	148,205	2,831	2.55
Debt securities	940,808	12,164	1.72	878,437	8,875	1.36
Loans and leases ⁽³⁾						
Residential mortgage	227,010	4,712	2.77	216,239	4,514	2.78
Home equity	27,492	684	3.32	31,761	811	3.41
Credit card	81,505	6,081	9.97	74,383	5,775	10.38
Direct/Indirect and other consumer	107,204	2,198	2.74	94,658	1,698	2.40
Total consumer	443,211	13,675	4.12	417,041	12,798	4.10
U.S. commercial	362,669	8,079	2.98	322,773	6,415	2.66
Non-U.S. commercial	124,965	2,228	2.38	96,445	1,284	1.78
Commercial real estate ⁽⁴⁾	64,295	1,601	3.33	59,632	1,114	2.50
Commercial lease financing	14,071	334	3.17	16,200	356	2.94
Total commercial	566,000	12,242	2.89	495,050	9,169	2.48
Total loans and leases	1,009,211	25,917	3.43	912,091	21,967	3.22
Other earning assets	108,968	2,813	3.45	106,978	1,696	2.12
Total earning assets	2,718,770	47,805	2.35	2,572,166	35,440	1.84
Cash and due from banks	28,116			31,886		
Other assets, less allowance for loan and lease losses	409,771			386,932		
Total assets	\$ 3,156,657			\$ 2,990,984		
Interest-bearing liabilities						
U.S. interest-bearing deposits						
Demand and money market deposits	\$ 989,364	\$ 1,101	0.15 %	\$ 912,547	\$ 234	0.03 %
Time and savings deposits	161,707	275	0.23	161,156	132	0.11
Total U.S. interest-bearing deposits	1,151,071	1,376	0.16	1,073,703	366	0.05
Non-U.S. interest-bearing deposits	80,235	343	0.57	82,743	28	0.04
Total interest-bearing deposits	1,231,306	1,719	0.19	1,156,446	394	0.05
Federal funds purchased and securities loaned or sold under agreements to repurchase ⁽⁵⁾	214,404	1,871	1.17	208,431	381	0.24
Short-term borrowings and other interest-bearing liabilities ^(2,5)	132,873	834	0.84	104,395	(586)	(0.75)
Trading account liabilities	54,852	1,117	2.72	52,797	824	2.09
Long-term debt	247,357	4,168	2.25	234,056	2,581	1.48
Total interest-bearing liabilities	1,880,792	9,709	0.69	1,756,125	3,594	0.27
Noninterest-bearing sources						
Noninterest-bearing deposits	775,278			723,151		
Other liabilities ⁽⁶⁾	231,073			236,982		
Shareholders' equity	269,514			274,726		
Total liabilities and shareholders' equity	\$ 3,156,657			\$ 2,990,984		
Net interest spread			1.66 %			1.57 %
Impact of noninterest-bearing sources			0.21			0.09
Net interest income/yield on earning assets ⁽⁷⁾		\$ 38,096	1.87 %		\$ 31,846	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 45.

⁽²⁾ For more information on negative interest, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

⁽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 \$60.0 billion and \$56.2 billion and non-U.S. commercial real estate loans of \$4.3 billion and \$3.4 billion for the nine months ended September 30, 2022 and 2021.

⁽⁵⁾ Certain prior-period amounts have been reclassified to conform to current-period presentation.

⁽⁶⁾ Includes \$29.7 billion and \$30.5 billion of structured notes and liabilities for the nine months ended September 30, 2022 and 2021.

⁽⁷⁾ Net interest income includes FTE adjustments of \$315 million and \$322 million for the nine months ended September 30, 2022 and 2021.

Business Segment Operations

Segment Description and Basis of Presentation

We report our results of operations through 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. For more information, see Business Segment Operations in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

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 22. 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 8, and for reconciliations to consolidated total revenue, net income and period-end total assets, see *Note 17 – 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

	Deposits		Consumer Lending		Total Consumer Banking		% Change
	2022	2021	2022	2021	2022	2021	
(Dollars in millions)							
Net interest income	\$ 5,006	\$ 3,730	\$ 2,778	\$ 2,763	\$ 7,784	\$ 6,493	20 %
Noninterest income:							
Card income	(10)	(7)	1,341	1,324	1,331	1,317	1
Service charges	597	934	—	1	597	935	(36)
All other income	141	58	51	35	192	93	106
Total noninterest income	728	985	1,392	1,360	2,120	2,345	(10)
Total revenue, net of interest expense	5,734	4,715	4,170	4,123	9,904	8,838	12
Provision for credit losses	173	53	565	194	738	247	n/m
Noninterest expense	3,141	2,724	1,956	1,834	5,097	4,558	12
Income before income taxes	2,420	1,938	1,649	2,095	4,069	4,033	1
Income tax expense	593	475	404	513	997	988	1
Net income	\$ 1,827	\$ 1,463	\$ 1,245	\$ 1,582	\$ 3,072	\$ 3,045	1
Effective tax rate ⁽¹⁾					24.5 %	24.5 %	
Net interest yield	1.87 %	1.49 %	3.76 %	3.95 %	2.79 %	2.49 %	
Return on average allocated capital	56	48	18	24	30	31	
Efficiency ratio	54.78	57.75	46.92	44.48	51.47	51.56	

Balance Sheet

Average	Three Months Ended September 30		Three Months Ended September 30		Three Months Ended September 30		% Change
	2022	2021	2022	2021	2022	2021	
Total loans and leases	\$ 4,153	\$ 4,387	\$ 291,078	\$ 276,993	\$ 295,231	\$ 281,380	5 %
Total earning assets ⁽²⁾	1,064,585	991,186	293,366	277,491	1,106,513	1,034,471	7
Total assets ⁽²⁾	1,096,911	1,026,811	300,374	283,631	1,145,846	1,076,236	6
Total deposits	1,063,075	993,624	6,018	7,141	1,069,093	1,000,765	7
Allocated capital	13,000	12,000	27,000	26,500	40,000	38,500	4

⁽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

	Deposits		Consumer Lending		Total Consumer Banking		
	Nine Months Ended September 30						
(Dollars in millions)	2022	2021	2022	2021	2022	2021	% Change
Net interest income	\$ 13,535	\$ 10,489	\$ 8,016	\$ 7,897	\$ 21,551	\$ 18,386	17 %
Noninterest income:							
Card income	(27)	(19)	3,863	3,837	3,836	3,818	—
Service charges	2,118	2,615	2	2	2,120	2,617	(19)
All other income	264	151	82	121	346	272	27
Total noninterest income	2,355	2,747	3,947	3,960	6,302	6,707	(6)
Total revenue, net of interest expense	15,890	13,236	11,963	11,857	27,853	25,093	11
Provision for credit losses	388	174	648	(1,241)	1,036	(1,067)	n/m
Noninterest expense	9,204	8,789	5,773	5,759	14,977	14,548	3
Income before income taxes	6,298	4,273	5,542	7,339	11,840	11,612	2
Income tax expense	1,543	1,047	1,358	1,798	2,901	2,845	2
Net income	\$ 4,755	\$ 3,226	\$ 4,184	\$ 5,541	\$ 8,939	\$ 8,767	2
Effective tax rate ⁽¹⁾					24.5 %	24.5 %	
Net interest yield	1.70 %	1.46 %	3.73 %	3.76 %	2.61 %	2.45 %	
Return on average allocated capital	49	36	21	28	30	30	
Efficiency ratio	57.92	66.40	48.26	48.57	53.77	57.97	

Balance Sheet

Average	Nine Months Ended September 30						% Change
	2022	2021	2022	2021	2022	2021	
	2022	2021	2022	2021	2022	2021	
Total loans and leases	\$ 4,171	\$ 4,479	\$ 285,501	\$ 280,165	\$ 289,672	\$ 284,644	2 %
Total earning assets ⁽²⁾	1,062,668	957,561	287,422	280,617	1,104,653	1,001,590	10
Total assets ⁽²⁾	1,095,830	994,562	294,193	285,813	1,144,587	1,043,787	10
Total deposits	1,061,876	961,266	5,909	7,006	1,067,785	968,272	10
Allocated capital	13,000	12,000	27,000	26,500	40,000	38,500	4

Period end	September 30 2022	December 31 2021	September 30 2022	December 31 2021	September 30 2022	December 31 2021	% Change
Total loans and leases	\$ 4,134	\$ 4,206	\$ 293,691	\$ 282,305	\$ 297,825	\$ 286,511	4 %
Total earning assets ⁽²⁾	1,068,130	1,048,009	295,637	282,850	1,110,524	1,090,331	2
Total assets ⁽²⁾	1,100,517	1,082,449	302,644	289,220	1,149,918	1,131,142	2
Total deposits	1,066,522	1,049,085	6,058	5,910	1,072,580	1,054,995	2

See page 12 for footnotes.
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. For more information about *Consumer Banking*, see Business Segment Operations in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

Consumer Banking Results

Three-Month Comparison

Net income for *Consumer Banking* increased \$27 million to \$3.1 billion due to higher revenue, largely offset by higher noninterest expense and an increase in provision for credit losses. Net interest income increased \$1.3 billion to \$7.8 billion primarily due to higher interest rates and the benefits of higher deposit and loan balances, partially offset by a decrease in the acceleration of net capitalized loan fees due to PPP loan forgiveness. Noninterest income decreased \$225 million to \$2.1 billion primarily driven by the impact of non-sufficient funds and overdraft policy changes.

The provision for credit losses increased \$491 million to \$738 million primarily driven by loan growth in the current-year period compared to the prior-year period that benefited from an improved macroeconomic outlook. Noninterest expense increased \$539 million to \$5.1 billion primarily driven by continued investments for business growth, including marketing, technology and compensation and benefits expenses, as well as increased client activity.

The return on average allocated capital was 30 percent, down from 31 percent, primarily driven by an increase in allocated capital. For more information on capital allocated to the business segments, see Business Segment Operations on page 12.

Nine-Month Comparison

Net income for *Consumer Banking* increased \$172 million to \$8.9 billion due to higher revenue, partially offset by an increase in provision for credit losses and higher noninterest expense. Net interest income increased \$3.2 billion to \$21.6 billion primarily due to the same factors as described in the three-month discussion. Noninterest income decreased \$405 million to \$6.3 billion primarily driven by the impact of non-sufficient funds and overdraft policy changes and lower mortgage banking income, partially offset by higher other service charges and card income due to increased client activity.

The provision for credit losses increased \$2.1 billion to \$1.0 billion primarily driven by loan growth and a dampening macroeconomic outlook in the current-year period compared to a benefit in the prior-year period due to an improved macroeconomic outlook. Noninterest expense increased \$429 million to \$15.0 billion primarily driven by continued investments for business growth and increased client activity, partially offset by an impairment charge for real estate rationalization and the contribution to the Bank of America Foundation in the prior-year period.

The return on average allocated capital was 30 percent, unchanged from the prior-year period.

Deposits

Three-Month Comparison

Net income for Deposits increased \$364 million to \$1.8 billion due to higher revenue, partially offset by higher noninterest expense. Net interest income increased \$1.3 billion to \$5.0 billion primarily due to higher interest rates and the benefit of higher deposit balances. Noninterest income decreased \$257 million to \$728 million primarily driven by the impact of non-sufficient funds and overdraft policy changes.

Noninterest expense increased \$417 million to \$3.1 billion primarily driven by continued investments for business growth and increased client activity.

Average deposits increased \$69.5 billion to \$1.1 trillion primarily due to net inflows of \$38.8 billion in checking and \$33.3 billion in money market savings largely driven by strong organic growth.

Nine-Month Comparison

Net income for Deposits increased \$1.5 billion to \$4.8 billion primarily due to higher revenue, partially offset by higher

noninterest expense. Net interest income increased \$3.0 billion to \$13.5 billion primarily due to the same factors as described in the three-month discussion. Noninterest income decreased \$392 million to \$2.4 billion primarily due to the same factor as described in the three-month discussion.

Noninterest expense increased \$415 million to \$9.2 billion primarily driven by continued investments for business growth and increased client activity, partially offset by an impairment charge for real estate rationalization in the prior-year period.

Average deposits increased \$100.6 billion to \$1.1 trillion primarily due to net inflows of \$58.4 billion in checking and \$42.2 billion in money market savings largely driven by strong organic growth.

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

Total deposit spreads (excludes noninterest costs) ⁽¹⁾

Period End

Consumer investment assets (in millions) ⁽²⁾
Active digital banking users (in thousands) ⁽³⁾
Active mobile banking users (in thousands) ⁽⁴⁾
Financial centers
ATMs

Three Months Ended September 30		Nine Months Ended September 30	
2022	2021	2022	2021
1.88%	1.68%	1.74%	1.70%
		\$ 302,413	\$ 353,280
		43,496	40,911
		34,922	32,455
		3,932	4,215
		15,572	16,513

⁽¹⁾ Includes deposits held in Consumer Lending.

⁽²⁾ Includes client brokerage assets, deposit sweep balances 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 decreased \$50.9 billion to \$302.4 billion driven by market performance, partially offset by client flows. Active mobile banking users increased approximately two million, reflecting continuing changes in our clients' banking preferences. We had a net decrease of 283 financial centers and 941 ATMs as we continue to optimize our consumer banking network.

Consumer Lending

Three-Month Comparison

Net income for Consumer Lending decreased \$337 million to \$1.2 billion primarily due to an increase in provision for credit losses. Net interest income increased \$15 million to \$2.8 billion primarily due to higher interest rates and loan balances, largely offset by a decrease in the acceleration of net capitalized loan fees due to PPP loan forgiveness. Noninterest income increased \$32 million to \$1.4 billion primarily driven by higher card income.

The provision for credit losses increased \$371 million to \$565 million primarily driven by loan growth in the current-year period compared to the prior-year period that benefited from an improved macroeconomic outlook. Noninterest expense increased \$122 million to \$2.0 billion primarily driven by increased client activity.

Average loans increased \$14.1 billion to \$291.1 billion primarily driven by an increase in credit card loans and first mortgage loans, partially offset by a decline in PPP loans.

Nine-Month Comparison

Net income for Consumer Lending decreased \$1.4 billion to \$4.2 billion primarily due to an increase in provision for credit losses. Net interest income increased \$119 million to \$8.0 billion primarily due to the same factors as described in the three-month discussion. Noninterest income decreased \$13 million to \$3.9 billion primarily driven by lower mortgage banking income, largely offset by higher card income.

The provision for credit losses increased \$1.9 billion to \$648 million primarily driven by loan growth and a dampening macroeconomic outlook in the current-year period compared to a benefit in the prior-year period due to an improved macroeconomic outlook. Noninterest expense increased \$14 million to \$5.8 billion primarily driven by increased client activity, largely offset by the contribution to the Bank of America Foundation in the prior-year period.

Average loans increased \$5.3 billion to \$285.5 billion primarily driven by an increase in credit card loans and first mortgage loans, partially offset by a decline in PPP 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

	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
(Dollars in millions)				
Total credit card ⁽¹⁾				
Gross interest yield ⁽²⁾	10.71 %	10.10 %	10.14 %	10.24 %
Risk-adjusted margin ⁽³⁾	10.07	10.70	10.13	9.93
New accounts (in thousands)	1,256	1,049	3,301	2,654
Purchase volumes	\$ 91,064	\$ 80,925	\$ 263,788	\$ 223,900
Debit card purchase volumes	\$ 127,135	\$ 119,680	\$ 373,426	\$ 349,492

⁽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 the three months ended September 30, 2022, the total risk-adjusted margin decreased 63 bps primarily driven by lower net interest margin and lower fee income, partially offset by lower net credit losses. During the nine months ended September 30, 2022, the total risk-adjusted margin increased 20 bps primarily driven by lower net credit losses, partially

offset by lower net interest margin and lower fee income. During the three and nine months ended September 30, 2022, total credit card purchase volumes increased \$10.1 billion and \$39.9 billion, and debit card purchase volumes increased \$7.5 billion and \$23.9 billion, reflecting higher levels of consumer spending.

Key Statistics – Loan Production ⁽¹⁾

	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
(Dollars in millions)				
Consumer Banking:				
First mortgage	\$ 4,028	\$ 12,510	\$ 18,695	\$ 33,194
Home equity	1,999	1,262	5,875	2,579
Total ⁽²⁾:				
First mortgage	\$ 8,724	\$ 21,232	\$ 39,548	\$ 56,731
Home equity	2,420	1,523	6,995	3,192

⁽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 \$8.5 billion and \$12.5 billion during the three months ended September 30, 2022 primarily driven by changes in demand. During the nine months ended September 30, 2022, *Consumer Banking* and the total Corporation decreased \$14.5 billion and \$17.2 billion primarily driven by changes in demand.

Home equity production in *Consumer Banking* and the total Corporation increased \$737 million and \$897 million during the three months ended September 30, 2022 primarily driven by higher demand. During the nine months ended September 30, 2022, *Consumer Banking* and the total Corporation increased \$3.3 billion and \$3.8 billion primarily driven by higher demand.

Global Wealth & Investment Management

(Dollars in millions)	Three Months Ended September 30			Nine Months Ended September 30		
	2022	2021	% Change	2022	2021	% Change
Net interest income	\$ 1,981	\$ 1,452	36 %	\$ 5,451	\$ 4,137	32 %
Noninterest income:						
Investment and brokerage services	3,255	3,682	(12)	10,395	10,610	(2)
All other income	193	176	10	492	599	(18)
Total noninterest income	3,448	3,858	(11)	10,887	11,209	(3)
Total revenue, net of interest expense	5,429	5,310	2	16,338	15,346	6
Provision for credit losses	37	(58)	n/m	29	(185)	(116)
Noninterest expense	3,816	3,744	2	11,706	11,425	2
Income before income taxes	1,576	1,624	(3)	4,603	4,106	12
Income tax expense	386	398	(3)	1,128	1,006	12
Net income	\$ 1,190	\$ 1,226	(3)	\$ 3,475	\$ 3,100	12
Effective tax rate	24.5 %	24.5 %		24.5 %	24.5 %	
Net interest yield	2.12	1.54		1.84	1.51	
Return on average allocated capital	27	30		27	25	
Efficiency ratio	70.28	70.51		71.65	74.45	

Balance Sheet

Average	Three Months Ended September 30			Nine Months Ended September 30		
	2022	2021	% Change	2022	2021	% Change
Total loans and leases	\$ 223,734	\$ 199,664	12 %	\$ 218,030	\$ 194,090	12 %
Total earning assets	370,733	373,691	(1)	395,023	367,239	8
Total assets	383,468	386,346	(1)	407,819	379,802	7
Total deposits	339,487	339,357	—	362,611	333,119	9
Allocated capital	17,500	16,500	6	17,500	16,500	6

Period end	September 30	December 31	% Change
	2022	2021	
Total loans and leases	\$ 224,858	\$ 208,971	8 %
Total earning assets	357,434	425,112	(16)
Total assets	370,790	438,275	(15)
Total deposits	324,859	390,143	(17)

n/m = not meaningful

GWIM consists of two primary businesses: Merrill Wealth Management and Bank of America Private Bank. For more information about GWIM, see Business Segment Operations in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

Three-Month Comparison

Net income for GWIM of \$1.2 billion remained relatively unchanged. The operating margin was 29 percent compared to 31 percent a year ago.

Net interest income increased \$529 million to \$2.0 billion driven by the benefits of higher interest rates and higher loan balances.

Noninterest income, which primarily includes investment and brokerage services income, decreased \$410 million to \$3.4 billion primarily due to the impacts of lower market valuations and declines in assets under management (AUM) pricing, partially offset by the impact of positive AUM flows.

The provision for credit losses increased \$95 million to \$37 million primarily due to loan growth and a dampening macroeconomic outlook in the current-year period. Noninterest expense increased \$72 million to \$3.8 billion primarily driven by continued investments in the business, partially offset by lower revenue-related incentives.

The return on average allocated capital was 27 percent, down from 30 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 12.

Average loans increased \$24.1 billion to \$223.7 billion primarily driven by residential mortgage, custom lending and securities-based lending. Average deposits of \$339.5 billion remained relatively unchanged.

Merrill Wealth Management revenue of \$4.5 billion increased one percent as the benefits of higher interest rates and higher loan balances were largely offset by the impact of lower market valuations and declines in AUM pricing.

Bank of America Private Bank revenue of \$905 million increased eight percent driven by the benefits of higher deposit and loan balances and higher interest rates.

Nine-Month Comparison

Net income for GWIM increased \$375 million to \$3.5 billion driven by higher revenue, partially offset by higher noninterest expense and provision for credit losses. The operating margin was 28 percent compared to 27 percent a year ago.

Net interest income increased \$1.3 billion to \$5.5 billion due to the same factors as described in the three-month discussion, as well as the benefits of higher deposit balances.

Noninterest income, which primarily includes investment and brokerage services income, decreased \$322 million to \$10.9 billion primarily due to the same factors as described in the three-month discussion.

The provision for credit losses increased \$214 million primarily due to the same factors as described in the three-month discussion. Noninterest expense increased \$281 million to \$11.7 billion primarily due to the same factors as described in the three-month discussion.

The return on average allocated capital was 27 percent, up from 25 percent, due to higher net income, partially offset by an increase in allocated capital.

Average loans increased \$23.9 billion to \$218.0 billion primarily due to the same factors as described in the three-month discussion. Average deposits increased \$29.5 billion to \$362.6 billion primarily driven by inflows from new and existing accounts.

Merrill Wealth Management revenue of \$13.6 billion increased six percent primarily driven by the benefits of higher interest rates, higher deposit and loan balances and positive AUM flows, partially offset by the impact of lower market valuations and declines in AUM pricing.

Bank of America Private Bank revenue of \$2.7 billion increased 11 percent primarily driven by the same factors as described in the three-month discussion.

Key Indicators and Metrics

(Dollars in millions)	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
Revenue by Business				
Merrill Wealth Management	\$ 4,524	\$ 4,471	\$ 13,649	\$ 12,916
Bank of America Private Bank	905	839	2,689	2,430
Total revenue, net of interest expense	\$ 5,429	\$ 5,310	\$ 16,338	\$ 15,346
Client Balances by Business, at period end				
Merrill Wealth Management			\$ 2,710,985	\$ 3,108,358
Bank of America Private Bank			537,771	584,475
Total client balances			\$ 3,248,756	\$ 3,692,833
Client Balances by Type, at period end				
Assets under management			\$ 1,329,557	\$ 1,578,630
Brokerage and other assets			1,413,946	1,612,472
Deposits			324,859	345,590
Loans and leases ⁽¹⁾			228,129	205,055
Less: Managed deposits in assets under management			(47,735)	(48,914)
Total client balances			\$ 3,248,756	\$ 3,692,833
Assets Under Management Rollforward				
Assets under management, beginning of period	\$ 1,411,344	\$ 1,549,069	\$ 1,638,782	\$ 1,408,465
Net client flows	4,110	14,776	20,680	44,698
Market valuation/other	(85,897)	14,785	(329,905)	125,467
Total assets under management, end of period	\$ 1,329,557	\$ 1,578,630	\$ 1,329,557	\$ 1,578,630
Total wealth advisors, at period end ⁽²⁾			18,841	18,855

⁽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 decreased \$444.1 billion, or 12 percent, to \$3.2 trillion at September 30, 2022 compared to September 30, 2021. The decrease in client balances was primarily due to the impact of lower market valuations, partially offset by positive client flows.

(Dollars in millions)	Three Months Ended September 30			Nine Months Ended September 30		
	2022	2021	% Change	2022	2021	% Change
Net interest income	\$ 3,326	\$ 2,185	52 %	\$ 8,304	\$ 6,150	35 %
Noninterest income:						
Service charges	771	889	(13)	2,590	2,637	(2)
Investment banking fees	726	1,297	(44)	2,298	3,642	(37)
All other income	768	874	(12)	2,599	2,538	2
Total noninterest income	2,265	3,060	(26)	7,487	8,817	(15)
Total revenue, net of interest expense	5,591	5,245	7	15,791	14,967	6
Provision for credit losses	170	(781)	(122)	492	(2,738)	(118)
Noninterest expense	2,651	2,534	5	8,133	7,915	3
Income before income taxes	2,770	3,492	(21)	7,166	9,790	(27)
Income tax expense	734	943	(22)	1,899	2,643	(28)
Net income	\$ 2,036	\$ 2,549	(20)	\$ 5,267	\$ 7,147	(26)
Effective tax rate	26.5 %	27.0 %		26.5 %	27.0 %	
Net interest yield	2.53	1.55		2.05	1.53	
Return on average allocated capital	18	24		16	22	
Efficiency ratio	47.41	48.31		51.50	52.88	

Balance Sheet

Average	Three Months Ended September 30			Nine Months Ended September 30		
	2022	2021	% Change	2022	2021	% Change
Total loans and leases	\$ 384,305	\$ 324,736	18 %	\$ 373,547	\$ 326,632	14 %
Total earning assets	521,555	560,181	(7)	541,670	537,037	1
Total assets	585,683	621,699	(6)	605,884	597,947	1
Total deposits	495,154	534,166	(7)	514,612	509,445	1
Allocated capital	44,500	42,500	5	44,500	42,500	5
Period end	September 30			December 31		% Change
	2022	2021		2022	2021	
Total loans and leases	\$ 377,711	\$ 352,933		\$ 377,711	\$ 352,933	7 %
Total earning assets	511,494	574,583		511,494	574,583	(11)
Total assets	575,442	638,131		575,442	638,131	(10)
Total deposits	484,309	551,752		484,309	551,752	(12)

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. For more information about *Global Banking*, see Business Segment Operations in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

Three-Month Comparison

Net income for *Global Banking* decreased \$513 million to \$2.0 billion driven by higher provision for credit losses and higher noninterest expense, partially offset by higher revenue.

Net interest income increased \$1.1 billion to \$3.3 billion primarily due to the benefits of higher interest rates and loan growth, partially offset by the impact of lower deposit balances.

Noninterest income decreased \$795 million to \$2.3 billion driven by lower investment banking fees, income from ESG investment activities and treasury service charges.

The provision for credit losses increased \$951 million to \$170 million primarily driven by a dampening macroeconomic outlook compared to a benefit in the provision for credit losses of \$781 million in the prior-year period due to an improved macroeconomic outlook.

Noninterest expense increased \$117 million to \$2.7 billion primarily due to continued investments in the business, including strategic hiring.

The return on average allocated capital was 18 percent, down from 24 percent, due to lower net income and higher allocated capital. For more information on capital allocated to the business segments, see Business Segment Operations on page 12.

Nine-Month Comparison

Net income for *Global Banking* decreased \$1.9 billion to \$5.3 billion driven by higher provision for credit losses and higher noninterest expense, partially offset by higher revenue.

Net interest income increased \$2.2 billion to \$8.3 billion primarily due to the benefits of higher interest rates and loan growth.

Noninterest income decreased \$1.3 billion to \$7.5 billion driven by lower investment banking fees and valuation adjustments on leveraged loans.

The provision for credit losses increased \$3.2 billion to \$492 million primarily driven by a dampening macroeconomic outlook and loan growth as well as a reserve build in the current-year period for our Russian exposure, compared to a benefit in the provision for credit losses of \$2.7 billion in the prior-year period due to an improved macroeconomic outlook.

Noninterest expense increased \$218 million to \$8.1 billion, primarily due to continued investments in the business, partially offset by an acceleration of expenses due to incentive compensation award changes in the prior-year period.

The return on average allocated capital was 16 percent, down from 22 percent, due to lower net income and higher allocated capital.

Global Corporate, Global Commercial and Business Banking

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

Global Corporate, Global Commercial and Business Banking

	Global Corporate Banking		Global Commercial Banking		Business Banking		Total	
	Three Months Ended September 30							
(Dollars in millions)	2022	2021	2022	2021	2022	2021	2022	2021
Revenue								
Business Lending	\$ 902	\$ 885	\$ 1,111	\$ 923	\$ 66	\$ 54	\$ 2,079	\$ 1,862
Global Transaction Services ⁽¹⁾	1,369	850	1,112	855	322	240	2,803	1,945
Total revenue, net of interest expense	\$ 2,271	\$ 1,735	\$ 2,223	\$ 1,778	\$ 388	\$ 294	\$ 4,882	\$ 3,807
Balance Sheet								
Average								
Total loans and leases	\$ 177,166	\$ 147,906	\$ 193,828	\$ 159,986	\$ 12,697	\$ 12,635	\$ 383,691	\$ 320,527
Total deposits ⁽¹⁾	241,289	263,478	198,479	213,713	55,386	56,935	495,154	534,126
	Global Corporate Banking		Global Commercial Banking		Business Banking		Total	
	Nine Months Ended September 30							
(Dollars in millions)	2022	2021	2022	2021	2022	2021	2022	2021
Revenue								
Business Lending	\$ 2,908	\$ 2,528	\$ 3,128	\$ 2,688	\$ 186	\$ 165	\$ 6,222	\$ 5,381
Global Transaction Services ⁽¹⁾	3,456	2,324	2,981	2,432	835	692	7,272	5,448
Total revenue, net of interest expense	\$ 6,364	\$ 4,852	\$ 6,109	\$ 5,120	\$ 1,021	\$ 857	\$ 13,494	\$ 10,829
Balance Sheet								
Average								
Total loans and leases	\$ 173,740	\$ 148,101	\$ 185,981	\$ 158,939	\$ 12,799	\$ 12,778	\$ 372,520	\$ 319,818
Total deposits ⁽¹⁾	247,924	246,269	209,583	207,783	57,106	55,361	514,613	509,413
Period end								
Total loans and leases	\$ 172,806	\$ 150,797	\$ 191,739	\$ 162,371	\$ 12,663	\$ 12,640	\$ 377,208	\$ 325,808
Total deposits ⁽¹⁾	242,837	257,462	187,899	221,160	53,572	57,814	484,308	536,433

⁽¹⁾ Prior periods have been revised to conform to current-period presentation.

Business Lending revenue increased \$217 million for the three months ended September 30, 2022 compared to the same period in 2021 primarily due to the benefits of loan growth and higher interest rates, partially offset by lower income from ESG investment activities. Business Lending revenue increased \$841 million for the nine months ended September 30, 2022 primarily due to the benefits of loan growth and higher interest rates.

Global Transaction Services revenue increased \$858 million for the three months ended September 30, 2022 driven by higher interest rates, partially offset by the impact of lower deposit balances and treasury service charges. Global Transaction Services revenue increased \$1.8 billion for the nine months ended September 30, 2022 driven by higher interest rates.

Average loans and leases increased 20 percent and 16 percent for the three and nine months ended September 30, 2022 due to higher client demand. Average deposits decreased

seven percent during the three months ended September 30, 2022 due to declines in domestic and international balances, and increased one percent during the nine months ended September 30, 2022 due to portfolio growth.

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		Total Corporation		Global Banking		Total Corporation	
	Three Months Ended September 30				Nine Months Ended September 30			
	2022	2021	2022	2021	2022	2021	2022	2021
Products								
Advisory	\$ 397	\$ 608	\$ 432	\$ 654	\$ 1,197	\$ 1,341	\$ 1,297	\$ 1,461
Debt issuance	273	401	616	933	915	1,306	2,109	3,031
Equity issuance	56	288	156	637	186	995	520	2,239
Gross investment banking fees	726	1,297	1,204	2,224	2,298	3,642	3,926	6,731
Self-led deals	(17)	(24)	(37)	(56)	(74)	(85)	(174)	(195)
Total investment banking fees	\$ 709	\$ 1,273	\$ 1,167	\$ 2,168	\$ 2,224	\$ 3,557	\$ 3,752	\$ 6,536

Total Corporation investment banking fees, which exclude self-led deals and are primarily included within *Global Banking* and *Global Markets*, were \$1.2 billion and \$3.8 billion for the three and nine months ended September 30, 2022. The three-month and nine-month periods decreased 46 percent and 43 percent compared to the same periods in 2021 primarily driven by lower equity issuance, debt issuance and advisory fees.

Global Markets

(Dollars in millions)	Three Months Ended September 30			Nine Months Ended September 30		
	2022	2021	% Change	2022	2021	% Change
Net interest income	\$ 743	\$ 1,000	(26)%	\$ 2,717	\$ 2,980	(9)%
Noninterest income:						
Investment and brokerage services	457	471	(3)	1,520	1,504	1
Investment banking fees	430	844	(49)	1,473	2,784	(47)
Market making and similar activities	2,874	2,014	43	8,721	7,448	17
All other income	(21)	190	(111)	(154)	721	(121)
Total noninterest income	3,740	3,519	6	11,560	12,457	(7)
Total revenue, net of interest expense	4,483	4,519	(1)	14,277	15,437	(8)
Provision for credit losses	11	16	(31)	24	33	(27)
Noninterest expense	3,023	3,252	(7)	9,249	10,150	(9)
Income before income taxes	1,449	1,251	16	5,004	5,254	(5)
Income tax expense	384	325	18	1,326	1,366	(3)
Net income	\$ 1,065	\$ 926	15	\$ 3,678	\$ 3,888	(5)
Effective tax rate	26.5 %	26.0 %		26.5 %	26.0 %	
Return on average allocated capital	10	10		12	14	
Efficiency ratio	67.42	71.94		64.78	65.75	

Balance Sheet

	Three Months Ended September 30			Nine Months Ended September 30		
	2022	2021	% Change	2022	2021	% Change
Average						
Trading-related assets:						
Trading account securities	\$ 308,514	\$ 304,133	1 %	\$ 301,690	\$ 291,500	3 %
Reverse repurchases	112,828	117,486	(4)	127,527	111,330	15
Securities borrowed	114,032	101,086	13	115,898	97,205	19
Derivative assets	57,017	41,010	39	53,098	44,308	20
Total trading-related assets	592,391	563,715	5	598,213	544,343	10
Total loans and leases	120,435	97,148	24	114,505	87,535	31
Total earning assets	591,883	557,333	6	600,477	528,113	14
Total assets	847,899	804,938	5	857,747	775,552	11
Total deposits	38,820	54,650	(29)	41,448	54,699	(24)
Allocated capital	42,500	38,000	12	42,500	38,000	12
Period end						
Total trading-related assets	\$ 592,938	\$ 491,160	21 %			
Total loans and leases	121,721	114,846	6			
Total earning assets	595,988	561,135	6			
Total assets	848,752	747,794	14			
Total deposits	37,318	46,374	(20)			

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. For more information about *Global Markets*, see Business Segment Operations in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

Except as otherwise noted below, the following explanations for current period-over-period changes 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 8.

Three-Month Comparison

Net income for *Global Markets* increased \$139 million to \$1.1 billion. Net DVA losses were \$14 million compared to losses of \$20 million in the prior-year period. Excluding net DVA, net income increased \$135 million to \$1.1 billion. These increases were primarily driven by lower noninterest expense.

Revenue decreased \$36 million to \$4.5 billion primarily driven by lower investment banking fees, largely offset by higher sales and trading revenue. Sales and trading revenue increased \$478 million, and excluding net DVA, increased \$472 million. These increases were driven by higher revenue in FICC.

Noninterest expense decreased \$229 million to \$3.0 billion primarily driven by the realignment of a liquidating business activity from *Global Markets* to *All Other* in the fourth quarter of 2021.

Average total assets increased \$43.0 billion to \$847.9 billion driven by loan growth, higher derivative balances due to a strong U.S. dollar and higher interest rates, as well as growth in commodities activity.

The return on average allocated capital was 10 percent, unchanged from the prior-year period, reflecting higher net income offset by an increase in allocated capital. For more information on capital allocated to the business segments, see Business Segment Operations on page 12.

Nine-Month Comparison

Net income for *Global Markets* decreased \$210 million to \$3.7 billion. Net DVA gains were \$213 million compared to losses of \$56 million in the prior-year period. Excluding net DVA, net income decreased \$415 million to \$3.5 billion. These decreases were primarily driven by lower revenue, partially offset by lower noninterest expense.

Revenue decreased \$1.2 billion to \$14.3 billion primarily due to the same factors as described in the three-month discussion. Sales and trading revenue increased \$711 million and excluding net DVA, sales and trading revenue increased \$442 million. These increases were driven by higher revenue in both FICC and Equities.

Noninterest expense decreased \$901 million to \$9.2 billion primarily due to the same factor as described in the three-month discussion and an acceleration of expenses from incentive compensation award changes in the prior-year period.

Average total assets increased \$82.2 billion to \$857.7 billion driven by loan growth and commodities activity in FICC as well as higher balances in Equities. Period-end total assets increased \$101.0 billion from December 31, 2021 to \$848.8 billion driven by higher derivative balances due to a strong U.S. dollar and higher interest rates, higher levels of inventory in FICC to facilitate client activity, and increased hedging of client activity with stock positions relative to derivatives in Equities.

The return on average allocated capital was 12 percent, down from 14 percent, reflecting lower net income and an increase in allocated capital.

Sales and Trading Revenue

For a description of sales and trading revenue, see Business Segment Operations in the MD&A of the Corporation's 2021 Annual Report on Form 10-K. The table below 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 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 8.

Sales and Trading Revenue ^(1, 2, 3)

(Dollars in millions)	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
Sales and trading revenue				
Fixed income, currencies and commodities	\$ 2,552	\$ 2,009	\$ 7,760	\$ 7,188
Equities	1,540	1,605	5,204	5,065
Total sales and trading revenue	\$ 4,092	\$ 3,614	\$ 12,964	\$ 12,253
Sales and trading revenue, excluding net DVA ⁽⁴⁾				
Fixed income, currencies and commodities	\$ 2,567	\$ 2,025	\$ 7,555	\$ 7,241
Equities	1,539	1,609	5,196	5,068
Total sales and trading revenue, excluding net DVA	\$ 4,106	\$ 3,634	\$ 12,751	\$ 12,309

⁽¹⁾ For more information on sales and trading revenue, see Note 3 – Derivatives to the Consolidated Financial Statements.

⁽²⁾ Includes FTE adjustments of \$58 million and \$253 million for the three and nine months ended September 30, 2022 compared to \$99 million and \$232 million for the same periods in 2021.

⁽³⁾ Includes *Global Banking* sales and trading revenue of \$287 million and \$785 million for the three and nine months ended September 30, 2022 compared to \$138 million and \$412 million for the same periods in 2021.

⁽⁴⁾ FICC and Equities sales and trading revenue, excluding net DVA, is a non-GAAP financial measure. FICC net DVA gains (losses) were \$(15) million and \$205 million for the three and nine months ended September 30, 2022 compared to losses of \$16 million and \$53 million for the same periods in 2021. Equities net DVA gains were \$1 million and \$8 million for the three and nine months ended September 30, 2022 compared to losses of \$4 million and \$3 million for the same periods in 2021.

Three-Month Comparison

FICC revenue increased \$542 million driven by improved performance across macro products, partially offset by a weaker trading performance in credit and mortgage products. Equities revenue decreased \$70 million driven by lower client activity in Asia and a weaker trading performance in cash, partially offset by increased client activity in derivatives.

Nine-Month Comparison

FICC revenue increased \$314 million driven by improved trading performance across interest rate and currency products, partially offset by gains in commodities in the prior-year period for a weather-related event and a weaker trading environment for credit products in the current-year period. Equities revenue increased \$128 million driven by a strong trading performance in derivatives, partially offset by a weaker trading performance in cash.

All Other

(Dollars in millions)	Three Months Ended September 30			Nine Months Ended September 30		
	2022	2021	% Change	2022	2021	% Change
Net interest income	\$ 37	\$ 65	(43)%	\$ 73	\$ 193	(62)%
Noninterest income (loss)	(836)	(1,110)	(25)	(3,599)	(3,661)	(2)
Total revenue, net of interest expense	(799)	(1,045)	(24)	(3,526)	(3,468)	2
Provision for credit losses	(58)	(48)	21	(130)	(148)	(12)
Noninterest expense	716	352	103	1,830	962	90
Loss before income taxes	(1,457)	(1,349)	8	(5,226)	(4,282)	22
Income tax benefit	(1,176)	(1,294)	(9)	(4,263)	(6,345)	(33)
Net income (loss)	\$ (281)	\$ (55)	n/m	\$ (963)	\$ 2,063	(147)

Balance Sheet

Average	Three Months Ended September 30			Nine Months Ended September 30		
	2022	2021	% Change	2022	2021	% Change
Total loans and leases	\$ 10,629	\$ 17,581	(40)%	\$ 13,457	\$ 19,190	(30)%
Total assets ⁽¹⁾	142,650	187,233	(24)	140,620	193,896	(27)
Total deposits	20,221	13,767	47	20,128	14,062	43

Period end	September 30		December 31	% Change
	2022	2021		
Total loans and leases	\$ 10,351	\$ 15,863		(35)%
Total assets ⁽¹⁾	128,051	214,153		(40)
Total deposits	19,031	21,182		(10)

⁽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 \$1.1 trillion for both the three and nine months ended September 30, 2022 compared to \$1.1 trillion for both periods in 2021, and period-end allocated assets were \$1.1 trillion and \$1.2 trillion at September 30, 2022 and December 31, 2021.

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 17 – *Business Segment Information* to the Consolidated Financial Statements.

Three-Month Comparison

The net loss of *All Other* increased \$226 million to a loss of \$281 million primarily due to higher noninterest expense and a lower income tax benefit, partially offset by higher revenue.

Revenue increased \$246 million primarily driven by lower valuation adjustments.

Noninterest expense increased \$364 million primarily driven by higher litigation expense due to the legacy monoline insurance litigation settlement and the realignment of a liquidating business activity from *Global Markets* to *All Other* in the fourth quarter of 2021, partially offset by decreases in other expenses.

The income tax benefit decreased \$118 million primarily due to the impact of lower levels of income tax credits associated with ESG investment activities, which were impacted by enactment of the Inflation Reduction Act of 2022 in the third quarter of 2022. For more information, see Financial Highlights – Income Tax Expense on page 7. Both periods included

income tax benefit adjustments to eliminate the FTE treatment of certain tax credits recorded in *Global Banking*.

Nine-Month Comparison

Net income decreased \$3.0 billion to a loss of \$963 million primarily due to a lower income tax benefit and higher noninterest expense.

Noninterest expense increased \$868 million primarily due to the same factors as described in the three-month discussion and expenses recognized for certain regulatory matters during the second quarter of 2022.

The income tax benefit decreased \$2.1 billion primarily due to the impact of the 2021 U.K. tax law change. For more information, see Financial Highlights – Income Tax Expense on page 7. Both periods included income tax benefit adjustments to eliminate the FTE treatment of certain tax credits recorded in *Global Banking*.

Managing Risk

Risk is inherent in all our business activities. The seven key types of risk faced by the Corporation are strategic, credit, market, liquidity, compliance, operational and reputational. 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 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.

Our risk appetite provides a common set of measures for senior management and the Board to clearly indicate the level of risk we are willing to take in alignment with our strategic and capital plans and ensure that the Corporation's risk profile remains aligned with our risk appetite. Our risk appetite is formally articulated in the Risk Appetite Statement, which includes both qualitative components and quantitative limits that are reviewed and approved by the Board at least annually.

For more information about the Corporation's risks, including those related to the pandemic, see Item 1A. Risk Factors of the Corporation's 2021 Annual Report on Form 10-K. These risks are being managed within our Risk Framework and supporting risk management programs.

For more information on our Risk Framework, our risk management activities and the key types of risk faced by the Corporation, see the Managing Risk section in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

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. For more information, including related regulatory requirements, see Capital Management in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

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 CCAR capital plan. Based on the results of our 2022 CCAR stress test, our SCB increased to 3.4 percent from 2.5 percent, effective October 1, 2022 through September 30, 2023.

In October 2021, the Board renewed the Corporation's \$25 billion common stock repurchase program previously announced in April 2021. The Board's authorization replaced the previous program. As with the April 2021 authorization, the Board also authorized common stock repurchases to offset shares awarded under the Corporation's equity-based compensation plans. Pursuant to the Board's authorizations, during the third quarter of 2022, we repurchased \$450 million of common stock, predominantly offsetting 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 financial services holding company, we are subject to regulatory capital rules, including Basel 3, issued by U.S. banking regulators. 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 risk-weighted assets (RWA) under both the Standardized and Advanced approaches. The approach that yields the lower ratio is used to assess capital adequacy, including under the PCA framework. As of September 30, 2022, the CET1, Tier 1 capital and Total capital ratios for the Corporation were lower under the Standardized approach.

Minimum Capital Requirements

In order to avoid restrictions on capital distributions and discretionary bonus payments, 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, 2021 through September 30, 2022, the Corporation's minimum CET1 capital ratio requirement was 9.5 percent under both the Standardized and Advanced approaches. Based on the results of our 2022 CCAR stress test, the Corporation's SCB increased to 3.4 percent, resulting in a minimum CET1 capital ratio requirement of 10.4 percent under the Standardized approach for the period from October 1, 2022 through September 30, 2023. At September 30, 2022, the Corporation's CET1 capital ratio of 11.0 percent under the Standardized approach exceeded its new CET1 capital ratio requirement that was effective October 1, 2022. Our minimum CET1 capital ratio requirement under the Advanced approaches remains unchanged at 9.5 percent.

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. The Corporation's G-SIB surcharge, which is higher under Method 2, is expected to increase to 3.0 percent on January 1, 2024 unless its surcharge calculated as of December 31, 2022 is lower than 3.0 percent.

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. Our insured depository institution subsidiaries are required to maintain a minimum 6.0 percent SLR to be considered well capitalized under the PCA framework.

Capital Composition and Ratios

Table 8 presents Bank of America Corporation's capital ratios and related information in accordance with Basel 3 Standardized and Advanced approaches as measured at September 30, 2022 and December 31, 2021. For the periods presented herein, the Corporation met the definition of well capitalized under current regulatory requirements.

Table 8 Bank of America Corporation Regulatory Capital under Basel 3

	Standardized Approach ⁽¹⁾	Advanced Approaches ⁽¹⁾	Regulatory Minimum ⁽²⁾
September 30, 2022			
Risk-based capital metrics:			
Common equity tier 1 capital	\$ 175,554	\$ 175,554	
Tier 1 capital	204,675	204,675	
Total capital ⁽³⁾	235,276	228,334	
Risk-weighted assets (in billions)	1,599	1,391	
Common equity tier 1 capital ratio	11.0 %	12.6 %	9.5 %
Tier 1 capital ratio	12.8	14.7	11.0
Total capital ratio	14.7	16.4	13.0
Leverage-based metrics:			
Adjusted quarterly average assets (in billions) ⁽⁴⁾	\$ 3,028	\$ 3,028	
Tier 1 leverage ratio	6.8 %	6.8 %	4.0
Supplementary leverage exposure (in billions)		\$ 3,556	
Supplementary leverage ratio		5.8 %	5.0
December 31, 2021			
Risk-based capital metrics:			
Common equity tier 1 capital	\$ 171,759	\$ 171,759	
Tier 1 capital	196,465	196,465	
Total capital ⁽³⁾	227,592	220,616	
Risk-weighted assets (in billions)	1,618	1,399	
Common equity tier 1 capital ratio	10.6 %	12.3 %	9.5 %
Tier 1 capital ratio	12.1	14.0	11.0
Total capital ratio	14.1	15.8	13.0
Leverage-based metrics:			
Adjusted quarterly average assets (in billions) ⁽⁴⁾	\$ 3,087	\$ 3,087	
Tier 1 leverage ratio	6.4 %	6.4 %	4.0
Supplementary leverage exposure (in billions)		\$ 3,604	
Supplementary leverage ratio		5.5 %	5.0

⁽¹⁾ Capital ratios as of September 30, 2022 and December 31, 2021 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.

⁽²⁾ The capital conservation buffer and G-SIB surcharge were 2.5 percent at both September 30, 2022 and December 31, 2021. At both September 30, 2022 and December 31, 2021, the Corporation's SCB of 2.5 percent was applied in place of the capital conservation buffer under the Standardized approach. The countercyclical capital buffer for both periods was zero. 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 SCB or the capital conservation buffer, as applicable, of 2.5 percent. 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 September 30, 2022, CET1 capital was \$175.6 billion, an increase of \$3.8 billion from December 31, 2021, due to earnings, partially offset by dividends, an increase in net unrealized losses on available-for-sale debt securities included in accumulated other comprehensive income (OCI), and common stock repurchases. Tier 1 capital increased \$8.2 billion primarily driven by the same factors as CET1 capital as well as non-cumulative perpetual preferred stock issuances. Total capital under the Standardized approach increased \$7.7 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. RWA under the Standardized approach, which yielded the lower CET1 capital ratio at September 30, 2022, decreased \$18.5 billion during the nine months ended September 30, 2022 to \$1,599 billion primarily due to lower client activity in *Global Markets* and a decrease in debt securities, partially offset by loan growth. Supplementary leverage exposure at September 30, 2022 decreased \$48.2 billion primarily due to lower debt securities, driven by lower deposits, partially offset by loan growth.

Table 9 shows the capital composition at September 30, 2022 and December 31, 2021.

Table 9 Capital Composition under Basel 3

	September 30 2022	December 31 2021
(Dollars in millions)		
Total common shareholders' equity	\$ 240,390	\$ 245,358
CECL transitional amount ⁽¹⁾	1,881	2,508
Goodwill, net of related deferred tax liabilities	(68,641)	(68,641)
Deferred tax assets arising from net operating loss and tax credit carryforwards	(7,658)	(7,743)
Intangibles, other than mortgage servicing rights, net of related deferred tax liabilities	(1,561)	(1,605)
Defined benefit pension plan net assets	(1,227)	(1,261)
Cumulative unrealized net (gain) loss related to changes in fair value of financial liabilities attributable to own creditworthiness, net-of-tax	(240)	1,400
Accumulated net (gain) loss on certain cash flow hedges ⁽²⁾	12,762	1,870
Other	(152)	(127)
Common equity tier 1 capital	175,554	171,759
Qualifying preferred stock, net of issuance cost	29,134	24,707
Other	(13)	(1)
Tier 1 capital	204,675	196,465
Tier 2 capital instruments	19,507	20,750
Qualifying allowance for credit losses ⁽³⁾	11,325	10,534
Other	(231)	(157)
Total capital under the Standardized approach	235,276	227,592
Adjustment in qualifying allowance for credit losses under the Advanced approaches ⁽³⁾	(6,942)	(6,976)
Total capital under the Advanced approaches	\$ 228,334	\$ 220,616

⁽¹⁾ December 31, 2021 includes the impact of the Corporation's adoption of the CECL accounting standard on January 1, 2020 and 25 percent of the increase in reserves since the initial adoption.

September 30, 2022 includes 75 percent of the transition provision's impact as of December 31, 2021.

⁽²⁾ Includes amounts in accumulated other comprehensive income 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 10 shows the components of RWA as measured under Basel 3 at September 30, 2022 and December 31, 2021.

Table 10 Risk-weighted Assets under Basel 3

	Standardized Approach	Advanced Approaches	Standardized Approach	Advanced Approaches
	September 30, 2022		December 31, 2021	
(Dollars in billions)				
Credit risk	\$ 1,536	\$ 903	\$ 1,549	\$ 913
Market risk	63	63	69	69
Operational risk	n/a	379	n/a	378
Risks related to credit valuation adjustments	n/a	46	n/a	39
Total risk-weighted assets	\$ 1,599	\$ 1,391	\$ 1,618	\$ 1,399

n/a = not applicable

Bank of America, N.A. Regulatory Capital

Table 11 presents regulatory capital information for BANA in accordance with Basel 3 Standardized and Advanced approaches as measured at September 30, 2022 and December 31, 2021. BANA met the definition of well capitalized under the PCA framework for both periods.

Table 11 Bank of America, N.A. Regulatory Capital under Basel 3

	Standardized Approach ⁽¹⁾	Advanced Approaches ⁽¹⁾	Regulatory Minimum ⁽²⁾
September 30, 2022			
(Dollars in millions, except as noted)			
Risk-based capital metrics:			
Common equity tier 1 capital	\$ 185,255	\$ 185,255	
Tier 1 capital	185,255	185,255	
Total capital ⁽³⁾	198,008	191,303	
Risk-weighted assets (in billions)	1,376	1,056	
Common equity tier 1 capital ratio	13.5 %	17.6 %	7.0 %
Tier 1 capital ratio	13.5	17.6	8.5
Total capital ratio	14.4	18.1	10.5
Leverage-based metrics:			
Adjusted quarterly average assets (in billions) ⁽⁴⁾	\$ 2,383	\$ 2,383	
Tier 1 leverage ratio	7.8 %	7.8 %	5.0
Supplementary leverage exposure (in billions)		\$ 2,814	
Supplementary leverage ratio		6.6 %	6.0
December 31, 2021			
Risk-based capital metrics:			
Common equity tier 1 capital	\$ 182,526	\$ 182,526	
Tier 1 capital	182,526	182,526	
Total capital ⁽³⁾	194,773	188,091	
Risk-weighted assets (in billions)	1,352	1,048	
Common equity tier 1 capital ratio	13.5 %	17.4 %	7.0 %
Tier 1 capital ratio	13.5	17.4	8.5
Total capital ratio	14.4	17.9	10.5
Leverage-based metrics:			
Adjusted quarterly average assets (in billions) ⁽⁴⁾	\$ 2,414	\$ 2,414	
Tier 1 leverage ratio	7.6 %	7.6 %	5.0
Supplementary leverage exposure (in billions)		\$ 2,824	
Supplementary leverage ratio		6.5 %	6.0

⁽¹⁾ Capital ratios as of September 30, 2022 and December 31, 2021 are calculated using the regulatory capital rule that allows a five-year transition period related to the adoption of the CECL accounting standard.

⁽²⁾ Risk-based capital regulatory minimums at both September 30, 2022 and December 31, 2021 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. Table 12 presents the Corporation's TLAC and long-term debt ratios and related information as of September 30, 2022 and December 31, 2021.

Table 12 Bank of America Corporation Total Loss-Absorbing Capacity and Long-Term Debt

	TLAC ⁽¹⁾	Regulatory Minimum ⁽²⁾	Long-term Debt	Regulatory Minimum ⁽³⁾
September 30, 2022				
(Dollars in millions)				
Total eligible balance	\$ 461,928		\$ 242,473	
Percentage of risk-weighted assets ⁽⁴⁾	28.9 %	22.0 %	15.2 %	8.5 %
Percentage of supplementary leverage exposure	13.0	9.5	6.8	4.5
December 31, 2021				
Total eligible balance	\$ 435,904		\$ 227,714	
Percentage of risk-weighted assets ⁽⁴⁾	26.9 %	22.0 %	14.1 %	8.5 %
Percentage of supplementary leverage exposure	12.1	9.5	6.3	4.5

⁽¹⁾ As of September 30, 2022 and December 31, 2021, TLAC ratios are calculated using the regulatory capital rule that allows a five-year transition period related to the adoption of CECL.

⁽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.

⁽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 September 30, 2022 and December 31, 2021.

Regulatory Developments

For information on regulatory developments, see Capital Management – Regulatory Developments in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

Regulatory Capital and Securities Regulation

The Corporation's principal U.S. broker-dealer subsidiaries are BofA Securities, Inc. (BofAS), Merrill Lynch Professional Clearing Corp. (MLPCC) and Merrill Lynch, Pierce, Fenner & Smith Incorporated (MLPF&S). The Corporation's principal European broker-dealer subsidiaries 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 minimum capital requirements as an alternative net capital broker-dealer under Rule 15c3-1e, and MLPCC and MLPF&S compute their minimum capital requirements in accordance with the alternative standard under Rule 15c3-1. BofAS and MLPCC are also registered as futures commission merchants and are 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 September 30, 2022, BofAS had tentative net capital of \$19.1 billion. BofAS also had regulatory net capital of \$16.2 billion, which exceeded the minimum requirement of \$4.1 billion.

MLPCC is a fully-guaranteed subsidiary of BofAS and provides clearing and settlement services as well as prime brokerage and arranged financing services for institutional clients. At September 30, 2022, MLPCC's regulatory net capital of \$7.8 billion exceeded the minimum requirement of \$1.5 billion.

MLPF&S provides retail services. At September 30, 2022, MLPF&S' regulatory net capital was \$5.6 billion, which exceeded the minimum requirement of \$158 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 September 30, 2022, MLI's capital resources were \$33.1 billion, which exceeded the minimum Pillar 1 requirement of \$12.1 billion. BofASE, a French investment firm, is regulated by the Autorité de Contrôle Prudentiel et de Résolution and the Autorité des Marchés Financiers, and is subject to certain regulatory capital requirements. At September 30, 2022, BofASE's capital resources were \$7.5 billion, which exceeded the minimum Pillar 1 requirement of \$3.2 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 September 30, 2022 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 fluctuation from the rising interest rate environment, inflationary pressures and 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. For more information regarding global funding and liquidity risk management, as well as liquidity sources, liquidity arrangements, contingency planning and credit ratings discussed below, see Liquidity Risk in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

NB Holdings Corporation

The parent company, 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 company assets not required to satisfy anticipated near-term expenditures to NB Holdings. The parent company 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 company would be resolved under the U.S. Bankruptcy Code.

Global Liquidity Sources and Other Unencumbered Assets

Table 13 presents average Global Liquidity Sources (GLS) for the three months ended September 30, 2022 and December 31, 2021.

Table 13 Average Global Liquidity Sources

	Three Months Ended	
	September 30 2022	December 31 2021
(Dollars in billions)		
Bank entities	\$ 763	\$ 1,006
Nonbank and other entities ⁽¹⁾	178	152
Total Average Global Liquidity Sources	\$ 941	\$ 1,158

⁽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 Federal Home Loan Banks (FHLBs) and the Federal Reserve Discount Window. The cash we could have obtained by borrowing against this pool of specifically-identified eligible assets was \$349 billion and \$322 billion at September 30, 2022 and December 31, 2021. 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 company 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 company 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 company 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 14 presents the composition of average GLS for the three months ended September 30, 2022 and December 31, 2021.

Table 14 Average Global Liquidity Sources Composition

	Three Months Ended	
	September 30 2022	December 31 2021
(Dollars in billions)		
Cash on deposit	\$ 184	\$ 259
U.S. Treasury securities	255	278
U.S. agency securities, mortgage-backed securities, and other investment-grade securities	487	606
Non-U.S. government securities	15	15
Total Average Global Liquidity Sources	\$ 941	\$ 1,158

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 \$618 billion and \$617 billion for the three months ended September 30, 2022 and December 31, 2021. For the same periods, the average consolidated LCR was 123 percent and 115 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 company and our subsidiaries to meet contractual and contingent cash outflows under a range of scenarios. For more information on liquidity stress analysis, see Liquidity Risk – Liquidity Stress Analysis in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

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. At September 30, 2022, the Corporation and its insured depository institutions were in compliance with this requirement.

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. We fund a substantial portion of our lending activities through our deposits, which totaled \$1.9 trillion and \$2.1 trillion at September 30, 2022 and December 31, 2021.

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.

Long-term Debt

During the nine months ended September 30, 2022, we issued \$56.0 billion of long-term debt consisting of \$41.5 billion of notes issued by Bank of America Corporation, substantially all of which was TLAC compliant, \$5.9 billion of notes issued by Bank of America, N.A. and \$8.6 billion of other debt, which is primarily structured liabilities.

During the nine months ended September 30, 2022, we had total long-term debt maturities and redemptions in the aggregate of \$24.3 billion consisting of \$13.6 billion for Bank of America Corporation, \$7.6 billion for Bank of America, N.A. and \$3.1 billion of other debt. Table 15 presents the carrying value of aggregate annual contractual maturities of long-term debt at September 30, 2022.

Table 15 Long-term Debt by Maturity

(Dollars in millions)	Remainder of 2022	2023	2024	2025	2026	Thereafter	Total
Bank of America Corporation							
Senior notes ⁽¹⁾	\$ —	\$ 13,877	\$ 22,295	\$ 24,286	\$ 23,380	\$ 122,517	\$ 206,355
Senior structured notes	141	711	447	500	907	7,619	10,325
Subordinated notes	—	—	3,230	5,123	4,907	12,394	25,654
Junior subordinated notes	—	—	—	—	—	743	743
Total Bank of America Corporation	141	14,588	25,972	29,909	29,194	143,273	243,077
Bank of America, N.A.							
Senior notes	—	2,150	—	—	—	—	2,150
Subordinated notes	—	—	—	—	—	1,485	1,485
Advances from Federal Home Loan Banks	—	500	—	15	9	58	582
Securitizations and other Bank VIEs ⁽²⁾	—	998	1,000	1,000	—	50	3,048
Other	1	315	50	71	30	4	471
Total Bank of America, N.A.	1	3,963	1,050	1,086	39	1,597	7,736
Other debt							
Structured Liabilities	1,030	4,468	1,881	2,039	1,363	7,336	18,117
Nonbank VIEs ⁽²⁾	—	—	—	—	—	192	192
Other	—	—	—	—	—	—	—
Total other debt	1,030	4,468	1,881	2,039	1,363	7,528	18,309
Total long-term debt	\$ 1,172	\$ 23,019	\$ 28,903	\$ 33,034	\$ 30,596	\$ 152,398	\$ 269,122

⁽¹⁾ Total includes \$180.0 billion of outstanding notes that are both TLAC eligible and callable one year before their stated maturities, including \$6.0 billion during the remainder of 2022, and \$16.4 billion, \$21.1 billion, \$20.8 billion and \$15.8 billion during each year of 2023 through 2026, respectively, and \$99.9 billion thereafter. For more information on our TLAC eligible and callable outstanding notes, see Liquidity Risk – Diversified Funding Sources in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

⁽²⁾ Represents liabilities of consolidated variable interest entities (VIEs) included in total long-term debt on the Consolidated Balance Sheet.

Total long-term debt decreased \$11.0 billion to \$269.1 billion during the nine months ended September 30, 2022, primarily due to debt valuation adjustments, maturities and redemptions, partially offset by debt issuances. 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 the nine months ended September 30, 2022, we issued \$8.6 billion of structured notes, which are debt obligations that pay investors returns linked to other debt or equity securities, indices, currencies or commodities. These structured notes are typically issued to meet client demand, and notes with certain attributes may also be TLAC eligible. 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 of the Corporation's 2021 Annual Report on Form 10-K.

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 45.

Credit Ratings

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. Table 16 presents the Corporation's current long-term/short-term senior debt ratings and outlooks expressed by the rating agencies.

The ratings and outlooks from Moody's Investors Service, Standard & Poor's Global Ratings and Fitch Ratings for the Corporation and its subsidiaries have not changed from those disclosed in the Corporation's 2021 Annual Report on Form 10-K.

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 herein and Item 1A. Risk Factors of the Corporation's 2021 Annual Report on Form 10-K.

Table 16 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	A2	P-1	Positive	A-	A-2	Positive	AA-	F1+	Stable
Bank of America, N.A.	Aa2	P-1	Positive	A+	A-1	Positive	AA	F1+	Stable
Bank of America Europe Designated Activity Company	NR	NR	NR	A+	A-1	Positive	AA	F1+	Stable
Merrill Lynch, Pierce, Fenner & Smith Incorporated	NR	NR	NR	A+	A-1	Positive	AA	F1+	Stable
BofA Securities, Inc.	NR	NR	NR	A+	A-1	Positive	AA	F1+	Stable
Merrill Lynch International	NR	NR	NR	A+	A-1	Positive	AA	F1+	Stable
BofA Securities Europe SA	NR	NR	NR	A+	A-1	Positive	AA	F1+	Stable

NR = not rated

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 September 30, 2022. The Corporation has fully and unconditionally guaranteed (or effectively provided for the full and unconditional guarantee of) all such securities issued by such finance subsidiaries. For more information regarding such guarantees by the Corporation, see *Liquidity Risk – Finance Subsidiary Issuers and Parent Guarantor* in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

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 of the Corporation's 2021 Annual Report on Form 10-K.

Credit Risk Management

For information on our credit risk management activities, see the following: *Consumer Portfolio Credit Risk Management*, *Commercial Portfolio Credit Risk Management* on page 35, *Non-U.S. Portfolio* on page 41, *Allowance for Credit Losses* on page 42, and *Note 5 – Outstanding Loans and Leases and Allowance for Credit Losses* to the Consolidated Financial Statements.

During the nine months ended September 30, 2022, asset quality continued to improve. Excluding losses associated with non-core mortgage sales, our net charge-off ratio remained near historic lows, and nonperforming loans and commercial reservable criticized utilized exposure decreased, which was partially offset by an increase in reservable criticized exposure

associated with our direct exposure to Russia as a result of the Russia/Ukraine conflict. While uncertainty around the pandemic has largely dissipated, uncertainty remains regarding broader economic impacts as a result of inflationary pressures, rising rates and the current geopolitical situation 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 the nine months ended September 30, 2022, the U.S. unemployment rate continued to decline and home prices increased compared to the same period a year ago; however, inflationary pressures continued to persist. Net charge-offs increased \$130 million to \$459 million during the three months ended September 30, 2022 and decreased \$211 million to \$1.3 billion during the nine months ended September 30, 2022 compared to the same periods in 2021. The increase in the three-month period was primarily due to overdrafts charged off in other consumer, and the decrease in the nine-month period was primarily due to lower credit card losses, as loss rates remain near historic lows. During the nine months ended September 30, 2022, nonperforming loans declined primarily due to decreases from consumer real estate loan sales, partially offset by increases from loans with expired deferrals that were modified as troubled debt restructurings (TDRs) during the first quarter of 2022.

The consumer allowance for loan and lease losses decreased \$153 million during the nine months ended September 30, 2022 to \$6.9 billion. For more information, see Allowance for Credit Losses on page 42.

For more information on our accounting policies regarding delinquencies, nonperforming status, charge-offs and TDRs for the consumer portfolio, see *Note 1 – Summary of Significant*

Accounting Principles to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K and *Note 5 – Outstanding Loans and Leases and Allowance for Credit Losses* to the Consolidated Financial Statements.

Table 17 presents our outstanding consumer loans and leases, consumer nonperforming loans and accruing consumer loans past due 90 days or more.

Table 17 Consumer Credit Quality

	Outstandings		Nonperforming		Accruing Past Due 90 Days or More	
	September 30 2022	December 31 2021	September 30 2022	December 31 2021	September 30 2022	December 31 2021
(Dollars in millions)						
Residential mortgage ⁽¹⁾	\$ 229,062	\$ 221,963	\$ 2,187	\$ 2,284	\$ 427	\$ 634
Home equity	26,845	27,935	532	630	—	—
Credit card	87,296	81,438	n/a	n/a	547	487
Direct/Indirect consumer ⁽²⁾	107,159	103,560	41	75	27	11
Other consumer	171	190	—	—	—	—
Consumer loans excluding loans accounted for under the fair value option	\$ 450,533	\$ 435,086	\$ 2,760	\$ 2,989	\$ 1,001	\$ 1,132
Loans accounted for under the fair value option ⁽³⁾	355	618				
Total consumer loans and leases	\$ 450,888	\$ 435,704				
Percentage of outstanding consumer loans and leases ⁽⁴⁾	n/a	n/a	0.61 %	0.69 %	0.22 %	0.26 %
Percentage of outstanding consumer loans and leases, excluding fully-insured loan portfolios ⁽⁴⁾	n/a	n/a	0.63	0.71	0.13	0.12

⁽¹⁾ Residential mortgage loans accruing past due 90 days or more are fully-insured loans. At September 30, 2022 and December 31, 2021, residential mortgage includes \$321 million and \$444 million of loans on which interest had been curtailed by the Federal Housing Administration (FHA), and therefore were no longer accruing interest, although principal was still insured, and \$106 million and \$190 million of loans on which interest was still accruing.

⁽²⁾ Outstandings primarily include auto and specialty lending loans and leases of \$50.7 billion and \$48.5 billion, U.S. securities-based lending loans of \$52.6 billion and \$51.1 billion and non-U.S. consumer loans of \$2.9 billion and \$3.0 billion at September 30, 2022 and December 31, 2021.

⁽³⁾ For more information on the fair value option, see *Note 15 – Fair Value Option* to the Consolidated Financial Statements.

⁽⁴⁾ Excludes consumer loans accounted for under the fair value option. At September 30, 2022 and December 31, 2021, \$8 million and \$21 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 18 presents net charge-offs and related ratios for consumer loans and leases.

Table 18 Consumer Net Charge-offs and Related Ratios

	Net Charge-offs				Net Charge-off Ratios ⁽¹⁾			
	Three Months Ended September 30		Nine Months Ended September 30		Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021	2022	2021	2022	2021
(Dollars in millions)								
Residential mortgage	\$ (3)	\$ (7)	\$ 73	\$ (17)	(0.01)%	(0.01)%	0.04 %	(0.01)%
Home equity	(18)	(34)	(72)	(93)	(0.25)	(0.46)	(0.35)	(0.40)
Credit card	328	321	948	1,443	1.53	1.69	1.55	2.59
Direct/Indirect consumer	9	(18)	17	4	0.03	(0.07)	0.02	0.01
Other consumer	143	67	358	198	n/m	n/m	n/m	n/m
Total	\$ 459	\$ 329	\$ 1,324	\$ 1,535	0.41	0.31	0.40	0.49

⁽¹⁾ Net charge-off ratios are calculated as annualized 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 51 percent of consumer loans and leases at September 30, 2022. Approximately 52 percent of the residential mortgage portfolio was in *Consumer Banking* and 45 percent was in *GWIM*. The

remaining portion was in *All Other*.

Outstanding balances in the residential mortgage portfolio increased \$7.1 billion during the nine months ended September 30, 2022 as originations were partially offset by paydowns and loan sales.

At September 30, 2022 and December 31, 2021, the residential mortgage portfolio included \$11.9 billion and \$12.7 billion of outstanding fully-insured loans, of which both had FHA insurance of \$2.2 billion, with the remainder protected by Fannie Mae long-term standby agreements.

Table 19 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 19 Residential Mortgage – Key Credit Statistics

	Reported Basis ⁽¹⁾		Excluding Fully-insured Loans ⁽¹⁾	
	September 30 2022	December 31 2021	September 30 2022	December 31 2021
(Dollars in millions)				
Outstandings	\$ 229,062	\$ 221,963	\$ 217,130	\$ 209,259
Accruing past due 30 days or more	1,392	1,753	720	866
Accruing past due 90 days or more	427	634	—	—
Nonperforming loans ⁽²⁾	2,187	2,284	2,187	2,284
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	2	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 which primarily consist of collateral-dependent TDRs, including those that have been discharged in Chapter 7 bankruptcy and loans that have not yet demonstrated a sustained period of payment performance following a TDR.

Nonperforming outstanding balances in the residential mortgage portfolio decreased \$97 million during the nine months ended September 30, 2022 primarily due to decreases from consumer real estate loan sales in the second quarter of 2022, partially offset by increases from loans with expired deferrals that were modified as TDRs during the first quarter of 2022. Of the nonperforming residential mortgage loans at September 30, 2022, \$1.4 billion, or 65 percent, were current on contractual payments. Loans accruing past due 30 days or more decreased \$146 million.

Net recoveries of \$3 million for the three months ended September 30, 2022 remained relatively unchanged compared to the same period in 2021. Net charge-offs of \$73 million for the nine months ended September 30, 2022 increased \$90 million compared to the same period in 2021 primarily due to loan sales that occurred in the second quarter of 2022.

Of the \$217.1 billion in total residential mortgage loans outstanding at September 30, 2022, 28 percent were originated as interest-only loans. The outstanding balance of interest-only residential mortgage loans that have entered the amortization period was \$3.4 billion, or six percent, at September 30, 2022. Residential mortgage loans that have entered the amortization period generally experienced a higher rate of early stage delinquencies and nonperforming status compared to the residential mortgage portfolio as a whole. At September 30,

2022, \$37 million, or one percent, of outstanding interest-only residential mortgages that had entered the amortization period were accruing past due 30 days or more compared to \$720 million, or less than one percent, for the entire residential mortgage portfolio. In addition, at September 30, 2022, \$213 million, or six percent, of outstanding interest-only residential mortgage loans that had entered the amortization period were nonperforming, of which \$84 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 to ten years. Approximately 95 percent 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 20 presents outstandings, nonperforming loans and net charge-offs by certain state concentrations for the residential mortgage portfolio. The Los Angeles-Long Beach-Santa Ana Metropolitan Statistical Area (MSA) within California represented 14 percent and 15 percent of outstandings at September 30, 2022 and December 31, 2021. In the New York area, the New York-Northern New Jersey-Long Island MSA made up 15 percent of outstandings at both September 30, 2022 and December 31, 2021.

Table 20 Residential Mortgage State Concentrations

	Outstandings ⁽¹⁾		Nonperforming ⁽¹⁾		Net Charge-offs			
	September 30 2022	December 31 2021	September 30 2022	December 31 2021	Three Months Ended September 30		Nine Months Ended September 30	
					2022	2021	2022	2021
(Dollars in millions)								
California	\$ 80,782	\$ 77,819	\$ 665	\$ 693	\$ (2)	\$ (3)	\$ 38	\$ (10)
New York	26,034	24,975	328	358	(1)	—	4	2
Florida	15,125	13,883	142	158	—	(1)	(1)	(5)
Texas	9,273	9,002	89	86	—	—	1	—
New Jersey	8,834	8,723	100	117	(1)	—	2	—
Other	77,082	74,857	863	872	1	(3)	29	(4)
Residential mortgage loans	\$ 217,130	\$ 209,259	\$ 2,187	\$ 2,284	\$ (3)	\$ (7)	\$ 73	\$ (17)
Fully-insured loan portfolio	11,932	12,704						
Total residential mortgage loan portfolio	\$ 229,062	\$ 221,963						

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

Home Equity

At September 30, 2022, 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 September 30, 2022, 82 percent of the home equity portfolio was in *Consumer Banking*, nine percent was in *All Other* and the remainder of the portfolio was primarily in *GWIM*. Outstanding balances in the home equity portfolio decreased

\$1.1 billion during the nine months ended September 30, 2022 primarily due to paydowns outpacing draws on existing lines and new originations. Of the total home equity portfolio at September 30, 2022 and December 31, 2021, \$11.4 billion and \$12.2 billion, or 43 percent and 44 percent, were in first-lien positions. At September 30, 2022, 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

totalled \$4.6 billion, or 17 percent of our total home equity portfolio.

Unused HELOCs totalled \$41.4 billion and \$40.5 billion at September 30, 2022 and December 31, 2021. The HELOC utilization rate was 38 percent and 39 percent at September 30, 2022 and December 31, 2021.

Table 21 presents certain home equity portfolio key credit statistics.

Table 21 Home Equity – Key Credit Statistics ⁽¹⁾

	September 30 2022	December 31 2021
(Dollars in millions)		
Outstandings	\$ 26,845	\$ 27,935
Accruing past due 30 days or more	83	157
Nonperforming loans ⁽²⁾	532	630
Percent of portfolio		
Refreshed CLTV greater than 90 but less than or equal to 100	—%	—%
Refreshed CLTV greater than 100	—	1
Refreshed FICO below 620	2	3

⁽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 which primarily consist of collateral-dependent TDRs, including those that have been discharged in Chapter 7 bankruptcy, junior-lien loans where the underlying first lien is 90 days or more past due, as well as loans that have not yet demonstrated a sustained period of payment performance following a TDR.

Nonperforming outstanding balances in the home equity portfolio decreased \$98 million to \$532 million at September 30, 2022, primarily driven by loan sales. Of the nonperforming home equity loans at September 30, 2022, \$277 million, or 52 percent, were current on contractual payments. In addition, \$189 million, or 36 percent, of nonperforming home equity loans 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 decreased \$74 million during the nine months ended September 30, 2022.

Net recoveries decreased \$16 million to \$18 million and \$21 million to \$72 million for the three and nine months ended September 30, 2022 compared to the same periods in 2021.

Of the \$26.8 billion in total home equity portfolio outstandings at September 30, 2022, as shown in Table 21, 14 percent require interest-only payments. The outstanding balance of HELOCs that have reached the end of their draw period and have entered the amortization period was \$5.5 billion at September 30, 2022. 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 September 30, 2022, \$47 million, or one percent, of outstanding HELOCs that had entered the amortization period were accruing past due 30 days or more. In addition, at September 30, 2022, \$380 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 the three months ended September 30, 2022, 21 percent of these customers with an outstanding balance did not pay any principal on their HELOCs.

Table 22 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 13 percent of the outstanding home equity portfolio at both September 30, 2022 and December 31, 2021. The Los Angeles-Long Beach-Santa Ana MSA within California made up 11 percent and 10 percent of the outstanding home equity portfolio at September 30, 2022 and December 31, 2021.

Table 22 Home Equity State Concentrations

	Outstandings ⁽¹⁾		Nonperforming ⁽¹⁾		Net Charge-offs			
	September 30 2022	December 31 2021	September 30 2022	December 31 2021	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)					2022	2021	2022	2021
California	\$ 7,464	\$ 7,600	\$ 127	\$ 140	\$ (4)	\$ (9)	\$ (17)	\$ (31)
Florida	2,768	2,977	63	78	(5)	(5)	(18)	(16)
New Jersey	2,113	2,259	54	69	(1)	(1)	(1)	(3)
New York	1,866	2,072	84	96	(1)	(2)	(4)	(3)
Massachusetts	1,380	1,422	25	32	(1)	(2)	(2)	(2)
Other	11,254	11,605	179	215	(6)	(15)	(30)	(38)
Total home equity loan portfolio	\$ 26,845	\$ 27,935	\$ 532	\$ 630	\$ (18)	\$ (34)	\$ (72)	\$ (93)

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

Credit Card

At September 30, 2022, 97 percent of the credit card portfolio was managed in *Consumer Banking* with the remainder in *GWIM*. Outstandings in the credit card portfolio increased \$5.9 billion during the nine months ended September 30, 2022 to \$87.3 billion primarily driven by increased purchase volumes, partially offset by the transfer of a \$1.6 billion affinity card loan portfolio to held for sale that was sold in October 2022. Net charge-offs increased \$7 million to \$328 million during the three months ended September 30, 2022 and decreased \$495 million to \$948 million during the nine months ended September 30, 2022 compared to the same periods in 2021, as loss rates

remained near historic lows. In addition, the nine-month period in the prior year included charge-offs associated with deferrals that expired in 2020. Credit card loans 30 days or more past due and still accruing interest increased \$205 million, and 90 days or more past due and still accruing interest increased \$60 million.

Unused lines of credit for credit card increased to \$367.4 billion at September 30, 2022 from \$361.2 billion at December 31, 2021.

Table 23 presents certain state concentrations for the credit card portfolio.

Table 23 Credit Card State Concentrations

(Dollars in millions)	Outstandings		Accruing Past Due 90 Days or More		Net Charge-offs			
	September 30 2022	December 31 2021	September 30 2022	December 31 2021	Three Months Ended September 30		Nine Months Ended September 30	
					2022	2021	2022	2021
California	\$ 14,287	\$ 13,076	\$ 97	\$ 82	\$ 58	\$ 60	\$ 164	\$ 273
Florida	8,843	8,046	75	71	44	46	130	205
Texas	7,590	6,894	54	47	30	30	87	132
New York	5,070	4,725	42	35	25	24	71	116
Washington	4,563	4,080	17	13	9	7	25	32
Other	46,943	44,617	262	239	162	154	471	685
Total credit card portfolio	\$ 87,296	\$ 81,438	\$ 547	\$ 487	\$ 328	\$ 321	\$ 948	\$ 1,443

Direct/Indirect Consumer

At September 30, 2022, 47 percent of the direct/indirect portfolio was included in *Consumer Banking* (consumer auto and recreational vehicle lending) and 53 percent was included in *GWIM* (principally securities-based lending loans). Outstandings in the direct/indirect portfolio increased \$3.6 billion during

the nine months ended September 30, 2022 to \$107.2 billion driven by growth in our auto portfolio and client demand for liquidity in securities-based lending.

Table 24 presents certain state concentrations for the direct/indirect consumer loan portfolio.

Table 24 Direct/Indirect State Concentrations

(Dollars in millions)	Outstandings		Accruing Past Due 90 Days or More		Net Charge-offs			
	September 30 2022	December 31 2021	September 30 2022	December 31 2021	Three Months Ended September 30		Nine Months Ended September 30	
					2022	2021	2022	2021
California	\$ 15,526	\$ 15,061	\$ 4	\$ 2	\$ 1	\$ (2)	\$ 4	\$ 3
Florida	13,749	13,352	2	1	2	(2)	2	—
Texas	10,104	9,505	3	2	2	(4)	3	2
New York	8,148	7,802	1	1	1	1	2	4
New Jersey	4,494	4,228	1	—	1	—	1	(1)
Other	55,138	53,612	16	5	2	(11)	5	(4)
Total direct/indirect loan portfolio	\$ 107,159	\$ 103,560	\$ 27	\$ 11	\$ 9	\$ (18)	\$ 17	\$ 4

Nonperforming Consumer Loans, Leases and Foreclosed Properties Activity

Table 25 presents nonperforming consumer loans, leases and foreclosed properties activity for the three and nine months ended September 30, 2022 and 2021. During the nine months ended September 30, 2022, nonperforming consumer loans decreased \$229 million to \$2.8 billion primarily due to decreases from loan sales, partially offset by increases from loans with expired deferrals that were modified as TDRs during the first quarter of 2022.

At September 30, 2022, \$639 million, or 23 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 September 30, 2022, \$1.7 billion, or 63 percent, of nonperforming consumer loans were modified and are now current after successful trial periods, or are current loans classified as nonperforming loans in accordance with applicable policies.

Foreclosed properties increased \$24 million during the nine months ended September 30, 2022 to \$125 million. Nonperforming loans also include certain loans that have been modified in TDRs where economic concessions have been granted to borrowers experiencing financial difficulties.

Table 25 Nonperforming Consumer Loans, Leases and Foreclosed Properties Activity

	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
(Dollars in millions)				
Nonperforming loans and leases, beginning of period	\$ 2,866	\$ 3,044	\$ 2,989	\$ 2,725
Additions	236	353	1,245	1,635
Reductions:				
Paydowns and payoffs	(124)	(163)	(446)	(446)
Sales	(1)	(1)	(401)	(3)
Returns to performing status ⁽¹⁾	(193)	(201)	(552)	(839)
Charge-offs	(12)	(12)	(50)	(49)
Transfers to foreclosed properties	(12)	(3)	(25)	(6)
Total net additions/(reductions) to nonperforming loans and leases	(106)	(27)	(229)	292
Total nonperforming loans and leases, September 30	2,760	3,017	2,760	3,017
Foreclosed properties, September 30 ⁽²⁾	125	87	125	87
Nonperforming consumer loans, leases and foreclosed properties, September 30	\$ 2,885	\$ 3,104	\$ 2,885	\$ 3,104
Nonperforming consumer loans and leases as a percentage of outstanding consumer loans and leases ⁽³⁾	0.61 %	0.71 %		
Nonperforming consumer loans, leases and foreclosed properties as a percentage of outstanding consumer loans, leases and foreclosed properties ⁽³⁾	0.64	0.73		

⁽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⁾ Foreclosed property balances do not include properties insured by certain government-guaranteed loans, principally FHA-insured, of \$75 million and \$55 million at September 30, 2022 and 2021.

⁽³⁾ Outstanding consumer loans and leases exclude loans accounted for under the fair value option.

Table 26 presents TDRs for the consumer real estate portfolio. Performing TDR balances are excluded from nonperforming loans and leases in Table 25.

Table 26 Consumer Real Estate Troubled Debt Restructurings

	September 30, 2022			December 31, 2021		
	Nonperforming	Performing	Total	Nonperforming	Performing	Total
(Dollars in millions)						
Residential mortgage ^(1, 2)	\$ 1,721	\$ 1,588	\$ 3,309	\$ 1,498	\$ 2,278	\$ 3,776
Home equity ⁽³⁾	327	552	879	254	652	906
Total consumer real estate troubled debt restructurings	\$ 2,048	\$ 2,140	\$ 4,188	\$ 1,752	\$ 2,930	\$ 4,682

⁽¹⁾ At September 30, 2022 and December 31, 2021, residential mortgage TDRs deemed collateral dependent totaled \$1.8 billion and \$1.6 billion, and included \$1.6 billion and \$1.4 billion of loans classified as nonperforming and \$187 million and \$279 million of loans classified as performing.

⁽²⁾ At September 30, 2022 and December 31, 2021, residential mortgage performing TDRs include \$1.1 billion and \$1.2 billion of loans that were fully-insured.

⁽³⁾ At September 30, 2022 and December 31, 2021, home equity TDRs deemed collateral dependent totaled \$413 million and \$370 million, and include \$290 million and \$222 million of loans classified as nonperforming and \$123 million and \$148 million of loans classified as performing.

In addition to modifying consumer real estate loans, we work with customers who are experiencing financial difficulty by modifying credit card and other consumer loans. Credit card and other consumer loan modifications generally involve a reduction in the customer's interest rate on the account and placing the customer on a fixed payment plan not exceeding 60 months.

Modifications of credit card and other consumer loans are made through programs utilizing direct customer contact, but may also utilize external programs. At September 30, 2022 and December 31, 2021, our credit card and other consumer TDR portfolio was \$608 million and \$672 million, of which \$533 million and \$599 million were current or less than 30 days past due under the modified terms.

Commercial Portfolio Credit Risk Management

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 31, 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 39.

For more information on our accounting policies regarding delinquencies, nonperforming status, net charge-offs and TDRs for the commercial portfolio, see *Note 1 – Summary of Significant Accounting Principles* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

Commercial Credit Portfolio

During the nine months ended September 30, 2022, commercial credit quality improved as charge-offs, nonperforming commercial loans and reservable criticized utilized exposure declined during this period. Due to the ongoing Russia/Ukraine conflict, all direct exposure to Russian counterparties was downgraded and reported as reservable criticized exposure, and expected credit losses have been incorporated into our estimate of the allowance for credit losses. Outstanding commercial loans and leases increased \$38.2 billion during the nine months ended September 30, 2022 due to growth in commercial and industrial, primarily in *Global Banking*. This increase was partially offset by lower U.S. small business commercial loans due to repayments of PPP loans by the Small Business Administration (SBA) under the terms of the program. For more information on PPP loans, see *Note 1 – Summary of Significant Accounting Principles* to the

Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

Credit quality of commercial real estate borrowers continued to stabilize as pandemic-impacted sectors are recovering. However, many real estate markets, while improving, are still experiencing disruptions in demand, supply chain challenges, tenant difficulties and challenging capital markets. 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 remained relatively unchanged at \$5.4 billion at September 30, 2022, as asset quality improvement and reduced pandemic uncertainties were offset by a dampening macroeconomic outlook, loan growth and a reserve build related to Russian exposure. For more information, see Allowance for Credit Losses on page 42.

Total commercial utilized credit exposure increased \$65.0 billion during the nine months ended September 30, 2022 to \$718.6 billion primarily driven by higher loans and leases and 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 57 percent and 56 percent at September 30, 2022 and December 31, 2021.

Table 27 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 27 Commercial Credit Exposure by Type

	Commercial Utilized ⁽¹⁾		Commercial Unfunded ^(2, 3, 4)		Total Commercial Committed	
	September 30 2022	December 31 2021	September 30 2022	December 31 2021	September 30 2022	December 31 2021
(Dollars in millions)						
Loans and leases	\$ 581,578	\$ 543,420	\$ 466,564	\$ 454,256	\$ 1,048,142	\$ 997,676
Derivative assets ⁽⁵⁾	71,956	35,344	—	—	71,956	35,344
Standby letters of credit and financial guarantees	35,080	34,389	1,344	639	36,424	35,028
Debt securities and other investments	18,647	19,427	3,227	4,638	21,874	24,065
Loans held-for-sale	3,909	13,185	11,308	16,581	15,217	29,766
Operating leases	5,516	5,935	—	—	5,516	5,935
Commercial letters of credit	1,036	1,176	65	247	1,101	1,423
Other	838	652	—	—	838	652
Total	\$ 718,560	\$ 653,528	\$ 482,508	\$ 476,361	\$ 1,201,068	\$ 1,129,889

⁽¹⁾ Commercial utilized exposure includes loans of \$4.5 billion and \$7.2 billion accounted for under the fair value option at September 30, 2022 and December 31, 2021.

⁽²⁾ Commercial unfunded exposure includes commitments accounted for under the fair value option with a notional amount of \$3.5 billion and \$4.8 billion at September 30, 2022 and December 31, 2021.

⁽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 \$10.4 billion and \$10.7 billion at September 30, 2022 and December 31, 2021.

⁽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 \$40.6 billion and \$30.8 billion at September 30, 2022 and December 31, 2021. Not reflected in utilized and committed exposure is additional non-cash derivative collateral held of \$59.3 billion and \$44.8 billion at September 30, 2022 and December 31, 2021, which consists primarily of other marketable securities.

Nonperforming commercial loans decreased \$355 million. Table 28 presents our commercial loans and leases portfolio and related credit quality information at September 30, 2022 and December 31, 2021.

Table 28 Commercial Credit Quality

	Outstandings		Nonperforming		Accruing Past Due 90 Days or More	
	September 30 2022	December 31 2021	September 30 2022	December 31 2021	September 30 2022	December 31 2021
(Dollars in millions)						
Commercial and industrial:						
U.S. commercial	\$ 355,370	\$ 325,936	\$ 640	\$ 825	\$ 300	\$ 171
Non-U.S. commercial	123,035	113,266	274	268	22	19
Total commercial and industrial	478,405	439,202	914	1,093	322	190
Commercial real estate	67,952	63,009	282	382	34	40
Commercial lease financing	12,956	14,825	11	80	12	8
	559,313	517,036	1,207	1,555	368	238
U.S. small business commercial ⁽¹⁾	17,769	19,183	16	23	252	87
Commercial loans excluding loans accounted for under the fair value option	\$ 577,082	\$ 536,219	\$ 1,223	\$ 1,578	\$ 620	\$ 325
Loans accounted for under the fair value option ⁽²⁾	4,496	7,201				
Total commercial loans and leases	\$ 581,578	\$ 543,420				

⁽¹⁾ Includes card-related products.

⁽²⁾ Commercial loans accounted for under the fair value option include U.S. commercial of \$2.4 billion and \$4.6 billion and non-U.S. commercial of \$2.1 billion and \$2.6 billion at September 30, 2022 and December 31, 2021. For more information on the fair value option, see Note 15 – Fair Value Option to the Consolidated Financial Statements.

Table 29 presents net charge-offs and related ratios for our commercial loans and leases for the three and nine months ended September 30, 2022 and 2021.

Table 29 Commercial Net Charge-offs and Related Ratios

(Dollars in millions)	Net Charge-offs				Net Charge-off Ratios ⁽¹⁾			
	Three Months Ended September 30		Nine Months Ended September 30		Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021	2022	2021	2022	2021
Commercial and industrial:								
U.S. commercial	\$ 23	\$ 15	\$ 24	\$ (4)	0.03 %	0.02%	0.01 %	—%
Non-U.S. commercial	(6)	1	(10)	41	(0.02)	—	(0.01)	0.06
Total commercial and industrial	17	16	14	37	0.01	0.02	—	0.01
Commercial real estate	13	—	32	28	0.08	—	0.07	0.06
Commercial lease financing	(1)	(1)	3	(1)	(0.05)	—	0.03	—
	29	15	49	64	0.02	0.01	0.01	0.02
U.S. small business commercial	32	119	110	282	0.72	1.76	0.82	1.16
Total commercial	\$ 61	\$ 134	\$ 159	\$ 346	0.04	0.11	0.04	0.09

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

Table 30 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 decreased \$4.7 billion during the nine months ended September 30, 2022, which was broad-based across industries. At both September 30, 2022 and December 31, 2021, 87 percent of commercial reservable criticized utilized exposure was secured.

Table 30 Commercial Reservable Criticized Utilized Exposure ^(1, 2)

(Dollars in millions)	September 30, 2022		December 31, 2021	
Commercial and industrial:				
U.S. commercial	\$ 9,811	2.56 %	\$ 11,327	3.20%
Non-U.S. commercial	2,683	2.06	2,582	2.17
Total commercial and industrial	12,494	2.43	13,909	2.94
Commercial real estate	4,532	6.52	7,572	11.72
Commercial lease financing	236	1.82	387	2.61
	17,262	2.90	21,868	3.96
U.S. small business commercial	397	2.23	513	2.67
Total commercial reservable criticized utilized exposure	\$ 17,659	2.88	\$ 22,381	3.91

⁽¹⁾ Total commercial reservable criticized utilized exposure includes loans and leases of \$17.0 billion and \$21.2 billion and commercial letters of credit of \$662 million and \$1.2 billion at September 30, 2022 and December 31, 2021.

⁽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 September 30, 2022, 64 percent of the U.S. commercial loan portfolio, excluding small business, was managed in *Global Banking*, 20 percent in *Global Markets*, 15 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 increased \$29.4 billion, or nine percent, during the nine months ended September 30, 2022 primarily driven by *Global Banking*. Reservable criticized utilized exposure decreased \$1.5 billion, or 13 percent, driven by decreases across a broad range of industries.

Non-U.S. Commercial

At September 30, 2022, 66 percent of the non-U.S. commercial loan portfolio was managed in *Global Banking*, 33 percent in *Global Markets* and the remainder in *GWIM*. Non-U.S. commercial loans increased \$9.8 billion, or nine percent, during the nine months ended September 30, 2022, as loan growth in *Global Banking* and *Global Markets* was partially offset by foreign currency valuation adjustments on foreign currency-denominated loans. Reservable criticized utilized exposure increased \$101

million, or four percent, due to downgrades for direct exposure to Russian counterparties. For information on the non-U.S. commercial portfolio, see Non-U.S. Portfolio on page 41. For more information on the Russia/Ukraine conflict, see Recent Developments on page 3.

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 \$4.9 billion, or eight percent, during the nine months ended September 30, 2022 to \$68.0 billion due to new originations outpacing paydowns and increased utilizations under existing credit facilities. Reservable criticized utilized exposure decreased \$3.0 billion, or 40 percent, primarily driven by Hotels due to improving vacancy rates and reduced travel restrictions. The portfolio remains diversified across property types and geographic regions. California represented the largest state concentration at 20 percent and 21 percent of the commercial real estate portfolio at September 30, 2022 and December 31, 2021. The commercial real estate portfolio is predominantly managed in *Global Banking* and consists of loans made primarily to public and private developers, and commercial real estate firms.

For the three and nine months ended September 30, 2022 and 2021, we continued to see low default rates and varying

degrees of improvement in certain geographic regions and property types of the portfolio. 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 31 presents outstanding commercial real estate loans by geographic region, based on the geographic location of the collateral, and by property type.

Table 31 Outstanding Commercial Real Estate Loans

	September 30 2022	December 31 2021
(Dollars in millions)		
By Geographic Region		
Northeast	\$ 16,630	\$ 14,318
California	13,424	13,145
Southwest	8,099	7,510
Southeast	7,170	6,758
Florida	5,304	4,367
Midwest	3,498	3,221
Illinois	3,223	2,878
Midsouth	2,359	2,289
Northwest	1,574	1,709
Non-U.S.	4,606	4,760
Other	2,065	2,054
Total outstanding commercial real estate loans	\$ 67,952	\$ 63,009
By Property Type		
Non-residential		
Office	\$ 18,245	\$ 18,309
Industrial / Warehouse	12,763	10,749
Multi-family rental	10,176	8,173
Shopping centers /Retail	6,017	6,502
Hotel / Motels	5,608	5,932
Unsecured	2,883	3,178
Multi-use	2,403	1,835
Other	8,534	7,238
Total non-residential	66,629	61,916
Residential	1,323	1,093
Total outstanding commercial real estate loans	\$ 67,952	\$ 63,009

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 \$1.5 billion and \$4.7 billion of PPP loans outstanding at September 30, 2022 and December 31, 2021. The decline of \$3.2 billion in PPP loans during the nine months ended September 30, 2022 was primarily due to repayment of the loans by the SBA under the terms of the program. Excluding PPP, credit card-related products were 54 percent and 50 percent of the U.S. small business commercial portfolio at September 30, 2022 and December 31, 2021 and represented all of the net charge-offs for the three and nine months ended September 30, 2022 compared to 100 percent and 96 percent for the same periods in 2021. The increase of \$165 million in accruing past due 90 days or more for the nine months ended September 30, 2022 was driven by PPP loans, which are fully guaranteed by the SBA.

Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity

Table 32 presents the nonperforming commercial loans, leases and foreclosed properties activity during the three and nine months ended September 30, 2022 and 2021. Nonperforming loans do not include loans accounted for under the fair value option. During the nine months ended September 30, 2022, nonperforming commercial loans and leases decreased \$355 million to \$1.2 billion. At September 30, 2022, 98 percent of commercial nonperforming loans, leases and foreclosed properties were secured and 56 percent were contractually current. Commercial nonperforming loans were carried at 86 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 32 Nonperforming Commercial Loans, Leases and Foreclosed Properties Activity ^(1, 2)

(Dollars in millions)	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
Nonperforming loans and leases, beginning of period	\$ 1,298	\$ 1,863	\$ 1,578	\$ 2,227
Additions	307	275	811	1,250
Reductions:				
Paydowns	(180)	(297)	(681)	(873)
Sales	(12)	(29)	(53)	(128)
Returns to performing status ⁽³⁾	(148)	(82)	(299)	(169)
Charge-offs	(42)	(33)	(94)	(219)
Transfers to loans held-for-sale	—	—	(39)	(391)
Total net reductions to nonperforming loans and leases	(75)	(166)	(355)	(530)
Total nonperforming loans and leases, September 30	1,223	1,697	1,223	1,697
Foreclosed properties, September 30	48	30	48	30
Nonperforming commercial loans, leases and foreclosed properties, September 30	\$ 1,271	\$ 1,727	\$ 1,271	\$ 1,727
Nonperforming commercial loans and leases as a percentage of outstanding commercial loans and leases ⁽⁴⁾	0.21 %	0.34 %		
Nonperforming commercial loans, leases and foreclosed properties as a percentage of outstanding commercial loans, leases and foreclosed properties ⁽⁴⁾	0.22	0.35		

⁽¹⁾ Balances do not include nonperforming loans held-for-sale of \$222 million and \$279 million at September 30, 2022 and 2021.

⁽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, or when the loan otherwise becomes well-secured and is in the process of collection. TDRs are generally classified as performing after a sustained period of demonstrated payment performance.

⁽⁴⁾ Outstanding commercial loans exclude loans accounted for under the fair value option.

Table 33 presents our commercial TDRs by product type and performing status. U.S. small business commercial TDRs are comprised of renegotiated small business card loans and small business loans. The renegotiated small business card loans are not classified as nonperforming as they are charged off no later

than the end of the month in which the loan becomes 180 days past due. Commercial TDRs increased \$799 million, or 42 percent, during the nine months ended September 30, 2022 primarily due to commercial real estate loans that were modified as TDRs during the first half of the year.

Table 33 Commercial Troubled Debt Restructurings

(Dollars in millions)	September 30, 2022			December 31, 2021		
	Nonperforming	Performing	Total	Nonperforming	Performing	Total
Commercial and industrial:						
U.S. commercial	\$ 351	\$ 956	\$ 1,307	\$ 359	\$ 685	\$ 1,044
Non-U.S. commercial	102	105	207	72	8	80
Total commercial and industrial	453	1,061	1,514	431	693	1,124
Commercial real estate	78	1,052	1,130	244	437	681
Commercial lease financing	3	6	9	50	7	57
	534	2,119	2,653	725	1,137	1,862
U.S. small business commercial	—	46	46	—	38	38
Total commercial troubled debt restructurings	\$ 534	\$ 2,165	\$ 2,699	\$ 725	\$ 1,175	\$ 1,900

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.

Our commercial credit exposure is diversified across a broad range of industries. Total commercial committed exposure increased \$71.2 billion, or six percent, during the nine months ended September 30, 2022 to \$1.2 trillion. The increase in commercial committed exposure was concentrated in Asset managers and funds, Global commercial banks and Financial markets infrastructure (clearinghouses).

For information on industry limits, see Commercial Portfolio Credit Risk Management – Industry Concentrations in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

Asset managers and funds, our largest industry concentration with committed exposure of \$172.5 billion,

increased \$35.6 billion, or 26 percent, during the nine months ended September 30, 2022, which was primarily driven by investment-grade exposures.

Real estate, our second largest industry concentration with committed exposure of \$98.6 billion, increased \$2.4 billion, or two percent, during the nine months ended September 30, 2022. For more information on the commercial real estate and related portfolios, see Commercial Portfolio Credit Risk Management – Commercial Real Estate on page 37.

Capital goods, our third largest industry concentration with committed exposure of \$89.4 billion, increased \$5.2 billion, or six percent, during the nine months ended September 30, 2022.

While the U.S. and global economies have shown signs of relief from the pandemic, uncertainty remains as a result of geopolitical and inflationary pressures, and a number of industries will likely continue to be adversely impacted due to these conditions. 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⁾

	Commercial Utilized		Total Commercial Committed ⁽²⁾	
	September 30 2022	December 31 2021	September 30 2022	December 31 2021
(Dollars in millions)				
Asset managers & funds	\$ 118,183	\$ 89,786	\$ 172,468	\$ 136,914
Real estate ⁽³⁾	70,535	69,384	98,590	96,202
Capital goods	47,669	42,784	89,447	84,293
Finance companies	50,749	59,327	74,003	86,009
Healthcare equipment and services	32,693	32,003	57,834	58,195
Materials	26,552	25,133	55,599	53,652
Retailing	26,850	24,514	52,916	50,816
Government & public education	36,635	37,597	48,991	50,066
Food, beverage and tobacco	23,258	21,584	48,317	45,419
Consumer services	26,250	28,172	46,186	48,052
Individuals and trusts	34,976	29,752	44,640	39,869
Commercial services and supplies	23,010	22,390	43,769	42,451
Utilities	19,280	17,082	39,560	36,855
Energy	16,934	14,217	37,829	34,136
Transportation	21,671	21,079	34,033	32,015
Global commercial banks	30,209	20,062	32,482	21,390
Technology hardware and equipment	10,993	10,159	28,135	26,910
Media	12,282	12,495	27,331	26,318
Software and services	13,908	10,663	26,678	27,643
Consumer durables and apparel	10,251	9,740	21,167	21,226
Insurance	12,427	5,743	20,901	14,323
Vehicle dealers	11,788	11,030	19,698	15,678
Pharmaceuticals and biotechnology	7,722	5,608	18,779	19,439
Telecommunication services	8,530	10,056	16,608	21,270
Automobiles and components	7,529	9,236	15,685	17,052
Financial markets infrastructure (clearinghouses)	7,894	3,876	12,704	6,076
Food and staples retailing	7,046	6,902	11,728	12,226
Religious and social organizations	2,736	3,154	4,990	5,394
Total commercial credit exposure by industry	\$ 718,560	\$ 653,528	\$ 1,201,068	\$ 1,129,889

⁽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 \$10.4 billion and \$10.7 billion at September 30, 2022 and December 31, 2021.

⁽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 September 30, 2022 and December 31, 2021, 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 \$9.1 billion and \$2.6 billion. We recorded net losses of \$56 million and gains of \$66 million for the three and nine months ended September 30, 2022 compared to net losses of \$18 million and \$86 million for the same periods in 2021. 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 40. For more information, see Trading Risk Management on page 44.

Tables 35 and 36 present the maturity profiles and the credit exposure debt ratings of the net credit default protection portfolio at September 30, 2022 and December 31, 2021.

Table 35 Net Credit Default Protection by Maturity

	September 30 2022	December 31 2021
Less than or equal to one year	20 %	34 %
Greater than one year and less than or equal to five years	77	62
Greater than five years	3	4
Total net credit default protection	100 %	100 %

Table 36 Net Credit Default Protection by Credit Exposure Debt Rating

	Net Notional ⁽¹⁾		Percent of Total	
	September 30, 2022	December 31, 2021		
(Dollars in millions)				
Ratings ^(2, 3)				
AAA	\$ (379)	4.2 %	\$ —	— %
AA	(852)	9.4	—	—
A	(3,103)	34.1	(350)	13.4
BBB	(2,828)	31.1	(710)	27.1
BB	(1,050)	11.6	(809)	30.9
B	(748)	8.2	(659)	25.2
CCC and below	(79)	0.9	(35)	1.3
NR ⁽⁴⁾	(48)	0.5	(55)	2.1
Total net credit default protection	\$ (9,087)	100.0 %	\$ (2,618)	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.

For more information on credit derivatives and counterparty credit risk valuation adjustments, see Note 3 – *Derivatives* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

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. For more information on our non-U.S. credit and trading portfolios, see Non-U.S. Portfolio in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

Table 37 presents our 20 largest non-U.S. country exposures at September 30, 2022. These exposures accounted for 89 percent of our total non-U.S. exposure at both September 30, 2022 and December 31, 2021. Net country exposure for these 20 countries increased \$1.8 billion during the nine months ended September 30, 2022 primarily driven by increases in Japan, the United Kingdom, Ireland and India, partially offset by reductions in France, Canada and Australia.

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 September 30 2022	Hedges and Credit Default Protection	Net Country Exposure at September 30 2022	Increase (Decrease) from December 31 2021
United Kingdom	\$ 32,150	\$ 14,730	\$ 10,068	\$ 2,300	\$ 59,248	\$ (1,259)	\$ 57,989	\$ 3,020
Germany	22,653	7,101	2,146	2,468	34,368	(823)	33,545	(280)
Canada	10,632	9,144	1,868	3,561	25,205	(617)	24,588	(1,723)
Japan	16,988	1,840	1,816	1,062	21,706	(723)	20,983	3,721
Australia	12,404	4,078	1,434	2,059	19,975	(333)	19,642	(1,662)
France	8,683	7,342	1,450	2,863	20,338	(1,000)	19,338	(5,569)
Brazil	6,366	1,251	537	3,693	11,847	(88)	11,759	(991)
China	7,192	295	1,909	2,381	11,777	(299)	11,478	(1,104)
India	6,798	305	609	3,121	10,833	(114)	10,719	2,088
Netherlands	3,945	4,215	1,011	1,234	10,405	(651)	9,754	158
South Korea	5,983	860	1,351	1,369	9,563	(78)	9,485	1,333
Singapore	4,178	622	356	4,116	9,272	(36)	9,236	(1,429)
Switzerland	5,187	3,316	570	440	9,513	(298)	9,215	640
Ireland	6,965	961	175	263	8,364	(50)	8,314	2,775
Hong Kong	5,858	312	321	1,494	7,985	(25)	7,960	633
Mexico	4,516	1,661	254	521	6,952	(245)	6,707	245
Italy	3,066	2,352	294	879	6,591	(375)	6,216	1,012
Spain	2,146	1,778	750	1,496	6,170	(215)	5,955	35
Belgium	1,284	1,452	289	934	3,959	(179)	3,780	(1,251)
Saudi Arabia	2,366	932	300	32	3,630	(49)	3,581	108
Total top 20 non-U.S. countries exposure	\$ 169,360	\$ 64,547	\$ 27,508	\$ 36,286	\$ 297,701	\$ (7,457)	\$ 290,244	\$ 1,759

Our largest non-U.S. country exposure at September 30, 2022 was the United Kingdom with net exposure of \$58.0 billion, which represents a \$3.0 billion increase from December 31, 2021. The increase was primarily driven by net counterparty exposure with financial institutions, partially offset by a reduction in deposits with the central bank. Our second

largest non-U.S. country exposure was Germany with net exposure of \$33.5 billion at September 30, 2022, a \$280 million decrease from December 31, 2021. The reduction was driven by a decrease in exposure with financial institutions and corporates, offset by an increase in deposits with the central bank.

Allowance for Credit Losses

The allowance for credit losses decreased \$26 million from December 31, 2021 to \$13.8 billion at September 30, 2022, which included a \$171 million reserve decrease related to the consumer portfolio and a \$145 million reserve increase related to the commercial portfolio. The decrease in the allowance was primarily driven by asset quality improvement and reduced

pandemic uncertainties, partially offset by reserve builds related to loan growth, a dampening macroeconomic outlook and Russian exposure.

Table 38 presents an allocation of the allowance for credit losses by product type at September 30, 2022 and December 31, 2021.

Table 38 Allocation of the Allowance for Credit Losses by Product Type

			Percent of Loans and Leases Outstanding ⁽¹⁾		Percent of Total	Percent of Loans and Leases Outstanding ⁽¹⁾
(Dollars in millions)	Amount	Percent of Total		Amount	Percent of Total	
	September 30, 2022			December 31, 2021		
Allowance for loan and lease losses						
Residential mortgage	\$ 282	2.29 %	0.12 %	\$ 351	2.83 %	0.16 %
Home equity	102	0.83	0.38	206	1.66	0.74
Credit card	5,879	47.79	6.74	5,907	47.70	7.25
Direct/Indirect consumer	525	4.27	0.49	523	4.22	0.51
Other consumer	92	0.75	n/m	46	0.37	n/m
Total consumer	6,880	55.93	1.53	7,033	56.78	1.62
U.S. commercial ⁽²⁾	3,018	24.53	0.81	3,019	24.37	0.87
Non-U.S. commercial	1,191	9.68	0.97	975	7.87	0.86
Commercial real estate	1,161	9.44	1.71	1,292	10.43	2.05
Commercial lease financing	52	0.42	0.40	68	0.55	0.46
Total commercial	5,422	44.07	0.94	5,354	43.22	1.00
Allowance for loan and lease losses	12,302	100.00 %	1.20	12,387	100.00 %	1.28
Reserve for unfunded lending commitments	1,515			1,456		
Allowance for credit losses	\$ 13,817			\$ 13,843		

⁽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 \$864 million and \$1.2 billion at September 30, 2022 and December 31, 2021.
n/m = not meaningful

Net charge-offs for the three and nine months ended September 30, 2022 were \$520 million and \$1.5 billion compared to \$463 million and \$1.9 billion for the same periods in 2021. During the three months ended September 30, 2022, net charge-offs increased \$57 million, or 12 percent, primarily due to overdrafts charged off in other consumer. During the nine months ended September 30, 2022, net charge-offs decreased \$398 million, or 21 percent, primarily driven by lower credit card losses, as loss rates remained near historic lows. The provision for credit losses increased \$1.5 billion to an expense of \$898 million, and \$5.6 billion to an expense of \$1.5 billion for the three and nine months ended September 30, 2022 compared to the same periods in 2021. The provision for credit losses for the three months ended September 30, 2022 was primarily driven by loan growth and a dampening macroeconomic outlook, and the nine-month period was driven by the same factors as well as a reserve build related to Russian exposure, partially offset by asset quality improvement and reduced pandemic uncertainties. For the same periods in the prior year, the benefit in the provision for credit losses was due to an improved macroeconomic outlook. The provision for credit losses for the

consumer portfolio, including unfunded lending commitments, increased \$641 million to an expense of \$722 million and \$2.5 billion to an expense of \$1.1 billion for the three and nine months ended September 30, 2022 compared to the same periods in 2021. The provision for credit losses for the commercial portfolio, including unfunded lending commitments, increased \$881 million to an expense of \$176 million and \$3.0 billion to an expense of \$304 million for the three and nine months ended September 30, 2022 compared to the same periods in 2021.

Table 39 presents a rollforward of the allowance for credit losses, including certain loan and allowance ratios for the three and nine months ended September 30, 2022 and 2021. 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 to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K and Note 5 – Outstanding Loans and Leases and Allowance for Credit Losses to the Consolidated Financial Statements.

Table 39 Allowance for Credit Losses

	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
(Dollars in millions)				
Allowance for loan and lease losses, beginning of period	\$ 11,973	\$ 14,095	\$ 12,387	\$ 18,802
Loans and leases charged off				
Residential mortgage	(5)	(7)	(155)	(27)
Home equity	(8)	(8)	(41)	(33)
Credit card	(487)	(495)	(1,452)	(1,956)
Direct/Indirect consumer	(63)	(59)	(184)	(229)
Other consumer	(146)	(72)	(371)	(217)
Total consumer charge-offs	(709)	(641)	(2,203)	(2,462)
U.S. commercial ⁽¹⁾	(85)	(159)	(239)	(509)
Non-U.S. commercial	(1)	(2)	(3)	(44)
Commercial real estate	(14)	(4)	(37)	(38)
Commercial lease financing	—	—	(5)	—
Total commercial charge-offs	(100)	(165)	(284)	(591)
Total loans and leases charged off	(809)	(806)	(2,487)	(3,053)
Recoveries of loans and leases previously charged off				
Residential mortgage	8	14	82	44
Home equity	26	42	113	126
Credit card	159	174	504	513
Direct/Indirect consumer	54	77	167	225
Other consumer	3	5	13	19
Total consumer recoveries	250	312	879	927
U.S. commercial ⁽²⁾	30	25	105	231
Non-U.S. commercial	7	1	13	3
Commercial real estate	1	4	5	10
Commercial lease financing	1	1	2	1
Total commercial recoveries	39	31	125	245
Total recoveries of loans and leases previously charged off	289	343	1,004	1,172
Net charge-offs	(520)	(463)	(1,483)	(1,881)
Provision for loan and lease losses	845	(475)	1,394	(3,766)
Other	4	(2)	4	—
Allowance for loan and lease losses, September 30	12,302	13,155	12,302	13,155
Reserve for unfunded lending commitments, beginning of period	1,461	1,687	1,456	1,878
Provision for unfunded lending commitments	53	(149)	57	(339)
Other	1	—	2	(1)
Reserve for unfunded lending commitments, September 30	1,515	1,538	1,515	1,538
Allowance for credit losses, September 30	\$ 13,817	\$ 14,693	\$ 13,817	\$ 14,693
Loan and allowance ratios ⁽³⁾:				
Loans and leases outstanding at September 30	\$ 1,027,615	\$ 920,170	\$ 1,027,615	\$ 920,170
Allowance for loan and lease losses as a percentage of total loans and leases outstanding at September 30	1.20 %	1.43 %	1.20 %	1.43 %
Consumer allowance for loan and lease losses as a percentage of total consumer loans and leases outstanding at September 30	1.53	1.70	1.53	1.70
Commercial allowance for loan and lease losses as a percentage of total commercial loans and leases outstanding at September 30	0.94	1.20	0.94	1.20
Average loans and leases outstanding	\$ 1,029,084	\$ 913,113	\$ 1,003,014	\$ 905,214
Annualized net charge-offs as a percentage of average loans and leases outstanding	0.20 %	0.20 %	0.20 %	0.28 %
Allowance for loan and lease losses as a percentage of total nonperforming loans and leases at September 30	309	279	309	279
Ratio of the allowance for loan and lease losses at September 30 to annualized net charge-offs	5.96	7.16	6.20	5.23
Amounts included in allowance for loan and lease losses for loans and leases that are excluded from nonperforming loans and leases at September 30 ⁽⁴⁾	\$ 6,746	\$ 7,375	\$ 6,746	\$ 7,375
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 September 30 ⁽⁴⁾	140 %	123 %	140 %	123 %

⁽¹⁾ Includes U.S. small business commercial charge-offs of \$43 million and \$150 million for the three and nine months ended September 30, 2022 compared to \$137 million and \$343 million for the same periods in 2021.

⁽²⁾ Includes U.S. small business commercial recoveries of \$11 million and \$40 million for the three and nine months ended September 30, 2022 compared to \$18 million and \$61 million for the same periods in 2021.

⁽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

For more information on our market risk management process, see Market Risk Management in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

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.

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. VaR is a common statistic used to measure market risk. 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.

Table 40 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. For more information on the market risk VaR for trading activities, see Trading Risk Management in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

The total market-based portfolio VaR results in Table 40 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 40 presents period-end, average, high and low daily trading VaR for the three months ended September 30, 2022, June 30, 2022 and September 30, 2021 using a 99 percent confidence level as well as average daily trading VaR for the nine months ended September 30, 2022 and 2021. The amounts disclosed in Table 40 and Table 41 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 average of total covered positions and less liquid trading positions portfolio VaR for the three months ended September 30, 2022 compared to the prior quarter remained relatively unchanged.

Table 40 Market Risk VaR for Trading Activities

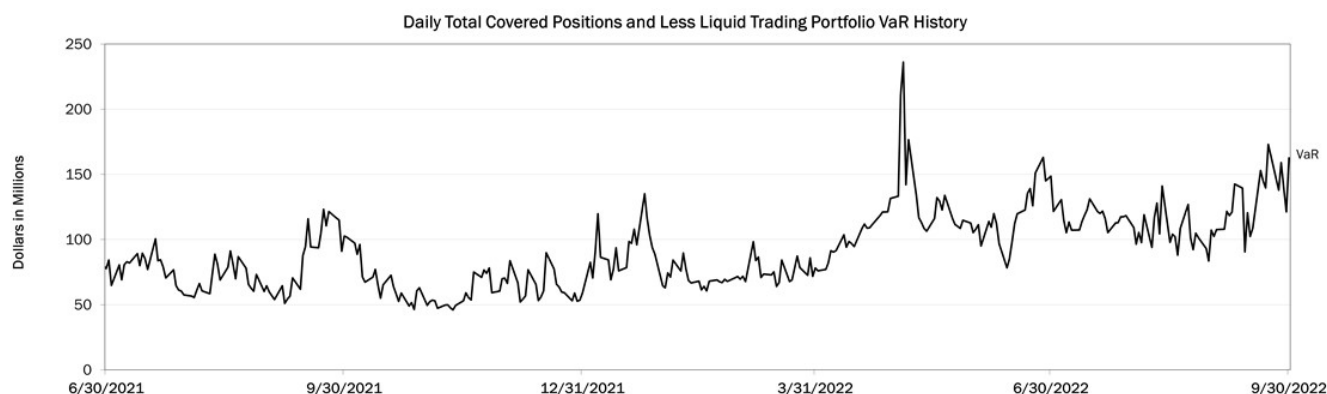
(Dollars in millions)	Three Months Ended												Nine Months Ended	
	September 30, 2022				June 30, 2022				September 30, 2021				September 30	
	Period End	Average	High ⁽¹⁾	Low ⁽¹⁾	Period End	Average	High ⁽¹⁾	Low ⁽¹⁾	Period End	Average	High ⁽¹⁾	Low ⁽¹⁾	2022 Average	2021 Average
Foreign exchange	\$ 24	\$ 19	\$ 32	\$ 12	\$ 21	\$ 17	\$ 22	\$ 12	\$ 12	\$ 13	\$ 21	\$ 9	\$ 18	\$ 13
Interest rate	35	34	55	25	36	36	56	24	33	32	48	20	36	42
Credit	90	68	95	54	71	73	106	53	72	66	80	54	68	68
Equity	22	16	23	12	21	22	33	19	32	24	32	19	20	24
Commodities	12	13	18	9	14	17	27	12	6	8	11	5	13	8
Portfolio diversification	(102)	(85)	n/a	n/a	(62)	(84)	n/a	n/a	(94)	(91)	n/a	n/a	(88)	(101)
Total covered positions portfolio	81	65	95	42	101	81	140	56	61	52	71	41	67	54
Impact from less liquid exposures ⁽²⁾	82	52	n/a	n/a	48	37	n/a	n/a	40	26	n/a	n/a	38	22
Total covered positions and less liquid trading positions portfolio	163	117	173	84	149	118	236	76	101	78	123	51	105	76
Fair value option loans	59	50	60	37	47	53	65	39	50	45	54	31	52	50
Fair value option hedges	17	16	18	13	14	18	24	14	18	17	20	14	17	15
Fair value option portfolio diversification	(39)	(36)	n/a	n/a	(28)	(35)	n/a	n/a	(44)	(36)	n/a	n/a	(35)	(32)
Total fair value option portfolio	37	30	37	23	33	36	44	30	24	26	33	23	34	33
Portfolio diversification	(5)	(4)	n/a	n/a	(8)	(14)	n/a	n/a	(21)	(12)	n/a	n/a	(13)	(7)
Total market-based portfolio	\$ 195	\$ 143	203	103	\$ 174	\$ 140	287	91	\$ 104	\$ 92	141	60	\$ 126	\$ 102

⁽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 the previous five quarters, corresponding to the data in Table 40.



Additional VaR statistics produced within our single VaR model are provided in Table 41 at the same level of detail as in Table 40. 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 41 presents average trading VaR statistics at 99 percent and 95 percent confidence levels for the three months ended September 30, 2022, June 30, 2022 and September 30, 2021.

Table 41 Average Market Risk VaR for Trading Activities – 99 percent and 95 percent VaR Statistics

(Dollars in millions)	Three Months Ended					
	September 30, 2022		June 30, 2022		September 30, 2021	
	99 percent	95 percent	99 percent	95 percent	99 percent	95 percent
Foreign exchange	\$ 19	\$ 11	\$ 17	\$ 10	\$ 13	\$ 9
Interest rate	34	18	36	18	32	16
Credit	68	26	73	27	66	20
Equity	16	8	22	12	24	11
Commodities	13	7	17	9	8	4
Portfolio diversification	(85)	(43)	(84)	(46)	(91)	(35)
Total covered positions portfolio	65	27	81	30	52	25
Impact from less liquid exposures	52	7	37	6	26	3
Total covered positions and less liquid trading positions portfolio	117	34	118	36	78	28
Fair value option loans	50	14	53	16	45	10
Fair value option hedges	16	10	18	11	17	9
Fair value option portfolio diversification	(36)	(13)	(35)	(15)	(36)	(9)
Total fair value option portfolio	30	11	36	12	26	10
Portfolio diversification	(4)	(7)	(14)	(8)	(12)	(6)
Total market-based portfolio	\$ 143	\$ 38	\$ 140	\$ 40	\$ 92	\$ 32

Backtesting

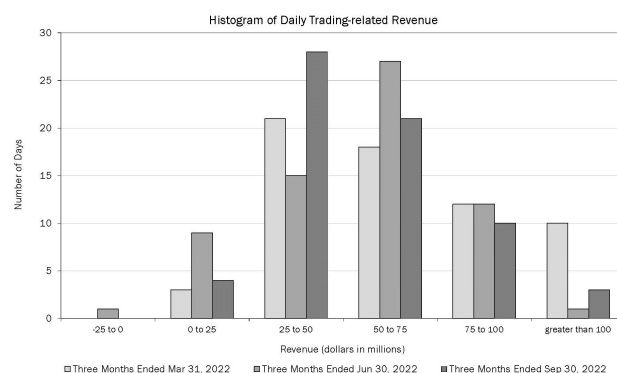
The accuracy of the VaR methodology is evaluated by backtesting, which compares the daily VaR results, utilizing a one-day holding period, against a comparable subset of trading revenue. For more information on our backtesting process, see Trading Risk Management – Backtesting in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

During the three and nine months ended September 30, 2022, there was one day 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, see Trading Risk Management – Total Trading-related Revenue in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

The following histogram is a graphic depiction of trading volatility and illustrates the daily level of trading-related revenue for the three months ended September 30, 2022 compared to the three months ended June 30, 2022 and March 31, 2022. During the three months ended September 30, 2022, positive trading-related revenue was recorded for 100 percent of the trading days, of which 94 percent were daily trading gains of over \$25 million. This compares to the three months ended June 30, 2022 where positive trading-related revenue was recorded for 98 percent of the trading days, of which 85 percent were daily trading gains of over \$25 million. During the three months ended March 31, 2022, positive trading-related revenue was recorded for 100 percent of the trading days, of which 95 percent were daily trading gains of over \$25 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. For more information, see Trading Risk Management – Trading Portfolio Stress Testing in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

Interest Rate Risk Management for the Banking Book

The following discussion presents net interest income for banking book activities. For more information, see Interest Rate Risk Management for the Banking Book in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

Table 42 presents the spot and 12-month forward rates used in our baseline forecasts at September 30, 2022 and December 31, 2021.

Table 42 Forward Rates

	September 30, 2022		
	Federal Funds	Three-month LIBOR	10-Year Swap
Spot rates	3.25 %	3.75 %	3.88 %
12-month forward rates	4.50	4.56	3.76
	December 31, 2021		
Spot rates	0.25 %	0.21 %	1.58 %
12-month forward rates	1.00	1.07	1.84

Table 43 shows the pretax impact to forecasted net interest income over the next 12 months from September 30, 2022 and December 31, 2021 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. Depending on the level of interest rates, Down-rate scenarios may not receive the full impact of the rate shock, particularly in low rate environments.

During the nine months ended September 30, 2022, the overall decrease in asset sensitivity of our balance sheet to Up-rate scenarios was primarily due to an increase in long-end and short-end rates. 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 23.

Table 43 Estimated Banking Book Net Interest Income Sensitivity to Curve Changes

(Dollars in millions)	Short Rate (bps)	Long Rate (bps)	September 30, 2022	December 31, 2021
Parallel Shifts				
+100 bps				
instantaneous shift	+100	+100	\$ 4,220	\$ 6,542
-100 bps				
instantaneous shift	-100	-100	(5,419)	n/m
Flatteners				
Short-end				
instantaneous change	+100	—	4,039	4,982
Long-end				
instantaneous change	—	-100	(210)	n/m
Steeptenars				
Short-end				
instantaneous change	-100	—	(5,209)	n/m
Long-end				
instantaneous change	—	+100	186	1,646

n/m = not meaningful

The sensitivity analysis in Table 43 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 43 assumes no change in deposit portfolio size or mix from the baseline forecast in alternate rate environments. In higher rate scenarios, any customer activity resulting in the replacement of low-cost or noninterest-bearing deposits with higher yielding deposits or market-based funding would reduce our benefit in those 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 43. 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.

Changes in interest rates impact the value of interest rate lock commitments (IRLCs) and the related residential first mortgage loans held-for-sale (LHFS), as well as the value of the MSRs. 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. For more information on IRLCs and the related residential mortgage LHFS, see Mortgage Banking Risk Management in the MD&A of the Corporation's 2021 Annual Report on Form 10-K.

There were no significant gains or losses related to the change in fair value of MSR, IRLCs and LHFS, net of gains and

losses on the hedge portfolio, for the three and nine months ended September 30, 2022 and 2021. For more information on MSRs, see *Note 14 – Fair Value Measurements* to the Consolidated Financial Statements.

Climate Risk Management

Climate-related risks are divided into two major categories: (1) risks related to the transition to a low-carbon economy, which may entail extensive policy, legal, technology and market changes, and (2) 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. These changes and events can have broad impacts on operations, supply chains, distribution networks, customers and markets and are otherwise referred to, respectively, as transition risk and physical risk. These risks can impact both financial and nonfinancial risk types. The impacts of transition risk can lead to and amplify credit risk or market risk by reducing our customers' operating income or the value of their assets as well as expose us to reputational and/or litigation risk due to increased regulatory scrutiny or negative public sentiment. Physical risk can lead to increased credit risk by diminishing borrowers' repayment capacity or impacting the value of collateral. In addition, it could pose increased operational risk to our facilities and people.

In 2021, we publicly announced our commitment to achieve net zero greenhouse gas emissions in our financing activities, operations, and supply chain before 2050 (Net Zero Goal) and set 2030 emissions targets for our operations and supply chain. In connection with our Net Zero Goal, we committed to reduce emissions by 2030 associated with our financing activities related to auto manufacturing, energy, and power generation (2030 Targets). In our September 2022 Task Force on Climate-related Financial Disclosures report, we disclosed our 2019 and 2020 financed emissions and emissions intensity metrics for these sectors, with 2019 serving as the baseline for our 2030 Targets.

In line with our participation in the Net Zero Banking Alliance, we plan to disclose the financed emissions for additional portions of our business loan portfolio in 2023, and we expect to set financing activity emission reduction targets for other key sectors by April 2024. These reduction targets are intended to align with the International Energy Agency Net Zero Emissions 2050 global pathway to limit warming to 1.5 degrees Celsius.

Achieving our climate-related goals and targets, including our Net Zero Goal and 2030 Targets, will require technological advances, clearly defined roadmaps for industry sectors, public policies, including those that improve the cost of capital for

net zero transition and better emissions data reporting, as well as ongoing, 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 condition in the relevant periods presented herein, and are not expected to have a significant effect on our results of operations or financial condition in the near-term.

For more information on our governance framework and climate risk management process, see the Managing Risk and Climate Risk Management sections in the MD&A of the Corporation's 2021 Annual Report on Form 10-K. For more information on climate risk, see Item 1A. Risk Factors – Other of the Corporation's 2021 Annual Report on Form 10-K. For more information about climate-related matters and the Corporation's climate-related goals and commitments, including our plans to achieve our Net Zero Goal and progress on our sustainable finance goals, see the Corporation's website and the 2021 Annual Report to shareholders available on the Investor Relations portion of our website. The contents of the Corporation's website and the 2021 Annual Report to shareholders are not incorporated by reference into this Quarterly Report on Form 10-Q.

The foregoing discussion and our discussion in the 2021 Annual Report to shareholders regarding our goals and commitments with respect to climate risk management, including environmental transition considerations, include "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, 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. For more information, see Complex Accounting Estimates in the MD&A of the Corporation's 2021 Annual Report on Form 10-K and *Note 1 – Summary of Significant Accounting Principles* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

Non-GAAP Reconciliations

Table 44 provides reconciliations of certain non-GAAP financial measures to the most closely related GAAP financial measures.

Table 44 Average and Period-end Supplemental Financial Data and Reconciliations to GAAP Financial Measures ⁽¹⁾

(Dollars in millions)	Average			
	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
Shareholders' equity	\$ 271,017	\$ 275,484	\$ 269,514	\$ 274,726
Goodwill	(69,022)	(69,023)	(69,022)	(68,999)
Intangible assets (excluding MSRs)	(2,107)	(2,185)	(2,127)	(2,181)
Related deferred tax liabilities	920	915	925	916
Tangible shareholders' equity	\$ 200,808	\$ 205,191	\$ 199,290	\$ 204,462
Preferred stock	(29,134)	(23,441)	(28,094)	(23,837)
Tangible common shareholders' equity	\$ 171,674	\$ 181,750	\$ 171,196	\$ 180,625

(Dollars in millions)	Period-end				
	September 30	June 30	March 31	December 31	September 30
	2022	2022	2022	2021	2021
Shareholders' equity	\$ 269,524	\$ 269,118	\$ 266,617	\$ 270,066	\$ 272,464
Goodwill	(69,022)	(69,022)	(69,022)	(69,022)	(69,023)
Intangible assets (excluding MSRs)	(2,094)	(2,114)	(2,133)	(2,153)	(2,172)
Related deferred tax liabilities	915	920	926	929	913
Tangible shareholders' equity	\$ 199,323	\$ 198,902	\$ 196,388	\$ 199,820	\$ 202,182
Preferred stock	(29,134)	(29,134)	(27,137)	(24,708)	(23,441)
Tangible common shareholders' equity	\$ 170,189	\$ 169,768	\$ 169,251	\$ 175,112	\$ 178,741
Total assets	\$ 3,072,953	\$ 3,111,606	\$ 3,238,223	\$ 3,169,495	\$ 3,085,446
Goodwill	(69,022)	(69,022)	(69,022)	(69,022)	(69,023)
Intangible assets (excluding MSRs)	(2,094)	(2,114)	(2,133)	(2,153)	(2,172)
Related deferred tax liabilities	915	920	926	929	913
Tangible assets	\$ 3,002,752	\$ 3,041,390	\$ 3,167,994	\$ 3,099,249	\$ 3,015,164

⁽¹⁾ For more information on non-GAAP financial measures and ratios we use in assessing the results of the Corporation, see Supplemental Financial Data on page 8.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

See Market Risk Management on page 44 in the MD&A and the sections referenced therein for Quantitative and Qualitative Disclosures about Market Risk.

Item 4. Controls and Procedures

Disclosure Controls and Procedures

As of the end of the period covered by this report, the Corporation's management, including the Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness and design of the Corporation's disclosure controls and procedures (as that term is defined in Rule 13a-15(e) of the Exchange Act). Based upon that evaluation, the Corporation's Chief Executive Officer and Chief Financial Officer concluded that the Corporation's disclosure controls and procedures were effective, as of the end of the period covered by this report.

Changes in Internal Control Over Financial Reporting

There have been no changes in the Corporation's internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act) during the three months ended September 30, 2022, that have materially affected, or are reasonably likely to materially affect, the Corporation's internal control over financial reporting.

Part I. Financial Information

Item 1. Financial Statements

Bank of America Corporation and Subsidiaries

Consolidated Statement of Income

	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
(In millions, except per share information)				
Net interest income				
Interest income	\$ 19,621	\$ 12,336	\$ 47,490	\$ 35,118
Interest expense	5,856	1,242	9,709	3,594
Net interest income	13,765	11,094	37,781	31,524
Noninterest income				
Fees and commissions	8,001	9,915	25,477	29,156
Market making and similar activities	3,068	2,005	9,023	7,360
Other income	(332)	(248)	(1,863)	(987)
Total noninterest income	10,737	11,672	32,637	35,529
Total revenue, net of interest expense	24,502	22,766	70,418	67,053
Provision for credit losses	898	(624)	1,451	(4,105)
Noninterest expense				
Compensation and benefits	8,887	8,714	27,286	27,103
Occupancy and equipment	1,777	1,764	5,285	5,353
Information processing and communications	1,546	1,416	4,621	4,289
Product delivery and transaction related	892	987	2,749	2,940
Professional fees	525	434	1,493	1,263
Marketing	505	347	1,365	1,528
Other general operating	1,171	778	3,096	2,524
Total noninterest expense	15,303	14,440	45,895	45,000
Income before income taxes	8,301	8,950	23,072	26,158
Income tax expense	1,219	1,259	2,676	1,193
Net income	\$ 7,082	\$ 7,691	\$ 20,396	\$ 24,965
Preferred stock dividends	503	431	1,285	1,181
Net income applicable to common shareholders	\$ 6,579	\$ 7,260	\$ 19,111	\$ 23,784
Per common share information				
Earnings	\$ 0.81	\$ 0.86	\$ 2.35	\$ 2.77
Diluted earnings	0.81	0.85	2.34	2.75
Average common shares issued and outstanding	8,107.7	8,430.7	8,122.2	8,583.1
Average diluted common shares issued and outstanding	8,160.8	8,492.8	8,173.3	8,702.2

Consolidated Statement of Comprehensive Income

	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
(Dollars in millions)				
Net income	\$ 7,082	\$ 7,691	\$ 20,396	\$ 24,965
Other comprehensive income (loss), net-of-tax:				
Net change in debt securities	(1,112)	(153)	(6,381)	(1,243)
Net change in debit valuation adjustments	462	27	1,298	292
Net change in derivatives	(3,703)	(431)	(10,890)	(1,130)
Employee benefit plan adjustments	37	50	97	170
Net change in foreign currency translation adjustments	(37)	(26)	(47)	(29)
Other comprehensive income (loss)	(4,353)	(533)	(15,923)	(1,940)
Comprehensive income (loss)	\$ 2,729	\$ 7,158	\$ 4,473	\$ 23,025

See accompanying Notes to Consolidated Financial Statements.

Bank of America Corporation and Subsidiaries

Consolidated Balance Sheet

	September 30 2022	December 31 2021
(Dollars in millions)		
Assets		
Cash and due from banks	\$ 27,802	\$ 29,222
Interest-bearing deposits with the Federal Reserve, non-U.S. central banks and other banks	177,174	318,999
Cash and cash equivalents	204,976	348,221
Time deposits placed and other short-term investments	7,449	7,144
Federal funds sold and securities borrowed or purchased under agreements to resell (includes \$165,521 and \$150,665 measured at fair value)	275,247	250,720
Trading account assets (includes \$112,374 and \$103,434 pledged as collateral)	293,458	247,080
Derivative assets	71,956	35,344
Debt securities:		
Carried at fair value	236,245	308,073
Held-to-maturity, at cost (fair value – \$527,553 and \$665,890)	643,713	674,554
Total debt securities	879,958	982,627
Loans and leases (includes \$4,851 and \$7,819 measured at fair value)	1,032,466	979,124
Allowance for loan and lease losses	(12,302)	(12,387)
Loans and leases, net of allowance	1,020,164	966,737
Premises and equipment, net	11,117	10,833
Goodwill	69,022	69,022
Loans held-for-sale (includes \$2,395 and \$4,455 measured at fair value)	7,629	15,635
Customer and other receivables	76,211	72,263
Other assets (includes \$7,326 and \$12,144 measured at fair value)	155,766	163,869
Total assets	\$ 3,072,953	\$ 3,169,495
Liabilities		
Deposits in U.S. offices:		
Noninterest-bearing	\$ 696,976	\$ 784,189
Interest-bearing (includes \$453 and \$408 measured at fair value)	1,143,317	1,165,914
Deposits in non-U.S. offices:		
Noninterest-bearing	21,630	27,457
Interest-bearing	76,174	86,886
Total deposits	1,938,097	2,064,446
Federal funds purchased and securities loaned or sold under agreements to repurchase (includes \$165,390 and \$139,641 measured at fair value)	215,627	192,329
Trading account liabilities	84,768	100,690
Derivative liabilities	50,156	37,675
Short-term borrowings (includes \$1,993 and \$4,279 measured at fair value)	21,044	23,753
Accrued expenses and other liabilities (includes \$6,764 and \$11,489 measured at fair value and \$1,515 and \$1,456 of reserve for unfunded lending commitments)	224,615	200,419
Long-term debt (includes \$27,531 and \$29,708 measured at fair value)	269,122	280,117
Total liabilities	2,803,429	2,899,429
Commitments and contingencies (Note 6 – Securitizations and Other Variable Interest Entities and Note 10 – Commitments and Contingencies)		
Shareholders' equity		
Preferred stock, \$0.01 par value; authorized – 100,000,000 shares; issued and outstanding – 4,117,652 and 3,939,686 shares	29,134	24,708
Common stock and additional paid-in capital, \$0.01 par value; authorized – 12,800,000,000 shares; issued and outstanding – 8,024,450,244 and 8,077,831,463 shares	59,460	62,398
Retained earnings	201,957	188,064
Accumulated other comprehensive income (loss)	(21,027)	(5,104)
Total shareholders' equity	269,524	270,066
Total liabilities and shareholders' equity	\$ 3,072,953	\$ 3,169,495
Assets of consolidated variable interest entities included in total assets above (isolated to settle the liabilities of the variable interest entities)		
Trading account assets	\$ 2,794	\$ 5,004
Loans and leases	16,073	17,135
Allowance for loan and lease losses	(802)	(958)
Loans and leases, net of allowance	15,271	16,177
All other assets	93	189
Total assets of consolidated variable interest entities	\$ 18,158	\$ 21,370
Liabilities of consolidated variable interest entities included in total liabilities above		
Short-term borrowings (includes \$33 and \$51 of non-recourse short-term borrowings)	\$ 82	\$ 247
Long-term debt (includes \$3,240 and \$3,587 of non-recourse debt)	3,240	3,587
All other liabilities (includes \$9 and \$7 of non-recourse liabilities)	9	7
Total liabilities of consolidated variable interest entities	\$ 3,331	\$ 3,841

See accompanying Notes to Consolidated Financial Statements.

Bank of America Corporation and Subsidiaries

Consolidated Statement of Changes in Shareholders' Equity

(In millions)	Preferred Stock	Common Stock and Additional Paid-in Capital		Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity
		Shares	Amount			
Balance, June 30, 2022	\$ 29,134	8,035.2	\$ 59,499	\$ 197,159	\$ (16,674)	\$ 269,118
Net income				7,082		7,082
Net change in debt securities					(1,112)	(1,112)
Net change in debit valuation adjustments					462	462
Net change in derivatives					(3,703)	(3,703)
Employee benefit plan adjustments					37	37
Net change in foreign currency translation adjustments					(37)	(37)
Dividends declared:						
Common				(1,780)		(1,780)
Preferred				(503)		(503)
Common stock issued under employee plans, net, and other		2.5	411	(1)		410
Common stock repurchased		(13.2)	(450)			(450)
Balance, September 30, 2022	\$ 29,134	8,024.5	\$ 59,460	\$ 201,957	\$ (21,027)	\$ 269,524
Balance, December 31, 2021	\$ 24,708	8,077.8	\$ 62,398	\$ 188,064	\$ (5,104)	\$ 270,066
Net income				20,396		20,396
Net change in debt securities					(6,381)	(6,381)
Net change in debit valuation adjustments					1,298	1,298
Net change in derivatives					(10,890)	(10,890)
Employee benefit plan adjustments					97	97
Net change in foreign currency translation adjustments					(47)	(47)
Dividends declared:						
Common				(5,188)		(5,188)
Preferred				(1,285)		(1,285)
Issuance of preferred stock	4,426					4,426
Common stock issued under employee plans, net, and other		44.5	1,137	(30)		1,107
Common stock repurchased		(97.8)	(4,075)			(4,075)
Balance, September 30, 2022	\$ 29,134	8,024.5	\$ 59,460	\$ 201,957	\$ (21,027)	\$ 269,524
Balance, June 30, 2021	\$ 23,441	8,487.2	\$ 79,242	\$ 177,499	\$ (3,063)	\$ 277,119
Net income				7,691		7,691
Net change in debt securities					(153)	(153)
Net change in debit valuation adjustments					27	27
Net change in derivatives					(431)	(431)
Employee benefit plan adjustments					50	50
Net change in foreign currency translation adjustments					(26)	(26)
Dividends declared:						
Common				(1,749)		(1,749)
Preferred				(431)		(431)
Common stock issued under employee plans, net, and other		2.0	284	(3)		281
Common stock repurchased		(248.0)	(9,914)			(9,914)
Balance, September 30, 2021	\$ 23,441	8,241.2	\$ 69,612	\$ 183,007	\$ (3,596)	\$ 272,464
Balance, December 31, 2020	\$ 24,510	8,650.8	\$ 85,982	\$ 164,088	\$ (1,656)	\$ 272,924
Net income				24,965		24,965
Net change in debt securities					(1,243)	(1,243)
Net change in debit valuation adjustments					292	292
Net change in derivatives					(1,130)	(1,130)
Employee benefit plan adjustments					170	170
Net change in foreign currency translation adjustments					(29)	(29)
Dividends declared:						
Common				(4,859)		(4,859)
Preferred				(1,181)		(1,181)
Issuance of preferred stock	902					902
Redemption of preferred stock	(1,971)					(1,971)
Common stock issued under employee plans, net, and other		42.2	1,223	(6)		1,217
Common stock repurchased		(451.8)	(17,593)			(17,593)
Balance, September 30, 2021	\$ 23,441	8,241.2	\$ 69,612	\$ 183,007	\$ (3,596)	\$ 272,464

See accompanying Notes to Consolidated Financial Statements.

Bank of America Corporation and Subsidiaries

Consolidated Statement of Cash Flows

	Nine Months Ended September 30	
	2022	2021
(Dollars in millions)		
Operating activities		
Net income	\$ 20,396	\$ 24,965
Adjustments to reconcile net income to net cash provided by operating activities:		
Provision for credit losses	1,451	(4,105)
Gains on sales of debt securities	(37)	(4)
Depreciation and amortization	1,476	1,403
Net amortization of premium/discount on debt securities	1,862	4,534
Deferred income taxes	620	(1,151)
Stock-based compensation	2,235	2,031
Loans held-for-sale:		
Originations and purchases	(18,736)	(27,003)
Proceeds from sales and paydowns of loans originally classified as held for sale and instruments from related securitization activities	27,260	24,852
Net change in:		
Trading and derivative assets/liabilities	(106,322)	(55,310)
Other assets	7,623	(34,337)
Accrued expenses and other liabilities	23,869	8,713
Other operating activities, net	978	3,568
Net cash used in operating activities	(37,325)	(51,844)
Investing activities		
Net change in:		
Time deposits placed and other short-term investments	(305)	28
Federal funds sold and securities borrowed or purchased under agreements to resell	(24,527)	42,124
Debt securities carried at fair value:		
Proceeds from sales	58,888	3,732
Proceeds from paydowns and maturities	90,161	124,149
Purchases	(114,027)	(174,517)
Held-to-maturity debt securities:		
Proceeds from paydowns and maturities	53,340	94,437
Purchases	(24,059)	(340,425)
Loans and leases:		
Proceeds from sales of loans originally classified as held for investment and instruments from related securitization activities	20,544	7,767
Purchases	(4,618)	(3,363)
Other changes in loans and leases, net	(69,267)	(5,866)
Other investing activities, net	(3,039)	(2,450)
Net cash used in investing activities	(16,909)	(254,384)
Financing activities		
Net change in:		
Deposits	(126,434)	169,324
Federal funds purchased and securities loaned or sold under agreements to repurchase	23,298	37,105
Short-term borrowings	(2,709)	957
Long-term debt:		
Proceeds from issuance	55,202	65,459
Retirement	(24,390)	(38,787)
Preferred stock:		
Proceeds from issuance	4,426	902
Redemption	—	(1,971)
Common stock repurchased	(4,075)	(17,593)
Cash dividends paid	(6,471)	(6,090)
Other financing activities, net	(501)	(696)
Net cash provided by (used in) financing activities	(81,654)	208,610
Effect of exchange rate changes on cash and cash equivalents	(7,357)	(2,991)
Net decrease in cash and cash equivalents	(143,245)	(100,609)
Cash and cash equivalents at January 1	348,221	380,463
Cash and cash equivalents at September 30	\$ 204,976	\$ 279,854

See accompanying Notes to Consolidated Financial Statements.

Bank of America Corporation and Subsidiaries

Notes to Consolidated Financial Statements

NOTE 1 Summary of Significant Accounting Principles

Bank of America Corporation, a bank holding company and a financial holding company, provides a diverse range of financial services and products throughout the U.S. and in certain international markets. The term “the Corporation” as used herein 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.

Principles of Consolidation and Basis of Presentation

The Consolidated Financial Statements include the accounts of the Corporation and its majority-owned subsidiaries and those variable interest entities (VIEs) where the Corporation is the primary beneficiary. Intercompany accounts and transactions have been eliminated. Results of operations of acquired companies are included from the dates of acquisition, and for VIEs, from the dates that the Corporation became the primary beneficiary. Assets held in an agency or fiduciary capacity are not included in the Consolidated Financial Statements. The Corporation accounts for investments in companies for which it owns a voting interest and for which it has the ability to exercise significant influence over operating and financing decisions using the equity method of accounting. These investments, which include the Corporation’s interests in affordable housing and renewable energy partnerships, are recorded in other assets. Equity method investments are subject to impairment testing, and the Corporation’s proportionate share of income or loss is included in other income.

The preparation of the Consolidated Financial Statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect reported amounts and

disclosures. Actual results could materially differ from those estimates and assumptions.

These unaudited Consolidated Financial Statements should be read in conjunction with the audited Consolidated Financial Statements, and related notes thereto, of the Corporation’s 2021 Annual Report on Form 10-K.

The nature of the Corporation’s business is such that the results of any interim period are not necessarily indicative of results for a full year. In the opinion of management, all adjustments, which consist of normal recurring adjustments necessary for a fair statement of the interim period results, have been made. The Corporation evaluates subsequent events through the date of filing with the Securities and Exchange Commission (SEC). Certain prior-period amounts have been reclassified to conform to current-period presentation.

Accounting Standards Issued and Not Yet Adopted

Hedge Accounting

The FASB issued a new accounting standard effective on January 1, 2023, with early adoption permitted, that makes targeted improvements to the application of the fair value hedge accounting guidance for closed portfolios of financial assets. Upon adoption, the application of these hedge strategies would be applied prospectively.

Financial Instruments – Credit Losses

The FASB amended the accounting and disclosure requirements for expected credit losses by removing the recognition and measurement guidance on troubled debt restructurings (TDRs) and enhancing certain disclosures. The amendments are effective on January 1, 2023 with early adoption permitted. The effects of these changes on the Corporation’s financial statements are not expected to have a material impact on its consolidated financial position, results of operations or disclosures in the Notes to the Consolidated Financial Statements.

NOTE 2 Net Interest Income and Noninterest Income

The table below presents the Corporation's net interest income and noninterest income disaggregated by revenue source for the three and nine months ended September 30, 2022 and 2021. For more information, see *Note 1 – Summary of Significant Accounting Principles* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K. For a disaggregation of noninterest income by business segment and *All Other*, see *Note 17 – Business Segment Information*.

(Dollars in millions)	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
Net interest income				
Interest income				
Loans and leases	\$ 10,231	\$ 7,502	\$ 25,805	\$ 21,859
Debt securities	4,239	3,282	12,111	8,832
Federal funds sold and securities borrowed or purchased under agreements to resell ⁽¹⁾	1,446	6	1,835	(43)
Trading account assets	1,449	967	3,753	2,793
Other interest income	2,256	579	3,986	1,677
Total interest income	19,621	12,336	47,490	35,118
Interest expense				
Deposits	1,235	133	1,719	394
Short-term borrowings ⁽¹⁾	2,264	(41)	2,705	(205)
Trading account liabilities	383	285	1,117	824
Long-term debt	1,974	865	4,168	2,581
Total interest expense	5,856	1,242	9,709	3,594
Net interest income	\$ 13,765	\$ 11,094	\$ 37,781	\$ 31,524
Noninterest income				
Fees and commissions				
Card income				
Interchange fees ⁽²⁾	\$ 1,060	\$ 1,154	\$ 3,067	\$ 3,431
Other card income	513	429	1,464	1,173
Total card income	1,573	1,583	4,531	4,604
Service charges				
Deposit-related fees	1,162	1,619	4,109	4,671
Lending-related fees	304	309	907	923
Total service charges	1,466	1,928	5,016	5,594
Investment and brokerage services				
Asset management fees	2,920	3,276	9,308	9,434
Brokerage fees	875	960	2,870	2,988
Total investment and brokerage services	3,795	4,236	12,178	12,422
Investment banking fees				
Underwriting income	452	1,168	1,559	4,028
Syndication fees	283	346	896	1,047
Financial advisory services	432	654	1,297	1,461
Total investment banking fees	1,167	2,168	3,752	6,536
Total fees and commissions	8,001	9,915	25,477	29,156
Market making and similar activities	3,068	2,005	9,023	7,360
Other income (loss)	(332)	(248)	(1,863)	(987)
Total noninterest income	\$ 10,737	\$ 11,672	\$ 32,637	\$ 35,529

⁽¹⁾ For more information on negative interest, see *Note 1 – Summary of Significant Accounting Principles* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

⁽²⁾ Gross interchange fees and merchant income were \$3.3 billion and \$3.0 billion for the three months ended September 30, 2022 and 2021 and are presented net of \$2.2 billion and \$1.8 billion of expenses for rewards and partner payments as well as certain other card costs for the same periods. Gross interchange fees and merchant income were \$9.5 billion and \$8.3 billion for the nine months ended September 30, 2022 and 2021 and are presented net of \$6.4 billion and \$4.9 billion of expenses for rewards and partner payments as well as certain other card costs for the same periods.

NOTE 3 Derivatives

Derivative Balances

Derivatives are entered into on behalf of customers, for trading or to support risk management activities. Derivatives used in risk management activities include derivatives that may or may not be designated in qualifying hedge accounting relationships. Derivatives that are not designated in qualifying hedge accounting relationships are referred to as other risk management derivatives. For more information on the Corporation's derivatives and hedging activities, see Note 1 – Summary of Significant Accounting Principles and Note 3 –

Derivatives to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K. The following tables present derivative instruments included on the Consolidated Balance Sheet in derivative assets and liabilities at September 30, 2022 and December 31, 2021. Balances are presented on a gross basis, prior to the application of counterparty and cash collateral netting. Total derivative assets and liabilities are adjusted on an aggregate basis to take into consideration the effects of legally enforceable master netting agreements and have been reduced by cash collateral received or paid.

September 30, 2022								
	Contract/ Notional ⁽¹⁾	Gross Derivative Assets			Gross Derivative Liabilities			Total
		Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total	Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total	
(Dollars in billions)								
Interest rate contracts								
Swaps	\$ 22,304.3	\$ 131.8	\$ 22.2	\$ 154.0	\$ 114.1	\$ 37.7	\$ 151.8	
Futures and forwards	3,105.7	19.1	—	19.1	17.3	—	17.3	
Written options	1,629.2	—	—	—	45.7	—	45.7	
Purchased options	1,580.4	46.5	—	46.5	—	—	—	
Foreign exchange contracts								
Swaps	1,495.0	53.5	0.5	54.0	51.9	0.3	52.2	
Spot, futures and forwards	4,521.9	85.0	0.9	85.9	87.4	—	87.4	
Written options	443.8	—	—	—	11.9	—	11.9	
Purchased options	430.4	12.7	—	12.7	—	—	—	
Equity contracts								
Swaps	376.0	22.0	—	22.0	17.9	—	17.9	
Futures and forwards	101.2	2.9	0.1	3.0	1.1	—	1.1	
Written options	761.4	—	—	—	48.8	—	48.8	
Purchased options	681.2	50.1	—	50.1	—	—	—	
Commodity contracts								
Swaps	55.7	8.1	—	8.1	6.9	—	6.9	
Futures and forwards	171.2	3.7	—	3.7	3.4	0.2	3.6	
Written options	75.8	—	—	—	4.9	—	4.9	
Purchased options	62.9	5.5	—	5.5	—	—	—	
Credit derivatives ⁽²⁾								
Purchased credit derivatives:								
Credit default swaps	354.1	4.5	—	4.5	1.4	—	1.4	
Total return swaps/options	110.9	1.5	—	1.5	2.9	—	2.9	
Written credit derivatives:								
Credit default swaps	333.0	1.6	—	1.6	4.3	—	4.3	
Total return swaps/options	120.3	4.9	—	4.9	1.4	—	1.4	
Gross derivative assets/liabilities		\$ 453.4	\$ 23.7	\$ 477.1	\$ 421.3	\$ 38.2	\$ 459.5	
Less: Legally enforceable master netting agreements				(364.5)			(364.5)	
Less: Cash collateral received/paid				(40.6)			(44.8)	
Total derivative assets/liabilities				\$ 72.0			\$ 50.2	

⁽¹⁾ Represents the total contract/notional amount of derivative assets and liabilities outstanding.

⁽²⁾ The net derivative asset (liability) and notional amount of written credit derivatives for which the Corporation held purchased credit derivatives with identical underlying referenced names were \$(2.9) billion and \$312.4 billion at September 30, 2022.

December 31, 2021

		Gross Derivative Assets			Gross Derivative Liabilities		
	Contract/ Notional ⁽¹⁾	Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total	Trading and Other Risk Management Derivatives	Qualifying Accounting Hedges	Total
(Dollars in billions)							
Interest rate contracts							
Swaps	\$ 18,068.1	\$ 150.5	\$ 8.9	\$ 159.4	\$ 156.4	\$ 4.4	\$ 160.8
Futures and forwards	2,243.2	1.1	—	1.1	1.0	—	1.0
Written options	1,616.1	—	—	—	28.8	—	28.8
Purchased options	1,673.6	33.1	—	33.1	—	—	—
Foreign exchange contracts							
Swaps	1,420.9	28.6	0.2	28.8	30.5	0.2	30.7
Spot, futures and forwards	4,087.2	37.1	0.3	37.4	37.7	0.2	37.9
Written options	287.2	—	—	—	4.1	—	4.1
Purchased options	267.6	4.1	—	4.1	—	—	—
Equity contracts							
Swaps	443.8	12.3	—	12.3	14.5	—	14.5
Futures and forwards	113.3	0.5	—	0.5	1.7	—	1.7
Written options	737.7	—	—	—	58.5	—	58.5
Purchased options	657.0	55.9	—	55.9	—	—	—
Commodity contracts							
Swaps	47.7	3.1	—	3.1	6.0	—	6.0
Futures and forwards	101.5	2.3	—	2.3	0.3	1.1	1.4
Written options	44.4	—	—	—	2.6	—	2.6
Purchased options	38.3	3.2	—	3.2	—	—	—
Credit derivatives ⁽²⁾							
Purchased credit derivatives:							
Credit default swaps	297.0	1.9	—	1.9	4.3	—	4.3
Total return swaps/options	85.3	0.2	—	0.2	1.1	—	1.1
Written credit derivatives:							
Credit default swaps	279.8	4.2	—	4.2	1.6	—	1.6
Total return swaps/options	85.3	0.9	—	0.9	0.5	—	0.5
Gross derivative assets/liabilities		\$ 339.0	\$ 9.4	\$ 348.4	\$ 349.6	\$ 5.9	\$ 355.5
Less: Legally enforceable master netting agreements				(282.3)	(282.3)		
Less: Cash collateral received/paid				(30.8)	(35.5)		
Total derivative assets/liabilities				\$ 35.3	\$ 37.7		

⁽¹⁾ Represents the total contract/notional amount of derivative assets and liabilities outstanding.

⁽²⁾ The net derivative asset (liability) and notional amount of written credit derivatives for which the Corporation held purchased credit derivatives with identical underlying referenced names were \$2.3 billion and \$258.4 billion at December 31, 2021.

Offsetting of Derivatives

The Corporation enters into International Swaps and Derivatives Association, Inc. (ISDA) master netting agreements or similar agreements with substantially all of the Corporation's derivative counterparties. For more information, see *Note 3 – Derivatives* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

The following table presents derivative instruments included in derivative assets and liabilities on the Consolidated Balance Sheet at September 30, 2022 and December 31, 2021 by primary risk (e.g., interest rate risk) and the platform, where

applicable, on which these derivatives are transacted. Balances are presented on a gross basis, prior to the application of counterparty and cash collateral netting. Total gross derivative assets and liabilities are adjusted on an aggregate basis to take into consideration the effects of legally enforceable master netting agreements, which include reducing the balance for counterparty netting and cash collateral received or paid.

For more information on offsetting of securities financing agreements, see *Note 9 – Securities Financing Agreements, Collateral and Restricted Cash*.

Offsetting of Derivatives ⁽¹⁾

	Derivative Assets	Derivative Liabilities	Derivative Assets	Derivative Liabilities
	September 30, 2022		December 31, 2021	
(Dollars in billions)				
Interest rate contracts				
Over-the-counter	\$ 149.0	\$ 140.3	\$ 171.3	\$ 166.3
Exchange-traded	0.5	0.1	0.2	—
Over-the-counter cleared	69.5	71.2	22.6	22.5
Foreign exchange contracts				
Over-the-counter	147.6	147.2	67.9	70.5
Over-the-counter cleared	2.2	2.1	1.1	1.1
Equity contracts				
Over-the-counter	33.8	28.3	29.2	32.9
Exchange-traded	40.4	37.8	38.3	38.4
Commodity contracts				
Over-the-counter	13.1	12.2	6.1	7.6
Exchange-traded	3.1	2.6	1.4	1.3
Over-the-counter cleared	0.3	0.3	0.1	0.1
Credit derivatives				
Over-the-counter	11.4	8.6	5.2	5.3
Over-the-counter cleared	0.9	1.0	1.8	1.8
Total gross derivative assets/liabilities, before netting				
Over-the-counter	354.9	336.6	279.7	282.6
Exchange-traded	44.0	40.5	39.9	39.7
Over-the-counter cleared	72.9	74.6	25.6	25.5
Less: Legally enforceable master netting agreements and cash collateral received/paid				
Over-the-counter	(295.1)	(298.9)	(250.3)	(254.6)
Exchange-traded	(38.5)	(38.5)	(37.8)	(37.8)
Over-the-counter cleared	(71.5)	(71.9)	(25.0)	(25.4)
Derivative assets/liabilities, after netting	66.7	42.4	32.1	30.0
Other gross derivative assets/liabilities ⁽²⁾	5.3	7.8	3.2	7.7
Total derivative assets/liabilities	72.0	50.2	35.3	37.7
Less: Financial instruments collateral ⁽³⁾	(26.0)	(5.8)	(11.8)	(10.6)
Total net derivative assets/liabilities	\$ 46.0	\$ 44.4	\$ 23.5	\$ 27.1

⁽¹⁾ Over-the-counter derivatives include bilateral transactions between the Corporation and a particular counterparty. Over-the-counter cleared derivatives include bilateral transactions between the Corporation and a counterparty where the transaction is cleared through a clearinghouse. Exchange-traded derivatives include listed options transacted on an exchange.

⁽²⁾ Consists of derivatives entered into under master netting agreements where the enforceability of these agreements is uncertain under bankruptcy laws in some countries or industries.

⁽³⁾ Amounts are limited to the derivative asset/liability balance and, accordingly, do not include excess collateral received/pledged. Financial instruments collateral includes securities collateral received or pledged and cash securities held and posted at third-party custodians that are not offset on the Consolidated Balance Sheet but shown as a reduction to derive net derivative assets and liabilities.

Derivatives Designated as Accounting Hedges

The Corporation uses various types of interest rate and foreign exchange derivative contracts to protect against changes in the fair value of its assets and liabilities due to fluctuations in interest rates and exchange rates (fair value hedges). The Corporation also uses these types of contracts to protect against changes in the cash flows of its assets and liabilities, and other forecasted transactions (cash flow hedges). The Corporation hedges its net investment in consolidated non-U.S.

operations determined to have functional currencies other than the U.S. dollar using forward exchange contracts and cross-currency basis swaps, and by issuing foreign currency-denominated debt (net investment hedges).

Fair Value Hedges

The table below summarizes information related to fair value hedges for the three and nine months ended September 30, 2022 and 2021.

Gains and Losses on Derivatives Designated as Fair Value Hedges

	Three Months Ended September 30, 2022		Three Months Ended September 30, 2021	
	Derivative	Hedged Item	Derivative	Hedged Item
(Dollars in millions)				
Interest rate risk on long-term debt ⁽¹⁾	\$ (8,435)	\$ 8,437	\$ (1,658)	\$ 1,660
Interest rate and foreign currency risk on long-term debt ⁽²⁾	(77)	78	(49)	46
Interest rate risk on available-for-sale securities ⁽³⁾	9,681	(9,707)	867	(859)
Total	\$ 1,169	\$ (1,192)	\$ (840)	\$ 847
	Nine Months Ended September 30, 2022		Nine Months Ended September 30, 2021	
	Derivative	Hedged Item	Derivative	Hedged Item
Interest rate risk on long-term debt ⁽¹⁾	\$ (27,458)	\$ 27,630	\$ (6,237)	\$ 6,208
Interest rate and foreign currency risk on long-term debt ⁽²⁾	(137)	137	(72)	67
Interest rate risk on available-for-sale securities ⁽³⁾	24,816	(24,975)	4,245	(4,184)
Total	\$ (2,779)	\$ 2,792	\$ (2,064)	\$ 2,091

⁽¹⁾ Amounts are recorded in interest expense in the Consolidated Statement of Income.

⁽²⁾ For the three and nine months ended September 30, 2022, the derivative amount includes gains (losses) of \$(6) million and \$(40) million in interest expense, \$(71) million and \$(96) million in market making and similar activities, and \$0 and \$(1) million in accumulated other comprehensive income (OCI). For the same periods in 2021, the derivative amount includes gains (losses) of \$(11) million and \$(62) million in interest expense, \$(33) million and \$(2) million in market making and similar activities, and \$(5) million and \$(8) million in accumulated OCI. Line item totals are in the Consolidated Statement of Income and on the Consolidated Balance Sheet.

⁽³⁾ Amounts are recorded in interest income in the Consolidated Statement of Income.

The table below summarizes the carrying value of hedged assets and liabilities that are designated and qualifying in fair value hedging relationships along with the cumulative amount of fair value hedging adjustments included in the carrying value that have been recorded in the current hedging relationships. These fair value hedging adjustments are open basis adjustments that are not subject to amortization as long as the hedging relationship remains designated.

Designated Fair Value Hedged Assets and Liabilities

	September 30, 2022		December 31, 2021	
	Carrying Value	Cumulative Fair Value Adjustments ⁽¹⁾	Carrying Value	Cumulative Fair Value Adjustments ⁽¹⁾
(Dollars in millions)				
Long-term debt ⁽²⁾	\$ 179,266	\$ (21,897)	\$ 181,745	\$ 3,987
Available-for-sale debt securities ^(2, 3, 4)	175,943	(20,153)	209,038	(2,294)
Trading account assets ⁽⁵⁾	11,872	680	2,067	32

⁽¹⁾ Increase (decrease) to carrying value.

⁽²⁾ At September 30, 2022 and December 31, 2021, the cumulative fair value adjustments remaining on long-term debt and available-for-sale debt securities from discontinued hedging relationships resulted in a decrease of \$103 million and an increase of \$1.5 billion in the related liability and a decrease in the related asset of \$5.2 billion and \$1.0 billion, which are being amortized over the remaining contractual life of the de-designated hedged items.

⁽³⁾ These amounts include the amortized cost of the prepayable financial assets used to designate hedging relationships in which the hedged item is the last layer expected to be remaining at the end of the hedging relationship (i.e. last-of-layer hedging relationship). At September 30, 2022 and December 31, 2021, the amortized cost of the closed portfolios used in these hedging relationships was \$22.0 billion and \$21.1 billion, of which \$9.2 billion and \$6.9 billion was designated in the last-of-layer hedging relationship. At September 30, 2022 and December 31, 2021, the cumulative adjustment associated with these hedging relationships was a decrease of \$488 million and \$172 million.

⁽⁴⁾ Carrying value represents amortized cost.

⁽⁵⁾ Represents hedging activities related to certain commodities inventory.

Cash Flow and Net Investment Hedges

The table below summarizes certain information related to cash flow hedges and net investment hedges for the three and nine months ended September 30, 2022 and 2021. Of the \$12.8 billion after-tax net loss (\$17.0 billion pretax) on derivatives in accumulated OCI at September 30, 2022, losses of \$3.7 billion after-tax (\$4.9 billion pretax) related to both open and terminated cash flow hedges are expected to be reclassified into earnings in the next 12 months. These net losses

reclassified into earnings are expected to primarily decrease net interest income related to the respective hedged items. For open cash flow hedges, the maximum length of time over which forecasted transactions are hedged is approximately seven years. For terminated cash flow hedges, the time period over which the forecasted transactions will be recognized in interest income is approximately five years, with the aggregated amount beyond this time period being insignificant.

Gains and Losses on Derivatives Designated as Cash Flow and Net Investment Hedges

	Gains (Losses) Recognized in Accumulated OCI on Derivatives		Gains (Losses) in Income Reclassified from Accumulated OCI		Gains (Losses) Recognized in Accumulated OCI on Derivatives		Gains (Losses) in Income Reclassified from Accumulated OCI	
	Three Months Ended September 30, 2022		Three Months Ended September 30, 2022		Nine Months Ended September 30, 2022		Nine Months Ended September 30, 2022	
(Dollars in millions, amounts pretax)								
Cash flow hedges								
Interest rate risk on variable-rate assets ⁽¹⁾	\$	(5,045)	\$	(110)	\$	(14,443)	\$	(191)
Price risk on forecasted MBS purchases ⁽¹⁾		—		—		(129)		13
Price risk on certain compensation plans ⁽²⁾		(13)		5		(107)		24
Total	\$	(5,058)	\$	(105)	\$	(14,679)	\$	(154)
Net investment hedges								
Foreign exchange risk ⁽³⁾	\$	1,541	\$	3	\$	3,339	\$	3
	Three Months Ended September 30, 2021				Nine Months Ended September 30, 2021			
Cash flow hedges								
Interest rate risk on variable-rate assets ⁽¹⁾	\$	(539)	\$	38	\$	(1,115)	\$	111
Price risk on forecasted MBS purchases ⁽¹⁾		29		5		(272)		20
Price risk on certain compensation plans ⁽²⁾		(2)		14		57		40
Total	\$	(512)	\$	57	\$	(1,330)	\$	171
Net investment hedges								
Foreign exchange risk ⁽³⁾	\$	642	\$	—	\$	1,145	\$	—

⁽¹⁾ Amounts reclassified from accumulated OCI are recorded in interest income in the Consolidated Statement of Income.

⁽²⁾ Amounts reclassified from accumulated OCI are recorded in compensation and benefits expense in the Consolidated Statement of Income.

⁽³⁾ Amounts reclassified from accumulated OCI are recorded in other income in the Consolidated Statement of Income. For the three and nine months ended September 30, 2022, amounts excluded from effectiveness testing and recognized in market making and similar activities were gains of \$38 million and losses of \$109 million. For the same periods in 2021, amounts excluded from effectiveness testing and recognized in market making and similar activities were losses of \$36 million and \$86 million.

Other Risk Management Derivatives

Other risk management derivatives are used by the Corporation to reduce certain risk exposures by economically hedging various assets and liabilities. The table below presents gains (losses) on these derivatives for the three and nine months ended September 30, 2022 and 2021. These gains (losses) are largely offset by the income or expense recorded on the hedged item.

Gains and Losses on Other Risk Management Derivatives

	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
(Dollars in millions)				
Interest rate risk on mortgage activities ^(1, 2)	\$ (64)	\$ 10	\$ (321)	\$ (49)
Credit risk on loans ⁽²⁾	(30)	(9)	(17)	(40)
Interest rate and foreign currency risk on asset and liability management activities ⁽³⁾	1,591	552	7,204	1,495
Price risk on certain compensation plans ⁽⁴⁾	(192)	(23)	(1,283)	575

⁽¹⁾ Includes hedges of interest rate risk on mortgage servicing rights and interest rate lock commitments (IRLCs) to originate mortgage loans that will be held for sale.

⁽²⁾ Gains (losses) on these derivatives are recorded in other income.

⁽³⁾ Gains (losses) on these derivatives are recorded in market making and similar activities.

⁽⁴⁾ Gains (losses) on these derivatives are recorded in compensation and benefits expense.

Transfers of Financial Assets with Risk Retained through Derivatives

The Corporation enters into certain transactions involving the transfer of financial assets that are accounted for as sales where substantially all of the economic exposure to the transferred financial assets is retained through derivatives (e.g., interest rate and/or credit), but the Corporation does not retain control over the assets transferred. At both September 30, 2022 and December 31, 2021, the Corporation had transferred \$4.8 billion non-U.S. government-guaranteed mortgage-backed securities to a third-party trust and retained economic exposure to the transferred assets through derivative contracts. In connection with these transfers, the Corporation received gross cash proceeds of \$4.9 billion and \$4.8 billion at the transfer dates. At September 30, 2022 and December 31, 2021, the fair value of the transferred securities was \$4.6 billion and \$5.0 billion.

Sales and Trading Revenue

The Corporation enters into trading derivatives to facilitate client transactions and to manage risk exposures arising from trading

account assets and liabilities. It is the Corporation's policy to include these derivative instruments in its trading activities, which include derivatives and non-derivative cash instruments. The resulting risk from these derivatives is managed on a portfolio basis as part of the Corporation's *Global Markets* business segment. For more information on sales and trading revenue, see *Note 3 – Derivatives* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

The table below, which includes both derivatives and non-derivative cash instruments, identifies the amounts in the respective income statement line items attributable to the Corporation's sales and trading revenue in *Global Markets*, categorized by primary risk, for the three and nine months ended September 30, 2022 and 2021. This table includes debit valuation adjustment (DVA) and funding valuation adjustment (FVA) gains (losses). *Global Markets* results in *Note 17 – Business Segment Information* are presented on a fully taxable-equivalent (FTE) basis. The table below is not presented on an FTE basis.

Sales and Trading Revenue

	Three Months Ended September 30, 2022				Nine Months Ended September 30, 2022			
	Market making and similar activities	Net Interest Income	Other ⁽¹⁾	Total	Market making and similar activities	Net Interest Income	Other ⁽¹⁾	Total
(Dollars in millions)								
Interest rate risk	\$ 372	\$ 432	\$ 140	\$ 944	\$ 1,452	\$ 1,381	\$ 291	\$ 3,124
Foreign exchange risk	552	13	(54)	511	1,562	(13)	(51)	1,498
Equity risk	1,532	(399)	416	1,549	4,474	(694)	1,404	5,184
Credit risk	252	544	114	910	561	1,559	176	2,296
Other risk ⁽²⁾	165	(62)	17	120	670	(138)	77	609
Total sales and trading revenue	\$ 2,873	\$ 528	\$ 633	\$ 4,034	\$ 8,719	\$ 2,095	\$ 1,897	\$ 12,711
	Three Months Ended September 30, 2021				Nine Months Ended September 30, 2021			
Interest rate risk	\$ 180	\$ 442	\$ 43	\$ 665	\$ 590	\$ 1,350	\$ 141	\$ 2,081
Foreign exchange risk	345	(22)	2	325	1,082	(62)	7	1,027
Equity risk	1,196	(28)	433	1,601	3,657	7	1,389	5,053
Credit risk	248	458	158	864	1,491	1,263	446	3,200
Other risk ⁽²⁾	45	(30)	45	60	627	(58)	91	660
Total sales and trading revenue	\$ 2,014	\$ 820	\$ 681	\$ 3,515	\$ 7,447	\$ 2,500	\$ 2,074	\$ 12,021

⁽¹⁾ Represents amounts in investment and brokerage services and other income that are recorded in *Global Markets* and included in the definition of sales and trading revenue. Includes investment and brokerage services revenue of \$444 million and \$1.5 billion for the three and nine months ended September 30, 2022 compared to \$460 million and \$1.5 billion for the same periods in 2021.

⁽²⁾ Includes commodity risk.

Credit Derivatives

The Corporation enters into credit derivatives primarily to facilitate client transactions and to manage credit risk exposures. Credit derivatives are classified as investment and non-investment grade based on the credit quality of the underlying referenced obligation. The Corporation considers ratings of BBB- or higher as investment grade. Non-investment grade includes non-rated credit derivative instruments. The Corporation discloses internal categorizations of investment

grade and non-investment grade consistent with how risk is managed for these instruments. For more information on credit derivatives, see Note 3 - *Derivatives* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

Credit derivative instruments where the Corporation is the seller of credit protection and their expiration at September 30, 2022 and December 31, 2021 are summarized in the table below.

Credit Derivative Instruments

	Less than One Year	One to Three Years	Three to Five Years	Over Five Years	Total
September 30, 2022					
Carrying Value					
(Dollars in millions)					
Credit default swaps:					
Investment grade	\$ 1	\$ 52	\$ 502	\$ 287	\$ 842
Non-investment grade	57	854	1,497	1,001	3,409
Total	58	906	1,999	1,288	4,251
Total return swaps/options:					
Investment grade	146	249	—	—	395
Non-investment grade	902	6	86	6	1,000
Total	1,048	255	86	6	1,395
Total credit derivatives	\$ 1,106	\$ 1,161	\$ 2,085	\$ 1,294	\$ 5,646
Credit-related notes:					
Investment grade	\$ —	\$ —	\$ —	\$ 673	\$ 673
Non-investment grade	—	2	4	1,118	1,124
Total credit-related notes	\$ —	\$ 2	\$ 4	\$ 1,791	\$ 1,797
Maximum Payout/Notional					
Credit default swaps:					
Investment grade	\$ 32,510	\$ 66,961	\$ 96,170	\$ 42,448	\$ 238,089
Non-investment grade	14,613	28,393	40,136	11,781	94,923
Total	47,123	95,354	136,306	54,229	333,012
Total return swaps/options:					
Investment grade	65,805	8,907	—	—	74,712
Non-investment grade	40,840	2,273	1,581	890	45,584
Total	106,645	11,180	1,581	890	120,296
Total credit derivatives	\$ 153,768	\$ 106,534	\$ 137,887	\$ 55,119	\$ 453,308
December 31, 2021					
Carrying Value					
Credit default swaps:					
Investment grade	\$ —	\$ 5	\$ 79	\$ 49	\$ 133
Non-investment grade	34	250	453	769	1,506
Total	34	255	532	818	1,639
Total return swaps/options:					
Investment grade	35	388	—	—	423
Non-investment grade	105	—	16	—	121
Total	140	388	16	—	544
Total credit derivatives	\$ 174	\$ 643	\$ 548	\$ 818	\$ 2,183
Credit-related notes:					
Investment grade	\$ —	\$ —	\$ 36	\$ 412	\$ 448
Non-investment grade	5	—	9	1,334	1,348
Total credit-related notes	\$ 5	\$ —	\$ 45	\$ 1,746	\$ 1,796
Maximum Payout/Notional					
Credit default swaps:					
Investment grade	\$ 34,503	\$ 66,334	\$ 73,444	\$ 17,844	\$ 192,125
Non-investment grade	16,119	29,233	34,356	7,961	87,669
Total	50,622	95,567	107,800	25,805	279,794
Total return swaps/options:					
Investment grade	49,626	11,494	78	—	61,198
Non-investment grade	22,621	717	642	73	24,053
Total	72,247	12,211	720	73	85,251
Total credit derivatives	\$ 122,869	\$ 107,778	\$ 108,520	\$ 25,878	\$ 365,045

The notional amount represents the maximum amount payable by the Corporation for most credit derivatives. However, the Corporation does not monitor its exposure to credit derivatives based solely on the notional amount because this measure does not take into consideration the probability of occurrence. As such, the notional amount is not a reliable indicator of the Corporation's exposure to these contracts. Instead, a risk framework is used to define risk tolerances and establish limits so that certain credit risk-related losses occur within acceptable, predefined limits.

Credit-related notes in the preceding table include investments in securities issued by collateralized debt obligation (CDO), collateralized loan obligation and credit-linked note vehicles. These instruments are primarily classified as trading securities. The carrying value of these instruments equals the Corporation's maximum exposure to loss. The Corporation is not obligated to make any payments to the entities under the terms of the securities owned.

Credit-related Contingent Features and Collateral

Certain of the Corporation's derivative contracts contain credit risk-related contingent features, primarily in the form of ISDA master netting agreements and credit support documentation that enhance the creditworthiness of these instruments compared to other obligations of the respective counterparty with whom the Corporation has transacted. These contingent features may be for the benefit of the Corporation as well as its counterparties with respect to changes in the Corporation's creditworthiness and the mark-to-market exposure under the derivative transactions. At September 30, 2022 and December 31, 2021, the Corporation held cash and securities collateral of \$120.0 billion and \$91.4 billion and posted cash and securities collateral of \$85.8 billion and \$79.3 billion in the normal course of business under derivative agreements, excluding cross-product margining agreements where clients are permitted to margin on a net basis for both derivative and secured financing arrangements.

In connection with certain OTC derivative contracts and other trading agreements, the Corporation can be required to provide additional collateral or to terminate transactions with certain counterparties in the event of a downgrade of the senior debt ratings of the Corporation or certain subsidiaries. The amount of additional collateral required depends on the contract and is usually a fixed incremental amount and/or the market value of the exposure. For more information on credit-related contingent features and collateral, see *Note 3 – Derivatives* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

At September 30, 2022, the amount of collateral, calculated based on the terms of the contracts, that the Corporation and certain subsidiaries could be required to post to counterparties but had not yet posted to counterparties was \$4.0 billion, including \$2.5 billion for Bank of America, National Association (BANA).

Some counterparties are currently able to unilaterally terminate certain contracts, or the Corporation or certain

subsidiaries may be required to take other action such as find a suitable replacement or obtain a guarantee. At September 30, 2022 and December 31, 2021, the liability recorded for these derivative contracts was not significant.

The table below presents the amount of additional collateral that would have been contractually required by derivative contracts and other trading agreements at September 30, 2022 if the rating agencies had downgraded their long-term senior debt ratings for the Corporation or certain subsidiaries by one incremental notch and by an additional second incremental notch. The table also presents derivative liabilities that would be subject to unilateral termination by counterparties upon downgrade of the Corporation's or certain subsidiaries' long-term senior debt ratings.

Additional Collateral Required to be Posted and Derivative Liabilities Subject to Unilateral Termination Upon Downgrade at September 30, 2022

(Dollars in millions)	One Incremental Notch	Second Incremental Notch
Additional collateral required to be posted upon downgrade		
Bank of America Corporation	\$ 430	\$ 1,043
Bank of America, N.A. and subsidiaries ⁽¹⁾	199	789
Derivative liabilities subject to unilateral termination upon downgrade		
Derivative liabilities	\$ 10	\$ 939
Collateral posted	—	629

⁽¹⁾ Included in Bank of America Corporation collateral requirements in this table.

Valuation Adjustments on Derivatives

The table below presents credit valuation adjustment (CVA), DVA and FVA gains (losses) on derivatives (excluding the effect of any related hedge activities), which are recorded in market making and similar activities, for the three and nine months ended September 30, 2022 and 2021. For more information on the valuation adjustments on derivatives, see *Note 3 – Derivatives* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

Valuation Adjustments Gains (Losses) on Derivatives ⁽¹⁾

(Dollars in millions)	Three Months Ended September 30	
	2022	2021
Derivative assets (CVA)	\$ (44)	\$ 54
Derivative assets/liabilities (FVA)	67	19
Derivative liabilities (DVA)	103	(5)

(Dollars in millions)	Nine Months Ended September 30	
	2022	2021
Derivative assets (CVA)	\$ (217)	\$ 212
Derivative assets/liabilities (FVA)	147	34
Derivative liabilities (DVA)	444	(13)

⁽¹⁾ At September 30, 2022 and December 31, 2021, cumulative CVA reduced the derivative assets balance by \$655 million and \$438 million, cumulative FVA reduced the net derivative balance by \$32 million and \$179 million, and cumulative DVA reduced the derivative liabilities balance by \$756 million and \$312 million.

NOTE 4 Securities

The table below presents the amortized cost, gross unrealized gains and losses, and fair value of available-for-sale (AFS) debt securities, other debt securities carried at fair value and held-to-maturity (HTM) debt securities at September 30, 2022 and December 31, 2021.

Debt Securities

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
(Dollars in millions)	September 30, 2022				December 31, 2021			
Available-for-sale debt securities								
Mortgage-backed securities:								
Agency	\$ 25,743	\$ 5	\$ (2,144)	\$ 23,604	\$ 45,268	\$ 1,257	\$ (186)	\$ 46,339
Agency-collateralized mortgage obligations	2,589	—	(220)	2,369	3,331	74	(25)	3,380
Commercial	6,248	24	(499)	5,773	19,036	647	(79)	19,604
Non-agency residential ⁽¹⁾	467	16	(83)	400	591	25	(33)	583
Total mortgage-backed securities	35,047	45	(2,946)	32,146	68,226	2,003	(323)	69,906
U.S. Treasury and government agencies	169,368	42	(1,797)	167,613	197,853	1,610	(318)	199,145
Non-U.S. securities	11,046	1	(44)	11,003	11,933	—	—	11,933
Other taxable securities	3,481	—	(76)	3,405	2,725	39	(3)	2,761
Tax-exempt securities	12,544	—	(372)	12,172	15,155	317	(39)	15,433
Total available-for-sale debt securities	231,486	88	(5,235)	226,339	295,892	3,969	(683)	299,178
Other debt securities carried at fair value ⁽²⁾	10,223	54	(371)	9,906	8,873	105	(83)	8,895
Total debt securities carried at fair value	241,709	142	(5,606)	236,245	304,765	4,074	(766)	308,073
Held-to-maturity debt securities								
Agency mortgage-backed securities	513,977	—	(94,111)	419,866	553,721	3,855	(10,366)	547,210
U.S. Treasury and government agencies	121,585	—	(21,089)	100,496	111,859	254	(2,395)	109,718
Other taxable securities	8,181	—	(990)	7,191	9,011	147	(196)	8,962
Total held-to-maturity debt securities	643,743	—	(116,190)	527,553	674,591	4,256	(12,957)	665,890
Total debt securities ^(3,4)	\$ 885,452	\$ 142	\$ (121,796)	\$ 763,798	\$ 979,356	\$ 8,330	\$ (13,723)	\$ 973,963

⁽¹⁾ At September 30, 2022 and December 31, 2021, the underlying collateral type included approximately 17 percent and 21 percent prime and 83 percent and 79 percent subprime.

⁽²⁾ Primarily includes non-U.S. securities used to satisfy certain international regulatory requirements. Any changes in value are reported in market making and similar activities. For detail on the components, see Note 14 – Fair Value Measurements.

⁽³⁾ Includes securities pledged as collateral of \$103.1 billion and \$111.9 billion at September 30, 2022 and December 31, 2021.

⁽⁴⁾ The Corporation held debt securities from Fannie Mae (FNMA) and Freddie Mac (FHLMC) that each exceeded 10 percent of shareholders' equity, with an amortized cost of \$296.5 billion and \$179.4 billion, and a fair value of \$241.8 billion and \$145.1 billion at September 30, 2022, and an amortized cost of \$345.3 billion and \$205.3 billion, and a fair value of \$342.5 billion and \$202.4 billion at December 31, 2021.

At September 30, 2022, the accumulated net unrealized loss on AFS debt securities, excluding the amount related to debt securities previously transferred to held to maturity, included in accumulated OCI was \$3.9 billion, net of the related income tax benefit of \$1.3 billion. At September 30, 2022 and December 31, 2021, nonperforming AFS debt securities held by the Corporation were not significant.

At September 30, 2022 and December 31, 2021, the Corporation had \$199.3 billion and \$268.5 billion in AFS debt securities, which were primarily U.S. agency and U.S. Treasury securities that have a zero credit loss assumption. For more information on the zero credit loss assumption, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K. For the remaining \$27.0 billion and \$30.7 billion in AFS debt securities at September 30, 2022 and December 31, 2021, the amount of expected credit losses was not significant. At September 30, 2022 and December 31, 2021, the Corporation had \$527.6 billion and \$665.9 billion in HTM debt securities, which were substantially all U.S. agency and U.S. Treasury securities that have a zero credit loss assumption.

At September 30, 2022 and December 31, 2021, the Corporation held equity securities at an aggregate fair value of

\$620 million and \$513 million and other equity securities, as valued under the measurement alternative, at a carrying value of \$311 million and \$266 million, both of which are included in other assets. At September 30, 2022 and December 31, 2021, the Corporation also held money market investments at a fair value of \$682 million and \$707 million, which are included in time deposits placed and other short-term investments.

The gross realized gains and losses on sales of AFS debt securities for the three and nine months ended September 30, 2022 and 2021 are presented in the table below.

Gains and Losses on Sales of AFS Debt Securities

	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2022	2021	2022	2021
Gross gains	\$ 540	\$ 4	\$ 1,243	\$ 19
Gross losses	(526)	—	(1,206)	(15)
Net gains on sales of AFS debt securities	\$ 14	\$ 4	\$ 37	\$ 4
Income tax expense attributable to realized net gains on sales of AFS debt securities	\$ 4	\$ 1	\$ 9	\$ 1

The table below presents the fair value and the associated gross unrealized losses on AFS debt securities and whether these securities have had gross unrealized losses for less than 12 months or for 12 months or longer at September 30, 2022 and December 31, 2021.

Total AFS Debt Securities in a Continuous Unrealized Loss Position

	Less than Twelve Months		Twelve Months or Longer		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
(Dollars in millions)						
Continuously unrealized loss-positioned AFS debt securities						
Mortgage-backed securities:						
Agency	\$ 20,518	\$ (1,625)	\$ 2,937	\$ (519)	\$ 23,455	\$ (2,144)
Agency-collateralized mortgage obligations	1,342	(87)	989	(133)	2,331	(220)
Commercial	3,831	(264)	1,366	(235)	5,197	(499)
Non-agency residential	272	(60)	101	(23)	373	(83)
Total mortgage-backed securities	25,963	(2,036)	5,393	(910)	31,356	(2,946)
U.S. Treasury and government agencies	125,543	(1,129)	31,867	(668)	157,410	(1,797)
Non-U.S. securities	9,221	(23)	732	(21)	9,953	(44)
Other taxable securities	2,373	(20)	759	(56)	3,132	(76)
Tax-exempt securities	931	(98)	4,297	(274)	5,228	(372)
Total AFS debt securities in a continuous unrealized loss position	\$ 164,031	\$ (3,306)	\$ 43,048	\$ (1,929)	\$ 207,079	\$ (5,235)
December 31, 2021						
Continuously unrealized loss-positioned AFS debt securities						
Mortgage-backed securities:						
Agency	\$ 11,733	\$ (166)	\$ 815	\$ (20)	\$ 12,548	\$ (186)
Agency-collateralized mortgage obligations	1,427	(22)	122	(3)	1,549	(25)
Commercial	3,451	(41)	776	(38)	4,227	(79)
Non-agency residential	241	(13)	174	(20)	415	(33)
Total mortgage-backed securities	16,852	(242)	1,887	(81)	18,739	(323)
U.S. Treasury and government agencies	103,307	(272)	4,850	(46)	108,157	(318)
Other taxable securities	—	—	82	(3)	82	(3)
Tax-exempt securities	502	(16)	109	(23)	611	(39)
Total AFS debt securities in a continuous unrealized loss position	\$ 120,661	\$ (530)	\$ 6,928	\$ (153)	\$ 127,589	\$ (683)

The remaining contractual maturity distribution and yields of the Corporation's debt securities carried at fair value and HTM debt securities at September 30, 2022 are summarized in the table below. Actual duration and yields may differ as prepayments on the loans underlying the mortgage-backed securities (MBS) or other asset-backed securities (ABS) are passed through to the Corporation.

Maturities of Debt Securities Carried at Fair Value and Held-to-maturity Debt Securities

(Dollars in millions)	Due in One Year or Less		Due after One Year through Five Years		Due after Five Years through Ten Years		Due after Ten Years		Total	
	Amount	Yield ⁽¹⁾	Amount	Yield ⁽¹⁾	Amount	Yield ⁽¹⁾	Amount	Yield ⁽¹⁾	Amount	Yield ⁽¹⁾
Amortized cost of debt securities carried at fair value										
Mortgage-backed securities:										
Agency	\$ —	— %	\$ 5	5.20 %	\$ 40	4.88 %	\$ 25,698	3.36 %	\$ 25,743	3.36 %
Agency-collateralized mortgage obligations	—	—	15	2.60	—	—	2,574	2.91	2,589	2.91
Commercial	36	2.22	488	2.79	4,227	1.78	1,509	2.07	6,260	1.93
Non-agency residential	—	—	—	—	—	—	867	8.31	867	8.31
Total mortgage-backed securities	36	2.22	508	2.81	4,267	1.81	30,648	3.40	35,459	3.20
U.S. Treasury and government agencies	7,222	1.40	62,354	1.76	100,285	1.65	28	3.00	169,889	1.68
Non-U.S. securities	17,773	1.67	2,429	4.22	6	4.24	128	5.34	20,336	2.00
Other taxable securities	1,635	3.56	1,241	3.56	469	3.04	136	3.46	3,481	3.49
Tax-exempt securities	939	1.60	5,135	2.45	2,330	2.67	4,140	3.03	12,544	2.62
Total amortized cost of debt securities carried at fair value	\$ 27,605	1.71	\$ 71,667	1.93	\$ 107,357	1.68	\$ 35,080	3.36	\$ 241,709	2.01
Amortized cost of HTM debt securities										
Agency mortgage-backed securities	\$ —	— %	\$ —	— %	\$ 14	2.71 %	\$ 513,963	2.13 %	\$ 513,977	2.13 %
U.S. Treasury and government agencies	—	—	4,539	1.80	117,046	1.37	—	—	121,585	1.39
Other taxable securities	37	9.52	1,064	2.13	433	2.93	6,647	2.49	8,181	2.49
Total amortized cost of HTM debt securities	\$ 37	—	\$ 5,603	1.86	\$ 117,493	1.37	\$ 520,610	2.13	\$ 643,743	1.99
Debt securities carried at fair value										
Mortgage-backed securities:										
Agency	\$ —		\$ 5		\$ 40		\$ 23,559		\$ 23,604	
Agency-collateralized mortgage obligations	—		15		—		2,354		2,369	
Commercial	36		473		3,977		1,297		5,783	
Non-agency residential	—		2		—		787		789	
Total mortgage-backed securities	36		495		4,017		27,997		32,545	
U.S. Treasury and government agencies	7,250		61,839		99,020		25		168,134	
Non-U.S. securities	17,466		2,396		6		121		19,989	
Other taxable securities	1,631		1,224		428		122		3,405	
Tax-exempt securities	937		5,051		2,267		3,917		12,172	
Total debt securities carried at fair value	\$ 27,320		\$ 71,005		\$ 105,738		\$ 32,182		\$ 236,245	
Fair value of HTM debt securities										
Agency mortgage-backed securities	\$ —		\$ —		\$ 13		\$ 419,853		\$ 419,866	
U.S. Treasury and government agencies	—		4,129		96,367		—		100,496	
Other taxable securities	37		993		401		5,760		7,191	
Total fair value of HTM debt securities	\$ 37		\$ 5,122		\$ 96,781		\$ 425,613		\$ 527,553	

⁽¹⁾ The weighted-average yield is computed based on a constant effective interest rate over the contractual life of each security. The average yield considers the contractual coupon and the amortization of premiums and accretion of discounts, excluding the effect of related hedging derivatives.

NOTE 5 Outstanding Loans and Leases and Allowance for Credit Losses

The following tables present total outstanding loans and leases and an aging analysis for the Consumer Real Estate, Credit Card and Other Consumer, and Commercial portfolio segments, by class of financing receivables, at September 30, 2022 and December 31, 2021.

	30-59 Days Past Due ⁽¹⁾	60-89 Days Past Due ⁽¹⁾	90 Days or More Past Due ⁽¹⁾	Total Past Due 30 Days or More	Total Current or Less Than 30 Days Past Due ⁽¹⁾	Loans Accounted for Under the Fair Value Option	Total Outstandings
September 30, 2022							
(Dollars in millions)							
Consumer real estate							
Residential mortgage	\$ 905	\$ 235	\$ 1,014	\$ 2,154	\$ 226,908		\$ 229,062
Home equity	79	27	232	338	26,507		26,845
Credit card and other consumer							
Credit card	393	262	547	1,202	86,094		87,296
Direct/Indirect consumer ⁽²⁾	199	53	33	285	106,874		107,159
Other consumer	—	—	—	—	171		171
Total consumer	1,576	577	1,826	3,979	446,554		450,533
Consumer loans accounted for under the fair value option ⁽³⁾						\$ 355	355
Total consumer loans and leases	1,576	577	1,826	3,979	446,554	355	450,888
Commercial							
U.S. commercial	519	327	447	1,293	354,077		355,370
Non-U.S. commercial	48	67	228	343	122,692		123,035
Commercial real estate ⁽⁴⁾	299	36	74	409	67,543		67,952
Commercial lease financing	28	7	20	55	12,901		12,956
U.S. small business commercial ⁽⁵⁾	196	143	253	592	17,177		17,769
Total commercial	1,090	580	1,022	2,692	574,390		577,082
Commercial loans accounted for under the fair value option ⁽³⁾						4,496	4,496
Total commercial loans and leases	1,090	580	1,022	2,692	574,390	4,496	581,578
Total loans and leases ⁽⁶⁾	\$ 2,666	\$ 1,157	\$ 2,848	\$ 6,671	\$1,020,944	\$ 4,851	\$1,032,466
Percentage of outstandings	0.26 %	0.11 %	0.28 %	0.65 %	98.88 %	0.47 %	100.00 %

⁽¹⁾ Consumer real estate loans 30-59 days past due includes fully-insured loans of \$173 million and nonperforming loans of \$101 million. Consumer real estate loans 60-89 days past due includes fully-insured loans of \$72 million and nonperforming loans of \$98 million. Consumer real estate loans 90 days or more past due includes fully-insured loans of \$427 million. Consumer real estate loans current or less than 30 days past due includes \$1.7 billion, and direct/indirect consumer includes \$29 million of nonperforming loans.

⁽²⁾ Total outstandings primarily includes auto and specialty lending loans and leases of \$50.7 billion, U.S. securities-based lending loans of \$52.6 billion and non-U.S. consumer loans of \$2.9 billion.

⁽³⁾ Consumer loans accounted for under the fair value option includes residential mortgage loans of \$74 million and home equity loans of \$281 million. Commercial loans accounted for under the fair value option includes U.S. commercial loans of \$2.4 billion and non-U.S. commercial loans of \$2.1 billion. For more information, see Note 14 – Fair Value Measurements and Note 15 – Fair Value Option.

⁽⁴⁾ Total outstandings includes U.S. commercial real estate loans of \$63.9 billion and non-U.S. commercial real estate loans of \$4.0 billion.

⁽⁵⁾ Includes Paycheck Protection Program loans.

⁽⁶⁾ Total outstandings includes loans and leases pledged as collateral of \$13.3 billion. The Corporation also pledged \$163.6 billion of loans with no related outstanding borrowings to secure potential borrowing capacity with the Federal Reserve Bank and Federal Home Loan Bank.

	30-59 Days Past Due ⁽¹⁾	60-89 Days Past Due ⁽¹⁾	90 Days or More Past Due ⁽¹⁾	Total Past Due 30 Days or More	Total Current or Less Than 30 Days Past Due ⁽¹⁾	Loans Accounted for Under the Fair Value Option	Total Outstandings
(Dollars in millions)							
December 31, 2021							
Consumer real estate							
Residential mortgage	\$ 1,005	\$ 297	\$ 1,571	\$ 2,873	\$ 219,090		\$ 221,963
Home equity	123	69	369	561	27,374		27,935
Credit card and other consumer							
Credit card	298	212	487	997	80,441		81,438
Direct/Indirect consumer ⁽²⁾	147	52	18	217	103,343		103,560
Other consumer	—	—	—	—	190		190
Total consumer	1,573	630	2,445	4,648	430,438		435,086
Consumer loans accounted for under the fair value option ⁽³⁾						\$ 618	618
Total consumer loans and leases	1,573	630	2,445	4,648	430,438	618	435,704
Commercial							
U.S. commercial	815	308	396	1,519	324,417		325,936
Non-U.S. commercial	148	20	83	251	113,015		113,266
Commercial real estate ⁽⁴⁾	115	34	285	434	62,575		63,009
Commercial lease financing	104	28	13	145	14,680		14,825
U.S. small business commercial ⁽⁵⁾	129	259	89	477	18,706		19,183
Total commercial	1,311	649	866	2,826	533,393		536,219
Commercial loans accounted for under the fair value option ⁽³⁾						7,201	7,201
Total commercial loans and leases	1,311	649	866	2,826	533,393	7,201	543,420
Total loans and leases ⁽⁶⁾	\$ 2,884	\$ 1,279	\$ 3,311	\$ 7,474	\$ 963,831	\$ 7,819	\$ 979,124
Percentage of outstandings	0.29 %	0.13 %	0.34 %	0.76 %	98.44 %	0.80 %	100.00 %

⁽¹⁾ Consumer real estate loans 30-59 days past due includes fully-insured loans of \$164 million and nonperforming loans of \$118 million. Consumer real estate loans 60-89 days past due includes fully-insured loans of \$89 million and nonperforming loans of \$100 million. Consumer real estate loans 90 days or more past due includes fully-insured loans of \$633 million. Consumer real estate loans current or less than 30 days past due includes \$1.4 billion, and direct/indirect consumer includes \$55 million of nonperforming loans.

⁽²⁾ Total outstandings primarily includes auto and specialty lending loans and leases of \$48.5 billion, U.S. securities-based lending loans of \$51.1 billion and non-U.S. consumer loans of \$3.0 billion.

⁽³⁾ Consumer loans accounted for under the fair value option includes residential mortgage loans of \$279 million and home equity loans of \$339 million. Commercial loans accounted for under the fair value option includes U.S. commercial loans of \$4.6 billion and non-U.S. commercial loans of \$2.6 billion. For more information, see Note 14 – Fair Value Measurements and Note 15 – Fair Value Option.

⁽⁴⁾ Total outstandings includes U.S. commercial real estate loans of \$58.2 billion and non-U.S. commercial real estate loans of \$4.8 billion.

⁽⁵⁾ Includes Paycheck Protection Program loans.

⁽⁶⁾ Total outstandings includes loans and leases pledged as collateral of \$13.0 billion. The Corporation also pledged \$146.6 billion of loans with no related outstanding borrowings to secure potential borrowing capacity with the Federal Reserve Bank and Federal Home Loan Bank.

The Corporation has entered into long-term credit protection agreements with FNMA and FHLMC on loans totaling \$9.7 billion and \$10.5 billion at September 30, 2022 and December 31, 2021, providing full credit protection on residential mortgage loans that become severely delinquent. All of these loans are individually insured, and therefore the Corporation does not record an allowance for credit losses related to these loans.

Nonperforming Loans and Leases

Commercial nonperforming loans decreased to \$1.2 billion at September 30, 2022 from \$1.6 billion at December 31, 2021. Consumer nonperforming loans decreased to \$2.8 billion at September 30, 2022 from \$3.0 billion at December 31, 2021 primarily due to decreases from consumer real estate loan

sales, partially offset by increases from loans with expired deferrals that were modified in TDRs during the first quarter of 2022.

The following table presents the Corporation's nonperforming loans and leases, including nonperforming TDRs, and loans accruing past due 90 days or more at September 30, 2022 and December 31, 2021. Nonperforming loans held-for-sale (LHFS) are excluded from nonperforming loans and leases as they are recorded at either fair value or the lower of cost or fair value. For more information on the criteria for classification as nonperforming, see Note 1 – Summary of Significant Accounting Principles to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

Credit Quality

(Dollars in millions)

	Nonperforming Loans and Leases		Accruing Past Due 90 Days or More	
	September 30 2022	December 31 2021	September 30 2022	December 31 2021
Residential mortgage ⁽¹⁾	\$ 2,187	\$ 2,284	\$ 427	\$ 634
With no related allowance ⁽²⁾	1,942	1,950	—	—
Home equity ⁽¹⁾	532	630	—	—
With no related allowance ⁽²⁾	394	414	—	—
Credit Card	n/a	n/a	547	487
Direct/indirect consumer	41	75	27	11
Total consumer	2,760	2,989	1,001	1,132
U.S. commercial	640	825	300	171
Non-U.S. commercial	274	268	22	19
Commercial real estate	282	382	34	40
Commercial lease financing	11	80	12	8
U.S. small business commercial	16	23	252	87
Total commercial	1,223	1,578	620	325
Total nonperforming loans	\$ 3,983	\$ 4,567	\$ 1,621	\$ 1,457
Percentage of outstanding loans and leases	0.39 %	0.47 %	0.16 %	0.15 %

⁽¹⁾ Residential mortgage loans accruing past due 90 days or more are fully-insured loans. At September 30, 2022 and December 31, 2021 residential mortgage includes \$321 million and \$444 million of loans on which interest had been curtailed by the Federal Housing Administration (FHA), and therefore were no longer accruing interest, although principal was still insured, and \$106 million and \$190 million of loans on which interest was still accruing.

⁽²⁾ Primarily relates to loans for which the estimated fair value of the underlying collateral less any costs to sell is greater than the amortized cost of the loans as of the reporting date.
n/a = not applicable

Credit Quality Indicators

The Corporation monitors credit quality within its Consumer Real Estate, Credit Card and Other Consumer, and Commercial portfolio segments based on primary credit quality indicators. For more information on the portfolio segments, see *Note 1 – Summary of Significant Accounting Principles* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K. Within the Consumer Real Estate portfolio segment, the primary credit quality indicators are refreshed loan-to-value (LTV) and refreshed Fair Isaac Corporation (FICO) score. Refreshed LTV measures the carrying value of the loan as a percentage of the value of the property securing the loan, refreshed quarterly. Home equity loans are evaluated using combined loan-to-value (CLTV), which measures the carrying value of the Corporation's loan and available line of credit combined with any outstanding senior liens against the property as a percentage of the value of the property securing the loan, refreshed quarterly. FICO score measures the creditworthiness of the borrower based on the financial obligations of the borrower and the borrower's credit history. FICO scores are typically refreshed quarterly or more frequently. Certain borrowers (e.g., borrowers that have had debts discharged in a bankruptcy proceeding) may not have their FICO scores updated.

FICO scores are also a primary credit quality indicator for the Credit Card and Other Consumer portfolio segment and the business card portfolio within U.S. small business commercial. Within the Commercial portfolio segment, loans are evaluated using the internal classifications of pass rated or reservable criticized as the primary credit quality indicators. The term reservable criticized refers to those commercial loans that are internally classified or listed by the Corporation as Special Mention, Substandard or Doubtful, which are asset quality categories defined by regulatory authorities. These assets have an elevated level of risk and may have a high probability of default or total loss. Pass rated refers to all loans not considered reservable criticized. In addition to these primary credit quality indicators, the Corporation uses other credit quality indicators for certain types of loans.

The following tables present certain credit quality indicators for the Corporation's Consumer Real Estate, Credit Card and Other Consumer, and Commercial portfolio segments by class of financing receivables and year of origination for term loan balances at September 30, 2022, including revolving loans that converted to term loans without an additional credit decision after origination or through a TDR.

Residential Mortgage – Credit Quality Indicators By Vintage

		Term Loans by Origination Year					
(Dollars in millions)	Total as of September 30, 2022	2022	2021	2020	2019	2018	Prior
Residential Mortgage							
Refreshed LTV							
Less than or equal to 90 percent	\$ 215,122	\$ 35,371	\$ 82,564	\$ 37,941	\$ 19,347	\$ 5,900	\$ 33,999
Greater than 90 percent but less than or equal to 100 percent	1,446	803	513	87	15	9	19
Greater than 100 percent	562	331	119	39	18	10	45
Fully-insured loans	11,932	511	3,737	3,173	977	165	3,369
Total Residential Mortgage	\$ 229,062	\$ 37,016	\$ 86,933	\$ 41,240	\$ 20,357	\$ 6,084	\$ 37,432
Residential Mortgage							
Refreshed FICO score							
Less than 620	\$ 2,054	\$ 317	\$ 489	\$ 343	\$ 108	\$ 86	\$ 711
Greater than or equal to 620 and less than 680	4,933	903	1,356	836	371	240	1,227
Greater than or equal to 680 and less than 740	24,594	4,303	8,441	4,372	2,159	812	4,507
Greater than or equal to 740	185,549	30,982	72,910	32,516	16,742	4,781	27,618
Fully-insured loans	11,932	511	3,737	3,173	977	165	3,369
Total Residential Mortgage	\$ 229,062	\$ 37,016	\$ 86,933	\$ 41,240	\$ 20,357	\$ 6,084	\$ 37,432

Home Equity – Credit Quality Indicators

	Total	Home Equity Loans and Reverse Mortgages ⁽¹⁾	Revolving Loans	Revolving Loans Converted to Term Loans
(Dollars in millions)	September 30, 2022			
Home Equity				
Refreshed LTV				
Less than or equal to 90 percent	\$ 26,662	\$ 1,406	\$ 19,805	\$ 5,451
Greater than 90 percent but less than or equal to 100 percent	68	25	24	19
Greater than 100 percent	115	41	37	37
Total Home Equity	\$ 26,845	\$ 1,472	\$ 19,866	\$ 5,507
Home Equity				
Refreshed FICO score				
Less than 620	\$ 689	\$ 177	\$ 175	\$ 337
Greater than or equal to 620 and less than 680	1,210	167	475	568
Greater than or equal to 680 and less than 740	4,228	355	2,550	1,323
Greater than or equal to 740	20,718	773	16,666	3,279
Total Home Equity	\$ 26,845	\$ 1,472	\$ 19,866	\$ 5,507

⁽¹⁾ Includes reverse mortgages of \$1.2 billion and home equity loans of \$450 million, which are no longer originated.

Credit Card and Direct/Indirect Consumer – Credit Quality Indicators By Vintage

	Direct/Indirect									Credit Card		
	Term Loans by Origination Year											
	Total Direct/ Indirect as of September 30, 2022	Revolving Loans	2022	2021	2020	2019	2018	Prior	Total Credit Card as of September 30, 2022	Revolving Loans	Revolving Loans Converted to Term Loans ⁽⁴⁾	
(Dollars in millions)												
Refreshed FICO score												
Less than 620	\$ 730	\$ 12	\$ 140	\$ 262	\$ 108	\$ 90	\$ 48	\$ 70	\$ 3,442	\$ 3,277	\$ 165	
Greater than or equal to 620 and less than 680	2,381	12	832	867	293	177	81	119	10,134	9,950	184	
Greater than or equal to 680 and less than 740	8,723	53	3,290	3,036	1,116	619	254	355	30,181	30,012	169	
Greater than or equal to 740	38,988	86	12,944	12,425	6,354	3,675	1,505	1,999	43,539	43,496	43	
Other internal credit metrics ^(2,3)	56,337	55,534	168	292	79	56	39	169	—	—	—	
Total credit card and other consumer	\$ 107,159	\$ 55,697	\$ 17,374	\$ 16,882	\$ 7,950	\$ 4,617	\$ 1,927	\$ 2,712	\$ 87,296	\$ 86,735	\$ 561	

⁽¹⁾ Represents TDRs that were modified into term loans.

⁽²⁾ Other internal credit metrics may include delinquency status, geography or other factors.

⁽³⁾ Direct/indirect consumer includes \$55.5 billion of securities-based lending, which is typically supported by highly liquid collateral with market value greater than or equal to the outstanding loan balance and therefore has minimal credit risk at September 30, 2022.

Commercial – Credit Quality Indicators By Vintage ⁽¹⁾

		Term Loans							
		Amortized Cost Basis by Origination Year							
(Dollars in millions)	Total as of September 30, 2022	2022	2021	2020	2019	2018	Prior	Revolving Loans	
U.S. Commercial									
Risk ratings									
Pass rated	\$ 346,130	\$ 51,059	\$ 42,706	\$ 19,446	\$ 17,967	\$ 9,431	\$ 31,503	\$ 174,018	
Reservable criticized	9,240	176	636	665	831	1,320	918	4,694	
Total U.S. Commercial	\$ 355,370	\$ 51,235	\$ 43,342	\$ 20,111	\$ 18,798	\$ 10,751	\$ 32,421	\$ 178,712	
Non-U.S. Commercial									
Risk ratings									
Pass rated	\$ 120,431	\$ 19,045	\$ 21,046	\$ 5,827	\$ 4,393	\$ 2,964	\$ 5,185	\$ 61,971	
Reservable criticized	2,604	60	387	241	315	194	483	924	
Total Non-U.S. Commercial	\$ 123,035	\$ 19,105	\$ 21,433	\$ 6,068	\$ 4,708	\$ 3,158	\$ 5,668	\$ 62,895	
Commercial Real Estate									
Risk ratings									
Pass rated	\$ 63,433	\$ 11,573	\$ 13,619	\$ 6,313	\$ 9,474	\$ 5,080	\$ 9,066	\$ 8,308	
Reservable criticized	4,519	9	366	567	1,513	888	1,065	111	
Total Commercial Real Estate	\$ 67,952	\$ 11,582	\$ 13,985	\$ 6,880	\$ 10,987	\$ 5,968	\$ 10,131	\$ 8,419	
Commercial Lease Financing									
Risk ratings									
Pass rated	\$ 12,720	\$ 1,583	\$ 2,699	\$ 2,076	\$ 2,048	\$ 1,404	\$ 2,910	\$ —	
Reservable criticized	236	5	23	14	76	47	71	—	
Total Commercial Lease Financing	\$ 12,956	\$ 1,588	\$ 2,722	\$ 2,090	\$ 2,124	\$ 1,451	\$ 2,981	\$ —	
U.S. Small Business Commercial ⁽²⁾									
Risk ratings									
Pass rated	\$ 8,910	\$ 1,323	\$ 2,174	\$ 1,688	\$ 907	\$ 657	\$ 2,030	\$ 131	
Reservable criticized	313	3	21	41	75	53	117	3	
Total U.S. Small Business Commercial	\$ 9,223	\$ 1,326	\$ 2,195	\$ 1,729	\$ 982	\$ 710	\$ 2,147	\$ 134	
Total	\$ 568,536	\$ 84,836	\$ 83,677	\$ 36,878	\$ 37,599	\$ 22,038	\$ 53,348	\$ 250,160	

⁽¹⁾ Excludes \$4.5 billion of loans accounted for under the fair value option at September 30, 2022.

⁽²⁾ Excludes U.S. Small Business Card loans of \$8.5 billion. Refreshed FICO scores for this portfolio are \$244 million for less than 620; \$786 million for greater than or equal to 620 and less than 680; \$2.3 billion for greater than or equal to 680 and less than 740; and \$5.2 billion greater than or equal to 740.

The following tables present certain credit quality indicators for the Corporation's Consumer Real Estate, Credit Card and Other Consumer, and Commercial portfolio segments by class of financing receivables and year of origination for term loan balances at December 31, 2021, including revolving loans that converted to term loans without an additional credit decision after origination or through a TDR.

Residential Mortgage – Credit Quality Indicators By Vintage

	Term Loans by Origination Year						
(Dollars in millions)	Total as of December 31, 2021	2021	2020	2019	2018	2017	Prior
Residential Mortgage							
Refreshed LTV							
Less than or equal to 90 percent	\$ 206,562	\$ 87,051	\$ 43,597	\$ 23,205	\$ 7,392	\$ 10,956	\$ 34,361
Greater than 90 percent but less than or equal to 100 percent	1,938	1,401	331	81	17	14	94
Greater than 100 percent	759	520	112	29	11	12	75
Fully-insured loans	12,704	3,845	3,486	1,150	216	235	3,772
Total Residential Mortgage	\$ 221,963	\$ 92,817	\$ 47,526	\$ 24,465	\$ 7,636	\$ 11,217	\$ 38,302
Residential Mortgage							
Refreshed FICO score							
Less than 620	\$ 2,451	\$ 636	\$ 442	\$ 140	\$ 120	\$ 104	\$ 1,009
Greater than or equal to 620 and less than 680	5,199	1,511	1,123	477	294	307	1,487
Greater than or equal to 680 and less than 740	24,532	8,822	5,454	2,785	1,057	1,434	4,980
Greater than or equal to 740	177,077	78,003	37,021	19,913	5,949	9,137	27,054
Fully-insured loans	12,704	3,845	3,486	1,150	216	235	3,772
Total Residential Mortgage	\$ 221,963	\$ 92,817	\$ 47,526	\$ 24,465	\$ 7,636	\$ 11,217	\$ 38,302

Home Equity - Credit Quality Indicators

			Home Equity Loans and Reverse Mortgages ⁽¹⁾	Revolving Loans	Revolving Loans Converted to Term Loans
(Dollars in millions)	Total	December 31, 2021			
Home Equity					
Refreshed LTV					
Less than or equal to 90 percent	\$ 27,594	\$ 1,773	\$ 19,095	\$ 6,726	
Greater than 90 percent but less than or equal to 100 percent	130	55	34	41	
Greater than 100 percent	211	85	54	72	
Total Home Equity	\$ 27,935	\$ 1,913	\$ 19,183	\$ 6,839	
Home Equity					
Refreshed FICO score					
Less than 620	\$ 893	\$ 244	\$ 209	\$ 440	
Greater than or equal to 620 and less than 680	1,434	222	495	717	
Greater than or equal to 680 and less than 740	4,625	468	2,493	1,664	
Greater than or equal to 740	20,983	979	15,986	4,018	
Total Home Equity	\$ 27,935	\$ 1,913	\$ 19,183	\$ 6,839	

⁽¹⁾ Includes reverse mortgages of \$1.3 billion and home equity loans of \$582 million, which are no longer originated.

Credit Card and Direct/Indirect Consumer – Credit Quality Indicators By Vintage

	Direct/Indirect											
			Term Loans by Origination Year						Credit Card			
	Total Direct/ Indirect as of December 31, 2021	Revolving Loans	2021	2020	2019	2018	2017	Prior	Total Credit Card as of December 31, 2021	Revolving Loans	Revolving Loans Converted to Term Loans ⁽¹⁾	
(Dollars in millions)												
Refreshed FICO score												
Less than 620	\$ 685	\$ 13	\$ 179	\$ 115	\$ 129	\$ 79	\$ 101	\$ 69	\$ 3,017	\$ 2,857	\$ 160	
Greater than or equal to 620 and less than 680	2,313	14	1,170	414	313	148	134	120	9,264	9,064	200	
Greater than or equal to 680 and less than 740	8,530	60	4,552	1,659	1,126	466	314	353	28,347	28,155	192	
Greater than or equal to 740	37,164	94	15,876	8,642	6,465	2,679	1,573	1,835	40,810	40,762	48	
Other internal credit metrics ^(2, 3)	54,868	54,173	283	53	77	75	63	144	—	—	—	
Total credit card and other consumer	\$ 103,560	\$ 54,354	\$ 22,060	\$ 10,883	\$ 8,110	\$ 3,447	\$ 2,185	\$ 2,521	\$ 81,438	\$ 80,838	\$ 600	

⁽¹⁾ Represents TDRs that were modified into term loans.

⁽²⁾ Other internal credit metrics may include delinquency status, geography or other factors.

⁽³⁾ Direct/indirect consumer includes \$54.2 billion of securities-based lending, which is typically supported by highly liquid collateral with market value greater than or equal to the outstanding loan balance and therefore has minimal credit risk at December 31, 2021.

Commercial – Credit Quality Indicators By Vintage ⁽¹⁾

(Dollars in millions)	Total as of December 31, 2021	Term Loans							Revolving Loans
		Amortized Cost Basis by Origination Year							
		2021	2020	2019	2018	2017	Prior		
U.S. Commercial									
Risk ratings									
Pass rated	\$ 315,618	\$ 55,862	\$ 25,012	\$ 23,373	\$ 11,439	\$ 10,426	\$ 23,877	\$ 165,629	
Reservable criticized	10,318	598	687	1,308	1,615	514	1,072	4,524	
Total U.S. Commercial	\$ 325,936	\$ 56,460	\$ 25,699	\$ 24,681	\$ 13,054	\$ 10,940	\$ 24,949	\$ 170,153	
Non-U.S. Commercial									
Risk ratings									
Pass rated	\$ 110,787	\$ 25,749	\$ 8,703	\$ 7,133	\$ 4,521	\$ 3,016	\$ 3,062	\$ 58,603	
Reservable criticized	2,479	223	324	487	275	257	216	697	
Total Non-U.S. Commercial	\$ 113,266	\$ 25,972	\$ 9,027	\$ 7,620	\$ 4,796	\$ 3,273	\$ 3,278	\$ 59,300	
Commercial Real Estate									
Risk ratings									
Pass rated	\$ 55,511	\$ 14,402	\$ 7,244	\$ 11,237	\$ 5,710	\$ 3,326	\$ 6,831	\$ 6,761	
Reservable criticized	7,498	277	990	2,237	1,710	596	1,464	224	
Total Commercial Real Estate	\$ 63,009	\$ 14,679	\$ 8,234	\$ 13,474	\$ 7,420	\$ 3,922	\$ 8,295	\$ 6,985	
Commercial Lease Financing									
Risk ratings									
Pass rated	\$ 14,438	\$ 3,280	\$ 2,485	\$ 2,427	\$ 2,030	\$ 1,741	\$ 2,475	\$ —	
Reservable criticized	387	25	18	91	67	48	138	—	
Total Commercial Lease Financing	\$ 14,825	\$ 3,305	\$ 2,503	\$ 2,518	\$ 2,097	\$ 1,789	\$ 2,613	\$ —	
U.S. Small Business Commercial ⁽²⁾									
Risk ratings									
Pass rated	\$ 11,618	\$ 4,257	\$ 2,922	\$ 1,059	\$ 763	\$ 623	\$ 1,853	\$ 141	
Reservable criticized	433	12	29	91	87	64	147	3	
Total U.S. Small Business Commercial	\$ 12,051	\$ 4,269	\$ 2,951	\$ 1,150	\$ 850	\$ 687	\$ 2,000	\$ 144	
Total	\$ 529,087	\$ 104,685	\$ 48,414	\$ 49,443	\$ 28,217	\$ 20,611	\$ 41,135	\$ 236,582	

⁽¹⁾ Excludes \$7.2 billion of loans accounted for under the fair value option at December 31, 2021.

⁽²⁾ Excludes U.S. Small Business Card loans of \$7.1 billion. Refreshed FICO scores for this portfolio are \$192 million for less than 620; \$618 million for greater than or equal to 620 and less than 680; \$1.9 billion for greater than or equal to 680 and less than 740; and \$4.4 billion greater than or equal to 740.

During the nine months ended September 30, 2022, commercial credit quality showed signs of stabilization. Commercial reservable criticized utilized exposure decreased to \$17.7 billion at September 30, 2022 from \$22.4 billion (to 2.88 percent from 3.91 percent of total commercial reservable utilized exposure) at December 31, 2021, which was broad-based across industries.

Troubled Debt Restructurings

Consumer Real Estate

Modifications of consumer real estate loans are classified as TDRs when the borrower is experiencing financial difficulties and a concession has been granted. Concessions may include reductions in interest rates, capitalization of past due amounts, principal and/or interest forbearance, payment extensions, principal and/or interest forgiveness, or combinations thereof. Prior to permanently modifying a loan, the Corporation may enter into trial modifications with certain borrowers under both government and proprietary programs. Trial modifications generally represent a three- to four-month period during which the borrower makes monthly payments under the anticipated modified payment terms. Upon successful completion of the trial period, the Corporation and the borrower enter into a permanent modification. Binding trial modifications are classified as TDRs when the trial offer is made and continue to be classified as TDRs regardless of whether the borrower enters into a permanent modification.

Consumer real estate loans of \$224 million that have been discharged in Chapter 7 bankruptcy with no change in

repayment terms and not reaffirmed by the borrower were included in TDRs at September 30, 2022, of which \$56 million were classified as nonperforming and \$38 million were loans fully insured.

At September 30, 2022 and December 31, 2021, remaining commitments to lend additional funds to debtors whose terms have been modified in a consumer real estate TDR were not significant. Consumer real estate foreclosed properties totaled \$125 million and \$101 million at September 30, 2022 and December 31, 2021. The carrying value of consumer real estate loans, including fully-insured loans, for which formal foreclosure proceedings were in process at September 30, 2022 and December 31, 2021 was \$946 million and \$1.1 billion. During the nine months ended September 30, 2022 and 2021, the Corporation reclassified \$151 million and \$33 million of consumer real estate loans to foreclosed properties or, for properties acquired upon foreclosure of certain government-guaranteed loans (principally FHA-insured loans), to other assets. The reclassifications represent non-cash investing activities and, accordingly, are not reflected in the Consolidated Statement of Cash Flows.

The table below presents the September 30, 2022 and 2021 unpaid principal balance, carrying value, and average pre- and post-modification interest rates of consumer real estate loans that were modified in TDRs during the three and nine months ended September 30, 2022 and 2021. The following Consumer Real Estate portfolio segment tables include loans that were initially classified as TDRs during the period and also loans that had previously been classified as TDRs and were modified again during the period.

Consumer Real Estate – TDRs Entered into During the Three and Nine Months Ended September 30, 2022 and 2021

	Unpaid Principal Balance	Carrying Value	Pre- Modification Interest Rate	Post- Modification Interest Rate ⁽¹⁾	Unpaid Principal Balance	Carrying Value	Pre- Modification Interest Rate	Post- Modification Interest Rate ⁽¹⁾
(Dollars in millions)	Three Months Ended September 30, 2022				Nine Months Ended September 30, 2022			
Residential mortgage	\$ 420	\$ 379	3.35 %	3.34 %	\$ 1,036	\$ 929	3.50 %	3.36 %
Home equity	99	86	4.58	4.83	216	176	4.20	4.31
Total	\$ 519	\$ 465	3.58	3.62	\$ 1,252	\$ 1,105	3.62	3.52
	Three Months Ended September 30, 2021				Nine Months Ended September 30, 2021			
Residential mortgage	\$ 451	\$ 399	3.52 %	3.49 %	\$ 832	\$ 742	3.49 %	3.44 %
Home equity	61	45	3.51	3.51	97	73	3.56	3.58
Total	\$ 512	\$ 444	3.52	3.49	\$ 929	\$ 815	3.50	3.46

⁽¹⁾ The post-modification interest rate reflects the interest rate applicable only to permanently completed modifications, which exclude loans that are in a trial modification period.

The table below presents the September 30, 2022 and 2021 carrying value for consumer real estate loans that were modified in a TDR during the three and nine months ended September 30, 2022 and 2021, by type of modification.

Consumer Real Estate – Modification Programs

	TDRs Entered into During the			
	Three Months Ended September 30		Nine Months Ended September 30	
(Dollars in millions)	2022	2021	2022	2021
Modifications under government programs	\$ —	\$ —	\$ —	\$ 4
Modifications under proprietary programs	420	417	999	740
Loans discharged in Chapter 7 bankruptcy ⁽¹⁾	4	9	12	29
Trial modifications	41	18	94	42
Total modifications	\$ 465	\$ 444	\$ 1,105	\$ 815

⁽¹⁾ Includes loans discharged in Chapter 7 bankruptcy with no change in repayment terms that are classified as TDRs.

The following table presents the carrying value of consumer real estate loans that entered into payment default during the three and nine months ended September 30, 2022 and 2021 that were modified in a TDR during the 12 months preceding payment default. A payment default for consumer real estate TDRs is recognized when a borrower has missed three monthly payments (not necessarily consecutively) since modification.

Consumer Real Estate – TDRs Entering Payment Default that were Modified During the Preceding 12 Months

	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
(Dollars in millions)				
Modifications under government programs	\$ —	\$ 1	\$ —	\$ 3
Modifications under proprietary programs	63	35	135	80
Loans discharged in Chapter 7 bankruptcy ⁽¹⁾	1	1	2	6
Trial modifications ⁽²⁾	8	3	19	15
Total modifications	\$ 72	\$ 40	\$ 156	\$ 104

⁽¹⁾ Includes loans discharged in Chapter 7 bankruptcy with no change in repayment terms that are classified as TDRs.

⁽²⁾ Includes trial modification offers to which the customer did not respond.

Credit Card and Other Consumer

The Corporation seeks to assist customers who are experiencing financial difficulty by modifying loans while ensuring compliance with federal and local laws and guidelines. Credit card and other consumer loan modifications generally involve reducing the interest rate on the account, placing the customer on a fixed payment plan not exceeding 60 months and canceling the customer's available line of credit, all of which are considered TDRs. The Corporation makes loan modifications directly with borrowers for debt held only by the Corporation (internal programs). Additionally, the Corporation makes loan modifications for borrowers working with third-party renegotiation

agencies that provide solutions to customers' entire unsecured debt structures (external programs). The Corporation classifies other secured consumer loans that have been discharged in Chapter 7 bankruptcy as TDRs, which are written down to collateral value and placed on nonaccrual status no later than the time of discharge.

The table below provides information on the Corporation's Credit Card and Other Consumer TDR portfolio including the September 30, 2022 and 2021 unpaid principal balance, carrying value, and average pre- and post-modification interest rates of loans that were modified in TDRs during the three and nine months ended September 30, 2022 and 2021.

Credit Card and Other Consumer – TDRs Entered into During the Three and Nine Months Ended September 30, 2022 and 2021

	Unpaid Principal Balance	Carrying Value ⁽¹⁾	Pre-Modification Interest Rate	Post-Modification Interest Rate	Unpaid Principal Balance	Carrying Value ⁽¹⁾	Pre-Modification Interest Rate	Post-Modification Interest Rate
	Three Months Ended September 30, 2022				Nine Months Ended September 30, 2022			
(Dollars in millions)								
Credit card	\$ 86	\$ 90	21.17 %	3.80 %	\$ 198	\$ 206	21.02 %	3.82 %
Direct/Indirect consumer	2	2	5.65	5.65	5	4	5.48	5.48
Total	\$ 88	\$ 92	20.87	3.83	\$ 203	\$ 210	20.69	3.86
	Three Months Ended September 30, 2021				Nine Months Ended September 30, 2021			
Credit card	\$ 66	\$ 71	18.48 %	3.71 %	\$ 189	\$ 200	18.47 %	4.26 %
Direct/Indirect consumer	4	2	5.20	5.20	13	8	5.53	5.53
Total	\$ 70	\$ 73	18.06	3.76	\$ 202	\$ 208	17.99	4.31

⁽¹⁾ Includes accrued interest and fees.

The table below presents the September 30, 2022 and 2021 carrying value for Credit Card and Other Consumer loans that were modified in a TDR during the three and nine months ended September 30, 2022 and 2021 by program type.

Credit Card and Other Consumer – TDRs by Program Type ⁽¹⁾

	TDRs Entered into During the Three Months Ended September 30		TDRs Entered into During the Nine Months Ended September 30	
	2022	2021	2022	2021
(Dollars in millions)				
Internal programs	\$ 77	\$ 60	\$ 174	\$ 166
External programs	13	11	32	37
Other	2	2	4	5
Total	\$ 92	\$ 73	\$ 210	\$ 208

⁽¹⁾ Includes accrued interest and fees.

Credit card and other consumer loans are deemed to be in payment default during the quarter in which a borrower misses the second of two consecutive payments. Payment defaults are one of the factors considered when projecting future cash flows in the calculation of the allowance for loan and lease losses for credit card and other consumer. Based on historical experience, the Corporation estimates that 12 percent of new credit card TDRs and 20 percent of new direct/indirect consumer TDRs may be in payment default within 12 months after modification.

Commercial Loans

Modifications of loans to commercial borrowers that are experiencing financial difficulty are designed to reduce the Corporation's loss exposure while providing the borrower with an

opportunity to work through financial difficulties, often to avoid foreclosure or bankruptcy. Each modification is unique and reflects the individual circumstances of the borrower. Modifications that result in a TDR may include extensions of maturity at a concessionary (below market) rate of interest, payment forbearances or other actions designed to benefit the borrower while mitigating the Corporation's risk exposure. Reductions in interest rates are rare. Instead, the interest rates are typically increased, although the increased rate may not represent a market rate of interest. Infrequently, concessions may also include principal forgiveness in connection with foreclosure, short sale or other settlement agreements leading to termination or sale of the loan.

At the time of restructuring, the loans are remeasured to reflect the impact, if any, on projected cash flows resulting from the modified terms. If a portion of the loan is deemed to be uncollectible, a charge-off may be recorded at the time of restructuring. Alternatively, a charge-off may have already been recorded in a previous period such that no charge-off is required at the time of modification.

During the three and nine months ended September 30, 2022, the carrying value of the Corporation's commercial loans that were modified as TDRs was \$745 million and \$1.7 billion compared to \$213 million and \$1.1 billion for the same periods in 2021. At September 30, 2022 and December 31, 2021, the Corporation had commitments to lend \$347 million and \$283 million to commercial borrowers whose loans were classified as TDRs. The balance of commercial TDRs in payment default was \$117 million and \$262 million at September 30, 2022 and December 31, 2021.

Loans Held-for-sale

The Corporation had LHFS of \$7.6 billion and \$15.6 billion at September 30, 2022 and December 31, 2021. Cash and non-cash proceeds from sales and paydowns of loans originally classified as LHFS were \$27.8 billion and \$27.0 billion for the nine months ended September 30, 2022 and 2021. Cash used for originations and purchases of LHFS totaled \$18.7 billion and \$27.0 billion for the nine months ended September 30, 2022 and 2021. Also included were non-cash net transfers into LHFS of \$2.1 billion for the nine months ended September 30, 2022, primarily driven by the transfer of a \$1.6 billion affinity card loan portfolio to held for sale that was sold in October 2022, and \$804 million for the nine months ended September 30, 2021.

Accrued Interest Receivable

Accrued interest receivable for loans and leases and loans held-for-sale at September 30, 2022 and December 31, 2021 was \$3.0 billion and \$2.2 billion and is reported in customer and other receivables on the Consolidated Balance Sheet.

Outstanding credit card loan balances include unpaid principal, interest and fees. Credit card loans are not classified as nonperforming but are charged off no later than the end of the month in which the account becomes 180 days past due, within 60 days after receipt of notification of death or bankruptcy, or upon confirmation of fraud. During the three and nine months ended September 30, 2022, the Corporation reversed \$81 million and \$241 million of interest and fee income against the income statement line item in which it was originally recorded upon charge-off of the principal balance of the loan compared to \$87 million and \$369 million for the same periods in 2021.

For the outstanding residential mortgage, home equity, direct/indirect consumer and commercial loan balances classified as nonperforming during the three and nine months ended September 30, 2022 and 2021, interest and fee income reversed at the time the loans were classified as nonperforming was not significant. For more information on the Corporation's nonperforming loan policies, see *Note 1 – Summary of Significant Accounting Principles* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

Allowance for Credit Losses

The allowance for credit losses is estimated using quantitative and qualitative methods that consider a variety of factors, such as historical loss experience, the current credit quality of the portfolio and an economic outlook over the life of the loan. Qualitative reserves cover losses that are expected but, in the

Corporation's assessment, may not be adequately reflected in the quantitative methods or the economic assumptions. The Corporation incorporates forward-looking information through the use of several macroeconomic scenarios in determining the weighted economic outlook over the forecasted life of the assets. These scenarios include key macroeconomic variables such as gross domestic product, unemployment rate, real estate prices and corporate bond spreads. The scenarios that are chosen each quarter and the weighting given to each scenario depend on a variety of factors including recent economic events, leading economic indicators, internal and third-party economist views, and industry trends. For more information on the Corporation's credit loss accounting policies including the allowance for credit losses, see *Note 1 – Summary of Significant Accounting Principles* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

The September 30, 2022 estimate for allowance for credit losses was based on various economic outlooks that included a baseline scenario derived from consensus estimates, a moderate recession scenario, a downside scenario to account for persistent inflation and interest rates at levels above what is factored into the baseline, and a tail risk scenario. In addition, an upside scenario considers the potential for improvement in the consensus outlooks. The weighted economic outlook assumes that the U.S. average unemployment rate will be above five percent in the fourth quarter of 2023 and fall just below five percent by the end of 2024. Additionally, in this economic outlook, U.S. gross domestic product is forecasted to grow at 0.2 percent and 1.5 percent year-over-year in the fourth quarters of 2023 and 2024. While asset quality continues to improve and the pandemic appears to have largely dissipated, uncertainty remains regarding broader economic impacts as a result of inflationary pressures, rising rates and the current geopolitical situation and could lead to adverse impacts to credit quality metrics in future periods. As such, the Corporation has factored the aforementioned uncertainties into its allowance for credit losses.

The allowance for credit losses at September 30, 2022 was \$13.8 billion, a decrease of \$26 million compared to December 31, 2021. The decrease in the allowance for credit losses was primarily driven by asset quality improvement and reduced pandemic uncertainties, partially offset by reserve builds related to loan growth, a dampening macroeconomic outlook and Russian exposure. The change in the allowance for credit losses was comprised of a net decrease of \$85 million in the allowance for loan and lease losses and a \$59 million increase in the reserve for unfunded lending commitments. The decrease in the allowance for credit losses was attributed to \$191 million in the consumer real estate portfolio, partially offset by an increase of \$20 million in the credit card and other consumer portfolio, and an increase of \$145 million in the commercial portfolio. The provision for credit losses increased \$1.5 billion to an expense of \$898 million, and \$5.6 billion to an expense of \$1.5 billion for the three and nine months ended September 30, 2022 compared to the same periods in 2021. The provision for credit losses for the three months ended September 30, 2022 was primarily driven by loan growth and a dampening macroeconomic outlook, and the nine-month period was driven by the same factors as well as a reserve build related to Russian exposure, partially offset by asset quality improvement and reduced pandemic uncertainties. For the same periods in the prior year, the benefit in the provision for credit losses was due to an improved macroeconomic outlook.

Outstanding loans and leases excluding loans accounted for under the fair value option increased \$56.3 billion during the nine months ended September 30, 2022 driven by commercial loans, which increased \$40.9 billion, driven by broad-based

growth, and consumer loans, which increased \$15.4 billion, primarily driven by residential mortgage and credit card.

The changes in the allowance for credit losses, including net charge-offs and provision for loan and lease losses, are detailed in the table below.

	Consumer Real Estate	Credit Card and Other Consumer	Commercial	Total
Three Months Ended September 30, 2022				
(Dollars in millions)				
Allowance for loan and lease losses, July 1	\$ 396	\$ 6,216	\$ 5,361	\$ 11,973
Loans and leases charged off	(13)	(696)	(100)	(809)
Recoveries of loans and leases previously charged off	34	216	39	289
Net charge-offs	21	(480)	(61)	(520)
Provision for loan and lease losses	(37)	760	122	845
Other	4	—	—	4
Allowance for loan and lease losses, September 30	384	6,496	5,422	12,302
Reserve for unfunded lending commitments, July 1	79	—	1,382	1,461
Provision for unfunded lending commitments	(1)	—	54	53
Other	—	—	1	1
Reserve for unfunded lending commitments, September 30	78	—	1,437	1,515
Allowance for credit losses, September 30	\$ 462	\$ 6,496	\$ 6,859	\$ 13,817
Three Months Ended September 30, 2021				
Allowance for loan and lease losses, July 1	\$ 597	\$ 6,835	\$ 6,663	\$ 14,095
Loans and leases charged off	(15)	(626)	(165)	(806)
Recoveries of loans and leases previously charged off	56	256	31	343
Net charge-offs	41	(370)	(134)	(463)
Provision for loan and lease losses	(85)	175	(565)	(475)
Other	2	(1)	(3)	(2)
Allowance for loan and lease losses, September 30	555	6,639	5,961	13,155
Reserve for unfunded lending commitments, July 1	107	—	1,580	1,687
Provision for unfunded lending commitments	(9)	—	(140)	(149)
Reserve for unfunded lending commitments, September 30	98	—	1,440	1,538
Allowance for credit losses, September 30	\$ 653	\$ 6,639	\$ 7,401	\$ 14,693
Nine Months Ended September 30, 2022				
(Dollars in millions)				
Allowance for loan and lease losses, January 1	\$ 557	\$ 6,476	\$ 5,354	\$ 12,387
Loans and leases charged off	(196)	(2,007)	(284)	(2,487)
Recoveries of loans and leases previously charged off	195	684	125	1,004
Net charge-offs	(1)	(1,323)	(159)	(1,483)
Provision for loan and lease losses	(179)	1,344	229	1,394
Other	7	(1)	(2)	4
Allowance for loan and lease losses, September 30	384	6,496	5,422	12,302
Reserve for unfunded lending commitments, January 1	96	—	1,360	1,456
Provision for unfunded lending commitments	(18)	—	75	57
Other	—	—	2	2
Reserve for unfunded lending commitments, September 30	78	—	1,437	1,515
Allowance for credit losses, September 30	\$ 462	\$ 6,496	\$ 6,859	\$ 13,817
Nine Months Ended September 30, 2021				
Allowance for loan and lease losses, January 1	\$ 858	\$ 9,213	\$ 8,731	\$ 18,802
Loans and leases charged off	(60)	(2,402)	(591)	(3,053)
Recoveries of loans and leases previously charged off	170	757	245	1,172
Net charge-offs	110	(1,645)	(346)	(1,881)
Provision for loan and lease losses	(414)	(929)	(2,423)	(3,766)
Other	1	—	(1)	—
Allowance for loan and lease losses, September 30	555	6,639	5,961	13,155
Reserve for unfunded lending commitments, January 1	137	—	1,741	1,878
Provision for unfunded lending commitments	(39)	—	(300)	(339)
Other	—	—	(1)	(1)
Reserve for unfunded lending commitments, September 30	98	—	1,440	1,538
Allowance for credit losses, September 30	\$ 653	\$ 6,639	\$ 7,401	\$ 14,693

NOTE 6 Securitizations and Other Variable Interest Entities

The Corporation utilizes VIEs in the ordinary course of business to support its own and its customers' financing and investing needs. The tables in this Note present the assets and liabilities of consolidated and unconsolidated VIEs at September 30, 2022 and December 31, 2021 in situations where the Corporation has continuing involvement with transferred assets or if the Corporation otherwise has a variable interest in the VIE. The tables also present the Corporation's maximum loss exposure at September 30, 2022 and December 31, 2021 resulting from its involvement with consolidated VIEs and unconsolidated VIEs in which the Corporation holds a variable interest. For more information on the Corporation's use of VIEs and related maximum loss exposure, see *Note 1 – Summary of Significant Accounting Principles* and *Note 6 – Securitizations and Other Variable Interest Entities* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

The Corporation invests in ABS issued by third-party VIEs with which it has no other form of involvement and enters into certain commercial lending arrangements that may also incorporate the use of VIEs, for example to hold collateral.

These securities and loans are included in *Note 4 – Securities* or *Note 5 – Outstanding Loans and Leases and Allowance for Credit Losses*. In addition, the Corporation has used VIEs in connection with its funding activities.

The Corporation did not provide financial support to consolidated or unconsolidated VIEs during the three and nine months ended September 30, 2022 or the year ended December 31, 2021 that it was not previously contractually required to provide, nor does it intend to do so.

The Corporation had liquidity commitments, including written put options and collateral value guarantees, with certain unconsolidated VIEs of \$908 million and \$968 million at September 30, 2022 and December 31, 2021.

First-lien Mortgage Securitizations

As part of its mortgage banking activities, the Corporation securitizes a portion of the first-lien residential mortgage loans it originates or purchases from third parties. Except as described in *Note 10 – Commitments and Contingencies*, the Corporation does not provide guarantees or recourse to the securitization trusts other than standard representations and warranties.

The table below summarizes select information related to first-lien mortgage securitizations for the three and nine months ended September 30, 2022 and 2021.

First-lien Mortgage Securitizations

	Residential Mortgage - Agency				Commercial Mortgage			
	Three Months Ended September 30		Nine Months Ended September 30		Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021	2022	2021	2022	2021
(Dollars in millions)								
Proceeds from loan sales ⁽¹⁾	\$ 3,259	\$ 2,153	\$ 7,000	\$ 5,047	\$ 779	\$ 3,122	\$ 5,194	\$ 5,961
Gains on securitizations ⁽²⁾	—	3	8	8	13	41	39	105
Repurchases from securitization trusts ⁽³⁾	21	156	46	512	—	—	—	—

⁽¹⁾ The Corporation transfers residential mortgage loans to securitizations sponsored primarily by the government-sponsored enterprises or Government National Mortgage Association (GNMA) in the normal course of business and primarily receives residential mortgage-backed securities in exchange. Substantially all of these securities are classified as Level 2 within the fair value hierarchy and are typically sold shortly after receipt.

⁽²⁾ A majority of the first-lien residential mortgage loans securitized are initially classified as LHFS and accounted for under the fair value option. Gains recognized on these LHFS prior to securitization, which totaled \$5 million and \$35 million net of hedges, during the three and nine months ended September 30, 2022 and compared to \$24 million and \$97 million for the same periods in 2021, are not included in the table above.

⁽³⁾ The Corporation may have the option to repurchase delinquent loans out of securitization trusts, which reduces the amount of servicing advances it is required to make. The Corporation may also repurchase loans from securitization trusts to perform modifications. Repurchased loans include FHA-insured mortgages collateralizing GNMA securities.

The Corporation recognizes consumer mortgage servicing rights (MSRs) from the sale or securitization of consumer real estate loans. The unpaid principal balance of loans serviced for investors, including residential mortgage and home equity loans, totaled \$102.6 billion and \$129.6 billion at September 30, 2022 and 2021. Servicing fee and ancillary fee income on serviced loans was \$71 million and \$215 million during the three and nine months ended September 30, 2022 compared to \$101 million and \$318 million for the same periods in 2021. Servicing advances on serviced loans, including loans serviced for others and loans held for investment, were \$1.6 billion and \$2.0 billion at September 30, 2022 and December 31, 2021.

For more information on MSRs, see *Note 14 – Fair Value Measurements*.

During the three and nine months ended September 30, 2022, the Corporation deconsolidated agency residential mortgage securitization trusts with total assets of \$22 million and \$585 million, with no significant deconsolidations during the three and nine months ended September 30, 2021.

The following table summarizes select information related to first-lien mortgage securitization trusts in which the Corporation held a variable interest at September 30, 2022 and December 31, 2021.

First-lien Mortgage VIEs

	Residential Mortgage										Commercial Mortgage	
	Agency		Prime		Non-agency Subprime		Alt-A					
	Sep 30 2022	December 31 2021	Sep 30 2022	December 31 2021	Sep 30 2022	December 31 2021	Sep 30 2022	December 31 2021	Sep 30 2022	December 31 2021		
(Dollars in millions)												
Unconsolidated VIEs												
Maximum loss exposure ⁽¹⁾	\$ 9,465	\$ 11,600	\$ 108	\$ 121	\$ 757	\$ 908	\$ 12	\$ 14	\$ 1,560	\$ 1,445		
On-balance sheet assets												
Senior securities:												
Trading account assets	\$ 347	\$ 175	\$ 3	\$ 8	\$ 28	\$ 44	\$ 10	\$ 12	\$ 58	\$ 21		
Debt securities carried at fair value	3,142	5,009	—	—	430	537	—	—	—	—		
Held-to-maturity securities	5,976	6,416	—	—	—	—	—	—	1,268	1,157		
All other assets	—	—	3	3	25	29	2	2	102	93		
Total retained positions	\$ 9,465	\$ 11,600	\$ 6	\$ 11	\$ 483	\$ 610	\$ 12	\$ 14	\$ 1,428	\$ 1,271		
Principal balance outstanding ⁽²⁾	\$ 83,659	\$ 93,142	\$ 4,123	\$ 4,710	\$ 5,110	\$ 6,179	\$ 11,856	\$ 13,627	\$ 83,475	\$ 85,540		
Consolidated VIEs												
Maximum loss exposure ⁽¹⁾	\$ 1,961	\$ 1,644	\$ —	\$ 49	\$ 83	\$ —	\$ —	\$ —	\$ —	\$ —		
On-balance sheet assets												
Trading account assets	\$ 1,961	\$ 1,644	\$ —	\$ —	\$ 83	\$ —	\$ —	\$ —	\$ —	\$ —		
Loans and leases, net	—	—	—	58	—	—	—	—	—	—		
Total assets	\$ 1,961	\$ 1,644	\$ —	\$ 58	\$ 83	\$ —	\$ —	\$ —	\$ —	\$ —		
Total liabilities	\$ —	\$ —	\$ —	\$ 9	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —		

⁽¹⁾ Maximum loss exposure includes obligations under loss-sharing reinsurance and other arrangements for non-agency residential mortgage and commercial mortgage securitizations, but excludes the reserve for representations and warranties obligations and corporate guarantees and also excludes servicing advances and other servicing rights and obligations. For more information, see Note 10 – Commitments and Contingencies and Note 14 – Fair Value Measurements.

⁽²⁾ Principal balance outstanding includes loans where the Corporation was the transferor to securitization VIEs with which it has continuing involvement, which may include servicing the loans.

Other Asset-backed Securitizations

The table below summarizes select information related to home equity, credit card and other asset-backed VIEs in which the Corporation held a variable interest at September 30, 2022 and December 31, 2021.

Home Equity Loan, Credit Card and Other Asset-backed VIEs

	Home Equity ⁽¹⁾		Credit Card ⁽²⁾		Resecuritization Trusts		Municipal Bond Trusts	
	Sep 30 2022	December 31 2021	Sep 30 2022	December 31 2021	Sep 30 2022	December 31 2021	Sep 30 2022	December 31 2021
	(Dollars in millions)							
Unconsolidated VIEs								
Maximum loss exposure	\$ 124	\$ 152	\$ —	\$ —	\$ 5,228	\$ 6,089	\$ 3,138	\$ 4,094
On-balance sheet assets								
Securities ⁽³⁾ :								
Trading account assets	\$ —	\$ —	\$ —	\$ —	\$ 1,271	\$ 1,030	\$ —	\$ —
Debt securities carried at fair value	1	1	—	—	1,340	1,903	—	—
Held-to-maturity securities	—	—	—	—	2,617	3,156	—	—
Total retained positions	\$ 1	\$ 1	\$ —	\$ —	\$ 5,228	\$ 6,089	\$ —	\$ —
Total assets of VIEs	\$ 344	\$ 430	\$ —	\$ —	\$ 16,379	\$ 18,633	\$ 3,634	\$ 4,655
Consolidated VIEs								
Maximum loss exposure	\$ 35	\$ 45	\$ 10,264	\$ 10,279	\$ 341	\$ 680	\$ 59	\$ 210
On-balance sheet assets								
Trading account assets	\$ —	\$ —	\$ —	\$ —	\$ 349	\$ 686	\$ 59	\$ 122
Loans and leases	105	140	14,025	14,434	—	—	—	—
Allowance for loan and lease losses	13	14	(812)	(970)	—	—	—	—
All other assets	2	3	58	70	—	—	—	88
Total assets	\$ 120	\$ 157	\$ 13,271	\$ 13,534	\$ 349	\$ 686	\$ 59	\$ 210
On-balance sheet liabilities								
Short-term borrowings	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —	\$ 49	\$ 196
Long-term debt	85	113	2,998	3,248	8	6	—	—
All other liabilities	—	—	9	7	—	—	—	—
Total liabilities	\$ 85	\$ 113	\$ 3,007	\$ 3,255	\$ 8	\$ 6	\$ 49	\$ 196

⁽¹⁾ For unconsolidated home equity loan VIEs, the maximum loss exposure includes outstanding trust certificates issued by trusts in rapid amortization, net of recorded reserves. For both consolidated and unconsolidated home equity loan VIEs, the maximum loss exposure excludes the reserve for representations and warranties obligations and corporate guarantees. For more information, see Note 10 – Commitments and Contingencies.

⁽²⁾ At September 30, 2022 and December 31, 2021, loans and leases in the consolidated credit card trust included \$4.2 billion and \$4.3 billion of seller's interest.

⁽³⁾ The retained senior securities were valued using quoted market prices or observable market inputs (Level 2 of the fair value hierarchy).

Home Equity Loans

The Corporation retains interests, primarily senior securities, in home equity securitization trusts to which it transferred home equity loans. In addition, the Corporation may be obligated to provide subordinate funding to the trusts during a rapid amortization event. This obligation is included in the maximum loss exposure in the preceding table. The charges that will ultimately be recorded as a result of the rapid amortization events depend on the undrawn portion of the home equity lines of credit, performance of the loans, the amount of subsequent draws and the timing of related cash flows.

Credit Card Securitizations

The Corporation securitizes originated and purchased credit card loans. The Corporation's continuing involvement with the securitization trust includes servicing the receivables, retaining an undivided interest (seller's interest) in the receivables, and holding certain retained interests, including subordinate interests in accrued interest and fees on the securitized receivables and cash reserve accounts.

Senior debt securities totaling \$1.0 billion were issued to third-party investors from the credit card securitization trust during the nine months ended September 30, 2022 and 2021.

At both September 30, 2022 and December 31, 2021, the Corporation held subordinate securities issued by the credit card securitization trust with a notional principal amount of \$6.5 billion. These securities serve as a form of credit enhancement to the senior debt securities and have a stated interest rate of zero percent. There were \$161 million of subordinate securities issued by the credit card securitization trust during the nine months ended September 30, 2022 and 2021.

Resecuritization Trusts

The Corporation transfers securities, typically MBS, into resecuritization VIEs generally at the request of customers seeking securities with specific characteristics. Generally, there are no significant ongoing activities performed in a

resecuritization trust, and no single investor has the unilateral ability to liquidate the trust.

The Corporation resecuritized \$5.3 billion and \$19.5 billion of securities during the three and nine months ended September 30, 2022 compared to \$5.9 billion and \$20.6 billion for the same periods in 2021. Securities transferred into resecuritization VIEs were measured at fair value with changes in fair value recorded in market making and similar activities prior to the resecuritization and, accordingly, no gain or loss on sale was recorded. During the three and nine months ended September 30, 2022 and 2021, resecuritization proceeds included securities with an initial fair value of \$670 million and \$2.4 billion compared to \$1.0 billion and \$1.6 billion, of which substantially all of the securities were classified as trading account assets for both periods and categorized as Level 2 within the fair value hierarchy.

Municipal Bond Trusts

The Corporation administers municipal bond trusts that hold highly-rated, long-term, fixed-rate municipal bonds. The trusts obtain financing by issuing floating-rate trust certificates that reprice on a weekly or other short-term basis to third-party investors.

The Corporation's liquidity commitments to unconsolidated municipal bond trusts, including those for which the Corporation was transferor, totaled \$3.1 billion and \$4.1 billion at September 30, 2022 and December 31, 2021. The weighted-average remaining life of bonds held in the trusts at September 30, 2022 was 7.9 years. There were no significant write-downs or downgrades of assets or issuers during the nine months ended September 30, 2022 and 2021.

Other Variable Interest Entities

The table below summarizes select information related to other VIEs in which the Corporation held a variable interest at September 30, 2022 and December 31, 2021.

Other VIEs

(Dollars in millions)	September 30, 2022			December 31, 2021		
	Consolidated	Unconsolidated	Total	Consolidated	Unconsolidated	Total
Maximum loss exposure	\$ 2,133	\$ 28,835	\$ 30,968	\$ 4,819	\$ 27,790	\$ 32,609
On-balance sheet assets						
Trading account assets	\$ 342	\$ 557	\$ 899	\$ 2,552	\$ 626	\$ 3,178
Debt securities carried at fair value	—	4	4	—	7	7
Loans and leases	1,943	86	2,029	2,503	47	2,550
Allowance for loan and lease losses	(3)	(11)	(14)	(2)	(12)	(14)
All other assets	33	27,606	27,639	28	26,628	26,656
Total	\$ 2,315	\$ 28,242	\$ 30,557	\$ 5,081	\$ 27,296	\$ 32,377
On-balance sheet liabilities						
Short-term borrowings	\$ 33	\$ —	\$ 33	\$ 51	\$ —	\$ 51
Long-term debt	149	—	149	211	—	211
All other liabilities	—	7,009	7,009	—	6,548	6,548
Total	\$ 182	\$ 7,009	\$ 7,191	\$ 262	\$ 6,548	\$ 6,810
Total assets of VIEs	\$ 2,315	\$ 95,767	\$ 98,082	\$ 5,081	\$ 92,249	\$ 97,330

Customer VIEs

Customer VIEs include credit-linked, equity-linked and commodity-linked note VIEs, repackaging VIEs and asset acquisition VIEs, which are typically created on behalf of customers who wish to obtain market or credit exposure to a specific company, index, commodity or financial instrument.

The Corporation's maximum loss exposure to consolidated and unconsolidated customer VIEs totaled \$999 million and \$2.9 billion at September 30, 2022 and December 31, 2021, including the notional amount of derivatives to which the Corporation is a counterparty, net of losses previously recorded, and the Corporation's investment, if any, in securities issued by the VIEs.

Collateralized Debt Obligation VIEs

The Corporation receives fees for structuring CDO VIEs, which hold diversified pools of fixed-income securities, typically corporate debt or ABS, which the CDO VIEs fund by issuing multiple tranches of debt and equity securities. CDOs are generally managed by third-party portfolio managers. The Corporation typically transfers assets to these CDOs, holds securities issued by the CDOs and may be a derivative counterparty to the CDOs. The Corporation's maximum loss exposure to consolidated and unconsolidated CDOs totaled \$111 million and \$235 million at September 30, 2022 and December 31, 2021.

Investment VIEs

The Corporation sponsors, invests in or provides financing, which may be in connection with the sale of assets, to a variety of investment VIEs that hold loans, real estate, debt securities or other financial instruments and are designed to provide the desired investment profile to investors or the Corporation. At September 30, 2022 and December 31, 2021, the Corporation's consolidated investment VIEs had total assets of \$665 million and \$1.0 billion. The Corporation also held investments in unconsolidated VIEs with total assets of \$7.9 billion and \$7.1 billion at September 30, 2022 and December 31, 2021. The Corporation's maximum loss exposure associated with both consolidated and unconsolidated investment VIEs totaled \$1.8 billion and \$2.0 billion at September 30, 2022 and December 31, 2021 comprised primarily of on-balance sheet assets less non-recourse liabilities.

Leveraged Lease Trusts

The Corporation's net investment in consolidated leveraged lease trusts totaled \$1.3 billion and \$1.5 billion at September 30, 2022 and December 31, 2021. The trusts hold long-lived equipment such as rail cars, power generation and distribution equipment, and commercial aircraft. The Corporation structures the trusts and holds a significant residual interest. The net investment represents the Corporation's maximum loss exposure to the trusts in the unlikely event that the leveraged lease investments become worthless. Debt issued by the leveraged lease trusts is non-recourse to the Corporation.

Tax Credit VIEs

The Corporation holds investments in unconsolidated limited partnerships and similar entities that construct, own and operate affordable housing, wind and solar projects. An

unrelated third party is typically the general partner or managing member and has control over the significant activities of the VIE. The Corporation earns a return primarily through the receipt of tax credits allocated to the projects. The maximum loss exposure included in the Other VIEs table was \$26.5 billion and \$25.7 billion at September 30, 2022 and December 31, 2021. The Corporation's risk of loss is generally mitigated by policies requiring that the project qualify for the expected tax credits prior to making its investment.

The Corporation's investments in affordable housing partnerships, which are reported in other assets on the Consolidated Balance Sheet, totaled \$13.4 billion and \$12.6 billion, including unfunded commitments to provide capital contributions of \$6.3 billion and \$5.8 billion, at September 30, 2022 and December 31, 2021. The unfunded commitments are expected to be paid over the next five years. During the three and nine months ended September 30, 2022, the Corporation recognized tax credits and other tax benefits from investments in affordable housing partnerships of \$409 million and \$1.2 billion and reported pretax losses in other income of \$311 million and \$938 million. For the same periods in 2021, the Corporation recognized tax credits and other tax benefits of \$350 million and \$1.1 billion and reported pretax losses in other income of \$282 million and \$837 million. These tax credits are recognized as part of the Corporation's annual effective tax rate used to determine tax expense in a given quarter. The Corporation may be asked to invest additional amounts to support a troubled affordable housing project. Such additional investments have not been and are not expected to be significant.

NOTE 7 Goodwill and Intangible Assets

Goodwill

The table below presents goodwill balances by business segment at September 30, 2022 and December 31, 2021. The reporting units utilized for goodwill impairment testing are the operating segments or one level below.

Goodwill

	September 30 2022	December 31 2021
(Dollars in millions)		
Consumer Banking	\$ 30,137	\$ 30,137
Global Wealth & Investment Management	9,677	9,677
Global Banking	24,026	24,026
Global Markets	5,182	5,182
Total goodwill	\$ 69,022	\$ 69,022

Intangible Assets

At September 30, 2022 and December 31, 2021, the net carrying value of intangible assets was \$2.1 billion and \$2.2 billion. At both September 30, 2022 and December 31, 2021, intangible assets included \$1.6 billion of intangible assets associated with trade names, substantially all of which had an indefinite life and, accordingly, are not being amortized. Amortization of intangibles expense was \$20 million and \$59 million for the three and nine months ended September 30, 2022 compared to \$19 million and \$56 million for the same periods in 2021.

NOTE 8 Leases

The Corporation enters into both lessor and lessee arrangements. For more information on lease accounting, see *Note 1 – Summary of Significant Accounting Principles* and *Note 8 – Leases* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K. For more information on lease financing receivables, see *Note 5 – Outstanding Loans and Leases and Allowance for Credit Losses*.

Lessor Arrangements

The Corporation's lessor arrangements primarily consist of operating, sales-type and direct financing leases for equipment. Lease agreements may include options to renew and for the lessee to purchase the leased equipment at the end of the lease term.

The table below presents the net investment in sales-type and direct financing leases at September 30, 2022 and December 31, 2021.

Net Investment ⁽¹⁾

(Dollars in millions)	September 30 2022	December 31 2021
Lease receivables	\$ 14,937	\$ 16,806
Unguaranteed residuals	1,793	2,078
Total net investment in sales-type and direct financing leases	\$ 16,730	\$ 18,884

⁽¹⁾ In certain cases, the Corporation obtains third-party residual value insurance to reduce its residual asset risk. The carrying value of residual assets with third-party residual value insurance for at least a portion of the asset value was \$6.6 billion and \$7.1 billion at September 30, 2022 and December 31, 2021.

The table below presents lease income for the three and nine months ended September 30, 2022 and 2021.

Lease Income

(Dollars in millions)	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
Sales-type and direct financing leases	\$ 149	\$ 152	\$ 428	\$ 468
Operating leases	241	235	704	689
Total lease income	\$ 390	\$ 387	\$ 1,132	\$ 1,157

Lessee Arrangements

The Corporation's lessee arrangements predominantly consist of operating leases for premises and equipment; the Corporation's financing leases are not significant.

The table below provides information on the right-of-use assets and lease liabilities at September 30, 2022 and December 31, 2021.

Lessee Arrangements

(Dollars in millions)	September 30 2022	December 31 2021
Right-of-use asset	\$ 9,743	\$ 10,233
Lease liabilities	10,310	10,858

NOTE 9 Securities Financing Agreements, Collateral and Restricted Cash

The Corporation enters into securities financing agreements which include securities borrowed or purchased under agreements to resell and securities loaned or sold under agreements to repurchase. These financing agreements (also referred to as "matched-book transactions") are to accommodate customers, obtain securities to cover short positions and finance inventory positions. The Corporation elects to account for certain securities financing agreements under the fair value option. For more information on the fair value option, see *Note 15 – Fair Value Option*.

Offsetting of Securities Financing Agreements

The Securities Financing Agreements table presents securities financing agreements included on the Consolidated Balance Sheet in federal funds sold and securities borrowed or purchased under agreements to resell, and in federal funds purchased and securities loaned or sold under agreements to repurchase at September 30, 2022 and December 31, 2021. Balances are presented on a gross basis, prior to the application of counterparty netting. Gross assets and liabilities are adjusted on an aggregate basis to take into consideration the effects of legally enforceable master netting agreements. For more information on the offsetting of derivatives, see *Note 3 – Derivatives*. For more information on the securities financing agreements and the offsetting of securities financing transactions, see *Note 10 – Securities Financing Agreements, Short-term Borrowings and Restricted Cash* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

Securities Financing Agreements

	Gross Assets/ Liabilities ⁽¹⁾	Amounts Offset	Net Balance Sheet Amount	Financial Instruments ⁽²⁾	Net Assets/ Liabilities
(Dollars in millions)					
September 30, 2022					
Securities borrowed or purchased under agreements to resell ⁽³⁾	\$ 550,757	\$ (275,510)	\$ 275,247	\$ (251,549)	\$ 23,698
Securities loaned or sold under agreements to repurchase	\$ 491,137	\$ (275,510)	\$ 215,627	\$ (201,129)	\$ 14,498
Other ⁽⁴⁾	6,564	—	6,564	(6,564)	—
Total	\$ 497,701	\$ (275,510)	\$ 222,191	\$ (207,693)	\$ 14,498
December 31, 2021					
Securities borrowed or purchased under agreements to resell ⁽³⁾	\$ 527,054	\$ (276,334)	\$ 250,720	\$ (229,525)	\$ 21,195
Securities loaned or sold under agreements to repurchase	\$ 468,663	\$ (276,334)	\$ 192,329	\$ (181,860)	\$ 10,469
Other ⁽⁴⁾	11,391	—	11,391	(11,391)	—
Total	\$ 480,054	\$ (276,334)	\$ 203,720	\$ (193,251)	\$ 10,469

⁽¹⁾ Includes activity where uncertainty exists as to the enforceability of certain master netting agreements under bankruptcy laws in some countries or industries.

⁽²⁾ Includes securities collateral received or pledged under repurchase or securities lending agreements where there is a legally enforceable master netting agreement. These amounts are not offset on the Consolidated Balance Sheet, but are shown as a reduction to derive a net asset or liability. Securities collateral received or pledged where the legal enforceability of the master netting agreements is uncertain is excluded from the table.

⁽³⁾ Excludes repurchase activity of \$9.2 billion and \$20.1 billion reported in loans and leases on the Consolidated Balance Sheet at September 30, 2022 and December 31, 2021.

⁽⁴⁾ Balance is reported in accrued expenses and other liabilities on the Consolidated Balance Sheet and relates to transactions where the Corporation acts as the lender in a securities lending agreement and receives securities that can be pledged as collateral or sold. In these transactions, the Corporation recognizes an asset at fair value, representing the securities received, and a liability, representing the obligation to return those securities.

Repurchase Agreements and Securities Loaned Transactions Accounted for as Secured Borrowings

The following tables present securities sold under agreements to repurchase and securities loaned by remaining contractual term to maturity and class of collateral pledged. Included in "Other" are transactions where the Corporation acts as the lender in a securities lending agreement and receives securities that can be pledged as collateral or sold. Certain agreements

contain a right to substitute collateral and/or terminate the agreement prior to maturity at the option of the Corporation or the counterparty. Such agreements are included in the table below based on the remaining contractual term to maturity. For more information on collateral requirements, see *Note 10 – Securities Financing Agreements, Short-term Borrowings and Restricted Cash* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

Remaining Contractual Maturity

	Overnight and Continuous	30 Days or Less	After 30 Days Through 90 Days	Greater than 90 Days ⁽¹⁾	Total
(Dollars in millions)					
September 30, 2022					
Securities sold under agreements to repurchase	\$ 200,049	\$ 150,817	\$ 38,774	\$ 32,748	\$ 422,388
Securities loaned	63,666	417	627	4,039	68,749
Other	6,564	—	—	—	6,564
Total	\$ 270,279	\$ 151,234	\$ 39,401	\$ 36,787	\$ 497,701
December 31, 2021					
Securities sold under agreements to repurchase	\$ 148,023	\$ 194,964	\$ 36,939	\$ 36,501	\$ 416,427
Securities loaned	46,231	466	1,428	4,111	52,236
Other	11,391	—	—	—	11,391
Total	\$ 205,645	\$ 195,430	\$ 38,367	\$ 40,612	\$ 480,054

⁽¹⁾ No agreements have maturities greater than three years.

Class of Collateral Pledged

	Securities Sold Under Agreements to Repurchase	Securities Loaned	Other	Total
(Dollars in millions)	September 30, 2022			
U.S. government and agency securities	\$ 206,265	\$ —	\$ —	\$ 206,265
Corporate securities, trading loans and other	13,544	1,939	245	15,728
Equity securities	6,338	66,727	6,319	79,384
Non-U.S. sovereign debt	194,281	83	—	194,364
Mortgage trading loans and ABS	1,960	—	—	1,960
Total	\$ 422,388	\$ 68,749	\$ 6,564	\$ 497,701
	December 31, 2021			
U.S. government and agency securities	\$ 201,546	\$ 27	\$ —	\$ 201,573
Corporate securities, trading loans and other	12,838	3,440	1,148	17,426
Equity securities	19,907	48,650	10,192	78,749
Non-U.S. sovereign debt	178,019	119	51	178,189
Mortgage trading loans and ABS	4,117	—	—	4,117
Total	\$ 416,427	\$ 52,236	\$ 11,391	\$ 480,054

Collateral

The Corporation accepts securities and loans as collateral that it is permitted by contract or practice to sell or repledge. At September 30, 2022 and December 31, 2021, the fair value of this collateral was \$774.4 billion and \$854.8 billion, of which \$712.4 billion and \$782.7 billion were sold or repledged. The primary source of this collateral is securities borrowed or purchased under agreements to resell. For more information on collateral, see *Note 1 – Summary of Significant Accounting Principles* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

Restricted Cash

At September 30, 2022 and December 31, 2021, the Corporation held restricted cash included within cash and cash equivalents on the Consolidated Balance Sheet of \$6.6 billion and \$5.9 billion, predominantly related to cash segregated in compliance with securities regulations and cash held on deposit with central banks to meet reserve requirements.

NOTE 10 Commitments and Contingencies

In the normal course of business, the Corporation enters into a number of off-balance sheet commitments. These commitments expose the Corporation to varying degrees of credit and market risk and are subject to the same credit and market risk limitation reviews as those instruments recorded on the Consolidated Balance Sheet. For more information on commitments and contingencies, see *Note 12 – Commitments and Contingencies* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

Credit Extension Commitments

The Corporation enters into commitments to extend credit such as loan commitments, standby letters of credit (SBLCs) and commercial letters of credit to meet the financing needs of its customers. The following table 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 \$10.4 billion and \$10.7 billion at September 30, 2022 and December 31, 2021. The carrying value of the Corporation's credit extension commitments at both September 30, 2022 and December 31, 2021, excluding commitments accounted for under the fair value option, were \$1.5 billion, which predominantly related to the reserve for unfunded lending commitments. The carrying value of these commitments is classified in accrued expenses and other liabilities on the Consolidated Balance Sheet.

Legally binding commitments to extend credit generally have specified rates and maturities. Certain of these commitments have adverse change clauses that help to protect the Corporation against deterioration in the borrower's ability to pay.

The following table includes the notional amount of commitments of \$3.5 billion and \$4.8 billion at September 30, 2022 and December 31, 2021 that are accounted for under the fair value option. However, the table excludes the cumulative net fair value for these commitments of \$200 million and \$97 million at September 30, 2022 and December 31, 2021, which is classified in accrued expenses and other liabilities. For more information regarding the Corporation's loan commitments accounted for under the fair value option, see *Note 15 – Fair Value Option*.

Credit Extension Commitments

	Expire in One Year or Less	Expire After One Year Through Three Years	Expire After Three Years Through Five Years	Expire After Five Years	Total
(Dollars in millions)					
Notional amount of credit extension commitments					
September 30, 2022					
Loan commitments ⁽¹⁾	\$ 108,780	\$ 159,380	\$ 210,765	\$ 20,174	\$ 499,099
Home equity lines of credit	1,285	6,643	11,310	22,120	41,358
Standby letters of credit and financial guarantees ⁽²⁾	23,186	10,561	2,762	449	36,958
Letters of credit	946	70	37	49	1,102
Other commitments ⁽³⁾	25	65	43	1,161	1,294
Legally binding commitments	134,222	176,719	224,917	43,953	579,811
Credit card lines ⁽⁴⁾	426,749	—	—	—	426,749
Total credit extension commitments	\$ 560,971	\$ 176,719	\$ 224,917	\$ 43,953	\$ 1,006,560
December 31, 2021					
Notional amount of credit extension commitments					
Loan commitments ⁽¹⁾	\$ 102,464	\$ 190,687	\$ 174,978	\$ 26,635	\$ 494,764
Home equity lines of credit	890	5,097	10,268	24,276	40,531
Standby letters of credit and financial guarantees ⁽²⁾	22,359	10,742	2,017	422	35,540
Letters of credit	1,145	124	56	98	1,423
Other commitments ⁽³⁾	18	59	81	1,233	1,391
Legally binding commitments	126,876	206,709	187,400	52,664	573,649
Credit card lines ⁽⁴⁾	406,169	—	—	—	406,169
Total credit extension commitments	\$ 533,045	\$ 206,709	\$ 187,400	\$ 52,664	\$ 979,818

⁽¹⁾ At September 30, 2022 and December 31, 2021, \$3.2 billion and \$4.6 billion of these loan commitments were held in the form of a security.

⁽²⁾ The notional amounts of SBLCs and financial guarantees classified as investment grade and non-investment grade based on the credit quality of the underlying reference name within the instrument were \$26.4 billion and \$10.1 billion at September 30, 2022, and \$26.3 billion and \$8.7 billion at December 31, 2021. Amounts in the table include consumer SBLCs of \$534 million and \$512 million at September 30, 2022 and December 31, 2021.

⁽³⁾ Primarily includes second-loss positions on lease-end residual value guarantees.

⁽⁴⁾ Includes business card unused lines of credit.

Other Commitments

At September 30, 2022 and December 31, 2021, the Corporation had commitments to purchase loans (e.g., residential mortgage and commercial real estate) of \$655 million and \$181 million, which upon settlement will be included in trading account assets, loans or LHFS, and commitments to purchase commercial loans of \$395 million and \$518 million, which upon settlement will be included in trading account assets.

At September 30, 2022 and December 31, 2021, the Corporation had commitments to purchase commodities, primarily liquefied natural gas, of \$253 million and \$949 million, which upon settlement will be included in trading account assets.

At September 30, 2022 and December 31, 2021, the Corporation had commitments to enter into resale and forward-dated resale and securities borrowing agreements of \$89.5 billion and \$92.0 billion, and commitments to enter into forward-dated repurchase and securities lending agreements of \$70.1 billion and \$32.6 billion. These commitments generally expire within the next 12 months.

At September 30, 2022 and December 31, 2021, the Corporation had a commitment to originate or purchase up to \$3.7 billion and \$4.0 billion on a rolling 12-month basis, of auto loans and leases from a strategic partner. This commitment extends through November 2026 and can be terminated with 12 months prior notice.

At September 30, 2022 and December 31, 2021, the Corporation had unfunded equity investment commitments of \$720 million and \$395 million.

Other Guarantees

Bank-owned Life Insurance Book Value Protection

The Corporation sells products that offer book value protection to insurance carriers who offer group life insurance policies to

corporations, primarily banks. At September 30, 2022 and December 31, 2021, the notional amount of these guarantees totaled \$4.4 billion and \$6.3 billion. At September 30, 2022 and December 31, 2021, the Corporation's maximum exposure related to these guarantees totaled \$650 million and \$928 million, with estimated maturity dates between 2033 and 2039.

Merchant Services

The Corporation in its role as merchant acquirer or as a sponsor of other merchant acquirers may be held liable for any reversed charges that cannot be collected from the merchants, due to, among other things, merchant fraud or insolvency. If charges are properly reversed after a purchase and cannot be collected from either the merchants or merchant acquirers, the Corporation may be held liable for these reversed charges. The ability to reverse a charge is primarily governed by the applicable payment network rules and regulations, which include, but are not limited to, the type of charge, type of payment used and time limits. The total amount of transactions subject to reversal under payment network rules and regulations processed for the preceding six-month period, which was approximately \$509 billion, is an estimate of the Corporation's maximum potential exposure as of September 30, 2022. The Corporation's risk in this area primarily relates to circumstances where a cardholder has purchased goods or services for future delivery. The Corporation mitigates this risk by requiring cash deposits, guarantees, letters of credit or other types of collateral from certain merchants. The Corporation's reserves for contingent losses and the losses incurred related to the merchant processing activity were not significant.

Representations and Warranties Obligations and Corporate Guarantees

For more information on representations and warranties obligations and corporate guarantees, see *Note 12 – Commitments and Contingencies* to the Consolidated Financial

Statements of the Corporation's 2021 Annual Report on Form 10-K.

The reserve for representations and warranties obligations and corporate guarantees was \$1.0 billion and \$1.2 billion at September 30, 2022 and December 31, 2021 and is included in accrued expenses and other liabilities on the Consolidated Balance Sheet, and the related provision is included in other income in the Consolidated Statement of Income. The representations and warranties reserve represents the Corporation's best estimate of probable incurred losses, is based on its experience in previous negotiations, and is subject to judgment, a variety of assumptions, and known or unknown uncertainties. Future representations and warranties losses may occur in excess of the amounts recorded for these exposures; however, the Corporation does not expect such amounts to be material to the Corporation's financial condition and liquidity. See *Litigation and Regulatory Matters* below for the Corporation's combined range of possible loss in excess of the reserve for representations and warranties and the accrued liability for litigation.

Fixed Income Clearing Corporation Sponsored Member Repo Program

The Corporation acts as a sponsoring member in a repo program whereby the Corporation clears certain eligible resale and repurchase agreements through the Government Securities Division of the Fixed Income Clearing Corporation on behalf of clients that are sponsored members in accordance with the Fixed Income Clearing Corporation's rules. As part of this program, the Corporation guarantees the payment and performance of its sponsored members to the Fixed Income Clearing Corporation. The Corporation's guarantee obligation is secured by a security interest in cash or high-quality securities collateral placed by clients with the clearinghouse and therefore, the potential for the Corporation to incur significant losses under this arrangement is remote. The Corporation's maximum potential exposure, without taking into consideration the related collateral, was \$38.6 billion and \$42.0 billion at September 30, 2022 and December 31, 2021.

Other Guarantees

In the normal course of business, the Corporation periodically guarantees the obligations of its affiliates in a variety of transactions including ISDA-related transactions and non-ISDA related transactions such as commodities trading, repurchase agreements, prime brokerage agreements and other transactions.

Guarantees of Certain Long-term Debt

The Corporation, as the parent company, fully and unconditionally guarantees the securities issued by BofA Finance LLC, a consolidated finance subsidiary of the Corporation, and effectively provides for the full and unconditional guarantee of trust securities issued by certain statutory trust companies that are 100 percent owned finance subsidiaries of the Corporation.

Litigation and Regulatory Matters

The following disclosures supplement the disclosure in *Note 12 – Commitments and Contingencies* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K (the prior commitments and contingencies disclosure).

In the ordinary course of business, the Corporation and its subsidiaries are routinely defendants in or parties to many pending and threatened legal, regulatory and governmental actions and proceedings. In view of the inherent difficulty of predicting the outcome of such matters, particularly where the claimants seek very large or indeterminate damages or where the matters present novel legal theories or involve a large number of parties, the Corporation generally cannot predict the eventual outcome of the pending matters, timing of the ultimate resolution of these matters, or eventual loss, fines or penalties related to each pending matter.

As a matter develops, the Corporation, in conjunction with any outside counsel handling the matter, evaluates whether such matter presents a loss contingency that is probable and estimable, and, for the matters below and the matters disclosed in the prior commitments and contingencies disclosure, whether a loss in excess of any accrued liability is reasonably possible in future periods. Once the loss contingency is deemed to be both probable and estimable, the Corporation will establish an accrued liability and record a corresponding amount of litigation-related expense. The Corporation continues to monitor the matter for further developments that could affect the amount of the accrued liability that has been previously established. Excluding expenses of internal and external legal service providers, litigation-related expense of \$507 million and \$1.1 billion was recognized for the three and nine months ended September 30, 2022 compared to \$66 million and \$155 million for the same periods in 2021.

For any matter disclosed in this Note and in the prior commitments and contingencies disclosure for which a loss in future periods is reasonably possible and estimable (whether in excess of an accrued liability or where there is no accrued liability) and for representations and warranties exposures, the Corporation's estimated range of possible loss is \$0 to \$0.7 billion in excess of the accrued liability, if any, as of September 30, 2022.

The accrued liability and estimated range of possible loss are based upon currently available information and subject to significant judgment, a variety of assumptions and known and unknown uncertainties. The matters underlying the accrued liability and estimated range of possible loss are unpredictable and may change from time to time, and actual losses may vary significantly from the current estimate and accrual. The estimated range of possible loss does not represent the Corporation's maximum loss exposure.

Information is provided below and in the prior commitments and contingencies disclosure regarding the nature of the litigation and, where specified, associated claimed damages. Based on current knowledge, and taking into account accrued liabilities, management does not believe that loss contingencies arising from pending matters, including the matters described below and in the prior commitments and contingencies disclosure, will have a material adverse effect on the consolidated financial condition or liquidity of the Corporation. However, in light of the significant judgment, variety of assumptions and uncertainties involved in those matters, some of which are beyond the Corporation's control, and the very large or indeterminate damages sought in some of those matters, an adverse outcome in one or more of those matters could be material to the Corporation's business or results of operations for any particular reporting period, or cause significant reputational harm.

Ambac Bond Insurance Litigation

Ambac v. Countrywide I

Ambac v. Countrywide II

Ambac v. First Franklin

On October 6, 2022, the Corporation and certain wholly owned subsidiaries entered into an agreement with Ambac Assurance Corporation (together with its subsidiaries, "Ambac") to resolve the above referenced matters. Under the terms of the agreement, in exchange for the Corporation's payment of \$1.84 billion, Ambac, among other things, caused these matters to be dismissed with prejudice, and released the Corporation and its subsidiaries from all outstanding claims related to Ambac's issuance of bond insurance policies for certain of the Corporation's and legacy entities' securitized pools of residential mortgage loans.

Prepaid Debit Card Investigations

On July 14, 2022, BANA agreed to settle two separate proceedings with the Office of the Comptroller of the Currency (OCC) and Consumer Financial Protection Bureau (CFPB) related to BANA's administration of prepaid debit cards to distribute unemployment benefits. The orders found that BANA's fraud prevention measures and resolution of potentially unauthorized transactions improperly delayed or denied access by certain cardholders to account funds. Without admitting or denying the findings, BANA consented to orders requiring it to improve its processes, review accounts and compensate cardholders, and pay penalties of \$125 million and \$100 million to the OCC and CFPB, respectively. The Corporation continues to defend civil litigation, including putative class actions, concerning BANA's administration of these prepaid debit card programs.

Record-keeping Investigations

Certain of the Corporation's U.S. subsidiaries have been cooperating with investigations by the SEC and U.S. Commodity Futures Trading Commission (CFTC) regarding compliance by financial institutions with record-keeping obligations for broker-dealers, investment advisors, swap dealers and futures commission merchants pertaining to business-related electronic communications sent over unapproved electronic messaging channels. On September 27, 2022, these subsidiaries entered into resolutions with the SEC and CFTC to resolve their respective civil investigations. The SEC and CFTC found that BofA Securities, Inc. and Merrill Lynch, Pierce Fenner & Smith

Incorporated did not maintain copies of certain communications required to be maintained under their respective record-keeping rules, where such communications were sent or received by employees over electronic messaging channels that had not been approved for employee use. The CFTC resolution also includes BANA. The SEC and CFTC also found related supervision failures. Under these resolutions, a \$125 million civil monetary penalty was paid to the SEC, and a \$100 million civil monetary penalty was paid to the CFTC.

NOTE 11 Shareholders' Equity Common Stock

Declared Quarterly Cash Dividends on Common Stock ⁽¹⁾

Declaration Date	Record Date	Payment Date	Dividend Per Share
October 19, 2022	December 2, 2022	December 30, 2022	\$ 0.22
July 20, 2022	September 2, 2022	September 30, 2022	0.22
April 27, 2022	June 3, 2022	June 24, 2022	0.21
February 2, 2022	March 4, 2022	March 25, 2022	0.21

⁽¹⁾ In 2022, and through October 28, 2022.

On October 19 2022, the Board of Directors declared a quarterly common stock dividend of \$0.22 per share.

During the three and nine months ended September 30, 2022, the Corporation repurchased and retired 13 million and 98 million shares of common stock, which reduced shareholders' equity by \$450 million and \$4.1 billion.

During the nine months ended September 30, 2022, in connection with employee stock plans, the Corporation issued 73 million shares of its common stock and, to satisfy tax withholding obligations, repurchased 28 million shares of its common stock.

Preferred Stock

During the three months ended September 30, 2022, June 30, 2022 and March 31, 2022 the Corporation declared \$503 million, \$315 million and \$467 million of cash dividends on preferred stock, or a total of \$1.3 billion for the nine months ended September 30, 2022. For more information on the Corporation's preferred stock, including liquidation preference, dividend requirements and redemption period, see *Note 13 – Shareholders' Equity* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

NOTE 12 Accumulated Other Comprehensive Income (Loss)

The table below presents the changes in accumulated OCI after-tax for the nine months ended September 30, 2022 and 2021.

(Dollars in millions)	Debt Securities	Debit Valuation Adjustments	Derivatives	Employee Benefit Plans	Foreign Currency	Total
Balance, December 31, 2020	\$ 5,122	\$ (1,992)	\$ 426	\$ (4,266)	\$ (946)	\$ (1,656)
Net change	(1,243)	292	(1,130)	170	(29)	(1,940)
Balance, September 30, 2021	\$ 3,879	\$ (1,700)	\$ (704)	\$ (4,096)	\$ (975)	\$ (3,596)
Balance, December 31, 2021	\$ 3,045	\$ (1,636)	\$ (1,880)	\$ (3,642)	\$ (991)	\$ (5,104)
Net change	(6,381)	1,298	(10,890)	97	(47)	(15,923)
Balance, September 30, 2022	\$ (3,336)	\$ (338)	\$ (12,770)	\$ (3,545)	\$ (1,038)	\$ (21,027)

The table below presents the net change in fair value recorded in accumulated OCI, net realized gains and losses reclassified into earnings and other changes for each component of OCI pre- and after-tax for the nine months ended September 30, 2022 and 2021.

	Pretax	Tax effect	After-tax	Pretax	Tax effect	After-tax
	Nine Months Ended September 30					
	2022			2021		
(Dollars in millions)						
Debt securities:						
Net increase (decrease) in fair value	\$ (8,417)	\$ 2,064	\$ (6,353)	\$ (1,650)	\$ 410	\$ (1,240)
Net realized (gains) losses reclassified into earnings ⁽¹⁾	(37)	9	(28)	(4)	1	(3)
Net change	(8,454)	2,073	(6,381)	(1,654)	411	(1,243)
Debit valuation adjustments:						
Net increase (decrease) in fair value	1,698	(411)	1,287	365	(82)	283
Net realized (gains) losses reclassified into earnings ⁽¹⁾	14	(3)	11	12	(3)	9
Net change	1,712	(414)	1,298	377	(85)	292
Derivatives:						
Net increase (decrease) in fair value	(14,681)	3,673	(11,008)	(1,339)	334	(1,005)
Reclassifications into earnings:						
Net interest income	182	(46)	136	(125)	30	(95)
Compensation and benefits expense	(24)	6	(18)	(40)	10	(30)
Net realized (gains) losses reclassified into earnings	158	(40)	118	(165)	40	(125)
Net change	(14,523)	3,633	(10,890)	(1,504)	374	(1,130)
Employee benefit plans:						
Net actuarial losses and other reclassified into earnings ⁽²⁾	135	(38)	97	209	(39)	170
Net change	135	(38)	97	209	(39)	170
Foreign currency:						
Net increase (decrease) in fair value	726	(774)	(48)	240	(269)	(29)
Net realized (gains) losses reclassified into earnings ⁽¹⁾	—	1	1	—	—	—
Net change	726	(773)	(47)	240	(269)	(29)
Total other comprehensive income (loss)	\$(20,404)	\$ 4,481	\$(15,923)	\$ (2,332)	\$ 392	\$ (1,940)

⁽¹⁾ Reclassifications of pretax debt securities, DVA and foreign currency (gains) losses are recorded in other income in the Consolidated Statement of Income.

⁽²⁾ Reclassifications of pretax employee benefit plan costs are recorded in other general operating expense in the Consolidated Statement of Income.

NOTE 13 Earnings Per Common Share

The calculation of earnings per common share (EPS) and diluted EPS for the three and nine months ended September 30, 2022 and 2021 is presented below. For more information on the calculation of EPS, see *Note 1 – Summary of Significant Accounting Principles* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
(In millions, except per share information)				
Earnings per common share				
Net income	\$ 7,082	\$ 7,691	\$ 20,396	\$ 24,965
Preferred stock dividends	(503)	(431)	(1,285)	(1,181)
Net income applicable to common shareholders	\$ 6,579	\$ 7,260	\$ 19,111	\$ 23,784
Average common shares issued and outstanding	8,107.7	8,430.7	8,122.2	8,583.1
Earnings per common share	\$ 0.81	\$ 0.86	\$ 2.35	\$ 2.77
Diluted earnings per common share				
Net income applicable to common shareholders	\$ 6,579	\$ 7,260	\$ 19,111	\$ 23,784
Add preferred stock dividends due to assumed conversions	—	—	—	168
Net income allocated to common shareholders	\$ 6,579	\$ 7,260	\$ 19,111	\$ 23,952
Average common shares issued and outstanding	8,107.7	8,430.7	8,122.2	8,583.1
Dilutive potential common shares ⁽¹⁾	53.1	62.1	51.1	119.1
Total diluted average common shares issued and outstanding	8,160.8	8,492.8	8,173.3	8,702.2
Diluted earnings per common share	\$ 0.81	\$ 0.85	\$ 2.34	\$ 2.75

⁽¹⁾ Includes incremental dilutive shares from preferred stock, restricted stock units, restricted stock and warrants.

For both the three and nine months ended September 30, 2022, and the three months ended September 30, 2021, 62 million average dilutive potential common shares associated with the Series L preferred stock were antidilutive, whereas they were included in the diluted share count under the "if-converted" method for the nine months ended September 30, 2021.

NOTE 14 Fair Value Measurements

Under applicable accounting standards, fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly

transaction between market participants on the measurement date. The Corporation determines the fair values of its financial instruments under applicable accounting standards and conducts a review of fair value hierarchy classifications on a quarterly basis. Transfers into or out of fair value hierarchy classifications are made if the significant inputs used in the financial models measuring the fair values of the assets and liabilities become unobservable or observable in the current marketplace. During the nine months ended September 30, 2022, there were no changes to valuation approaches or techniques that had, or are expected to have, a material impact

on the Corporation's consolidated financial position or results of operations.

For more information regarding the fair value hierarchy, how the Corporation measures fair value and valuation techniques, see *Note 1 – Summary of Significant Accounting Principles* and *Note 20 – Fair Value Measurements* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K. The Corporation accounts for certain financial

instruments under the fair value option. For more information, see *Note 15 – Fair Value Option*.

Recurring Fair Value

Assets and liabilities carried at fair value on a recurring basis at September 30, 2022 and December 31, 2021, including financial instruments that the Corporation accounts for under the fair value option, are summarized in the following tables.

	September 30, 2022					
	Fair Value Measurements					
(Dollars in millions)	Level 1	Level 2	Level 3	Netting Adjustments ⁽¹⁾	Assets/Liabilities at Fair Value	
Assets						
Time deposits placed and other short-term investments	\$ 682	\$ —	\$ —	\$ —	\$ 682	
Federal funds sold and securities borrowed or purchased under agreements to resell	—	165,521	—	—	165,521	
Trading account assets:						
U.S. Treasury and government agencies	62,200	501	—	—	62,701	
Corporate securities, trading loans and other	—	44,931	2,349	—	47,280	
Equity securities	82,645	28,537	171	—	111,353	
Non-U.S. sovereign debt	11,613	22,537	485	—	34,635	
Mortgage trading loans, MBS and ABS:						
U.S. government-sponsored agency guaranteed	—	26,743	50	—	26,793	
Mortgage trading loans, ABS and other MBS	—	9,283	1,413	—	10,696	
Total trading account assets ⁽²⁾	156,458	132,532	4,468	—	293,458	
Derivative assets	20,236	453,548	3,286	(405,114)	71,956	
AFS debt securities:						
U.S. Treasury and government agencies	166,691	922	—	—	167,613	
Mortgage-backed securities:						
Agency	—	23,604	—	—	23,604	
Agency-collateralized mortgage obligations	—	2,369	—	—	2,369	
Non-agency residential	—	134	266	—	400	
Commercial	—	5,773	—	—	5,773	
Non-U.S. securities	7	10,579	417	—	11,003	
Other taxable securities	—	3,405	—	—	3,405	
Tax-exempt securities	—	12,120	52	—	12,172	
Total AFS debt securities	166,698	58,906	735	—	226,339	
Other debt securities carried at fair value:						
U.S. Treasury and government agencies	520	—	—	—	520	
Non-agency residential MBS	—	286	100	—	386	
Non-U.S. and other securities	3,656	5,344	—	—	9,000	
Total other debt securities carried at fair value	4,176	5,630	100	—	9,906	
Loans and leases	—	4,654	197	—	4,851	
Loans held-for-sale	—	2,123	272	—	2,395	
Other assets ⁽³⁾	4,660	861	1,805	—	7,326	
Total assets ⁽⁴⁾	\$ 352,910	\$ 823,775	\$ 10,863	\$ (405,114)	\$ 782,434	
Liabilities						
Interest-bearing deposits in U.S. offices	\$ —	\$ 453	\$ —	\$ —	\$ 453	
Federal funds purchased and securities loaned or sold under agreements to repurchase	—	165,390	—	—	165,390	
Trading account liabilities:						
U.S. Treasury and government agencies	16,495	419	—	—	16,914	
Equity securities	35,187	5,873	—	—	41,060	
Non-U.S. sovereign debt	11,283	8,086	—	—	19,369	
Corporate securities and other	—	7,412	13	—	7,425	
Total trading account liabilities	62,965	21,790	13	—	84,768	
Derivative liabilities	19,609	434,324	5,503	(409,280)	50,156	
Short-term borrowings	—	1,987	6	—	1,993	
Accrued expenses and other liabilities	5,652	1,049	63	—	6,764	
Long-term debt	—	26,738	793	—	27,531	
Total liabilities ⁽⁴⁾	\$ 88,226	\$ 651,731	\$ 6,378	\$ (409,280)	\$ 337,055	

⁽¹⁾ Amounts represent the impact of legally enforceable master netting agreements and also cash collateral held or placed with the same counterparties.

⁽²⁾ Includes securities with a fair value of \$17.7 billion that were segregated in compliance with securities regulations or deposited with clearing organizations. This amount is included in the parenthetical disclosure on the Consolidated Balance Sheet. Trading account assets also includes certain commodities inventory of \$918 million that is accounted for at the lower of cost or net realizable value, which is the current selling price less any costs to sell.

⁽³⁾ Includes MSRs of \$1.0 billion, which are classified as Level 3 assets.

⁽⁴⁾ Total recurring Level 3 assets were 0.35 percent of total consolidated assets, and total recurring Level 3 liabilities were 0.23 percent of total consolidated liabilities.

December 31, 2021

	Fair Value Measurements				
(Dollars in millions)	Level 1	Level 2	Level 3	Netting Adjustments ⁽¹⁾	Assets/Liabilities at Fair Value
Assets					
Time deposits placed and other short-term investments	\$ 707	\$ —	\$ —	\$ —	\$ 707
Federal funds sold and securities borrowed or purchased under agreements to resell	—	150,665	—	—	150,665
Trading account assets:					
U.S. Treasury and government agencies	44,599	803	—	—	45,402
Corporate securities, trading loans and other	—	31,601	2,110	—	33,711
Equity securities	61,425	38,383	190	—	99,998
Non-U.S. sovereign debt	3,822	25,612	396	—	29,830
Mortgage trading loans, MBS and ABS:					
U.S. government-sponsored agency guaranteed	—	25,645	109	—	25,754
Mortgage trading loans, ABS and other MBS	—	10,967	1,418	—	12,385
Total trading account assets ⁽²⁾	109,846	133,011	4,223	—	247,080
Derivative assets	34,748	310,581	3,133	(313,118)	35,344
AFS debt securities:					
U.S. Treasury and government agencies	198,071	1,074	—	—	199,145
Mortgage-backed securities:					
Agency	—	46,339	—	—	46,339
Agency-collateralized mortgage obligations	—	3,380	—	—	3,380
Non-agency residential	—	267	316	—	583
Commercial	—	19,604	—	—	19,604
Non-U.S. securities	—	11,933	—	—	11,933
Other taxable securities	—	2,690	71	—	2,761
Tax-exempt securities	—	15,381	52	—	15,433
Total AFS debt securities	198,071	100,668	439	—	299,178
Other debt securities carried at fair value:					
U.S. Treasury and government agencies	575	—	—	—	575
Non-agency residential MBS	—	343	242	—	585
Non-U.S. and other securities	2,580	5,155	—	—	7,735
Total other debt securities carried at fair value	3,155	5,498	242	—	8,895
Loans and leases	—	7,071	748	—	7,819
Loans held-for-sale	—	4,138	317	—	4,455
Other assets ⁽³⁾	7,657	2,915	1,572	—	12,144
Total assets ⁽⁴⁾	\$ 354,184	\$ 714,547	\$ 10,674	\$ (313,118)	\$ 766,287
Liabilities					
Interest-bearing deposits in U.S. offices	\$ —	\$ 408	\$ —	\$ —	\$ 408
Federal funds purchased and securities loaned or sold under agreements to repurchase	—	139,641	—	—	139,641
Trading account liabilities:					
U.S. Treasury and government agencies	19,826	313	—	—	20,139
Equity securities	41,744	6,491	—	—	48,235
Non-U.S. sovereign debt	10,400	13,781	—	—	24,181
Corporate securities and other	—	8,124	11	—	8,135
Total trading account liabilities	71,970	28,709	11	—	100,690
Derivative liabilities	35,282	314,380	5,795	(317,782)	37,675
Short-term borrowings	—	4,279	—	—	4,279
Accrued expenses and other liabilities	8,359	3,130	—	—	11,489
Long-term debt	—	28,633	1,075	—	29,708
Total liabilities ⁽⁴⁾	\$ 115,611	\$ 519,180	\$ 6,881	\$ (317,782)	\$ 323,890

⁽¹⁾ Amounts represent the impact of legally enforceable master netting agreements and also cash collateral held or placed with the same counterparties.

⁽²⁾ Includes securities with a fair value of \$10.6 billion that were segregated in compliance with securities regulations or deposited with clearing organizations. This amount is included in the parenthetical disclosure on the Consolidated Balance Sheet. Trading account assets also includes certain commodities inventory of \$752 million that is accounted for at the lower of cost or net realizable value, which is the current selling price less any costs to sell.

⁽³⁾ Includes MSRs of \$818 million, which are classified as Level 3 assets.

⁽⁴⁾ Total recurring Level 3 assets were 0.34 percent of total consolidated assets, and total recurring Level 3 liabilities were 0.24 percent of total consolidated liabilities.

The following tables present a reconciliation of all assets and liabilities measured at fair value on a recurring basis using significant unobservable inputs (Level 3) during the three and nine months ended September 30, 2022 and 2021, including net realized and unrealized gains (losses) included in earnings and accumulated OCI. Transfers into Level 3 occur primarily due

to decreased price observability, and transfers out of Level 3 occur primarily due to increased price observability. Transfers occur on a regular basis for long-term debt instruments due to changes in the impact of unobservable inputs on the value of the embedded derivative in relation to the instrument as a whole.

Level 3 – Fair Value Measurements ⁽¹⁾

	Balance July 1	Total Realized/ Unrealized Gains (Losses) in Net Income ⁽²⁾	Gains (Losses) in OCI ⁽³⁾	Purchases	Sales	Gross Issuances	Settlements	Gross Transfers into Level 3	Gross Transfers out of Level 3	Balance September 30	Change in Unrealized Gains (Losses) in Net Income Related to Financial Instruments Still Held ⁽²⁾
(Dollars in millions)											
Three Months Ended September 30, 2022											
Trading account assets:											
Corporate securities, trading loans and other	\$ 2,367	\$ (28)	\$ (1)	\$ 176	\$ (144)	\$ —	\$ (300)	\$ 329	\$ (50)	\$ 2,349	\$ (30)
Equity securities	179	(5)	—	13	(7)	—	—	3	(12)	171	(5)
Non-U.S. sovereign debt	470	39	(12)	11	(2)	—	(18)	2	(5)	485	39
Mortgage trading loans, MBS and ABS	1,386	(57)	—	166	(72)	—	(6)	113	(67)	1,463	(47)
Total trading account assets	4,402	(51)	(13)	366	(225)	—	(324)	447	(134)	4,468	(43)
Net derivative assets (liabilities) ⁽⁴⁾	(1,682)	(266)	—	97	(238)	—	49	(62)	(115)	(2,217)	(293)
AFS debt securities:											
Non-agency residential MBS	299	(1)	(11)	—	—	—	(8)	—	(13)	266	(1)
Non-U.S. and other taxable securities	200	2	(3)	—	—	—	(5)	224	(1)	417	(2)
Tax-exempt securities	52	—	—	—	—	—	—	—	—	52	—
Total AFS debt securities	551	1	(14)	—	—	—	(13)	224	(14)	735	(3)
Other debt securities carried at fair value – Non-agency residential MBS	112	(2)	—	—	—	—	(4)	—	(6)	100	(2)
Loans and leases ⁽⁵⁾	256	(1)	—	—	—	—	(58)	—	—	197	(2)
Loans held-for-sale ⁽⁵⁾	345	(27)	(2)	—	—	—	(44)	—	—	272	(27)
Other assets ^(6,7)	1,750	70	(20)	—	(2)	78	(68)	—	(3)	1,805	61
Trading account liabilities – Corporate securities and other											
	(14)	1	—	—	—	—	—	—	—	(13)	—
Short-term borrowings ⁽⁵⁾	—	1	—	—	(4)	—	—	(3)	—	(6)	1
Accrued expenses and other liabilities ⁽⁵⁾	(63)	7	—	(7)	—	—	—	—	—	(63)	7
Long-term debt ⁽⁵⁾	(812)	26	(12)	—	—	—	18	(13)	—	(793)	26
Three Months Ended September 30, 2021											
Trading account assets:											
Corporate securities, trading loans and other	\$ 1,764	\$ (2)	\$ —	\$ 89	\$ (43)	\$ —	\$ (118)	\$ 239	\$ (295)	\$ 1,634	\$ (20)
Equity securities	260	(2)	—	18	(11)	—	—	20	(76)	209	(2)
Non-U.S. sovereign debt	414	4	(26)	16	—	—	(9)	—	—	399	4
Mortgage trading loans, MBS and ABS	1,498	(43)	—	97	(89)	—	(61)	180	(8)	1,574	(41)
Total trading account assets	3,936	(43)	(26)	220	(143)	—	(188)	439	(379)	3,816	(59)
Net derivative assets (liabilities) ⁽⁴⁾	(2,884)	564	—	124	(168)	—	23	173	(157)	(2,325)	512
AFS debt securities:											
Non-agency residential MBS	205	(1)	(2)	—	—	—	(12)	208	—	398	(4)
Non-U.S. and other taxable securities	85	(3)	(1)	—	—	—	2	—	—	83	—
Tax-exempt securities	51	2	—	—	—	—	—	—	—	53	2
Total AFS debt securities	341	(2)	(3)	—	—	—	(10)	208	—	534	(2)
Other debt securities carried at fair value – Non-agency residential MBS	281	(2)	—	—	—	—	(9)	26	—	296	(2)
Loans and leases ⁽⁵⁾	857	(59)	—	—	—	—	(67)	—	(13)	718	(59)
Loans held-for-sale ⁽⁵⁾	263	13	(7)	94	(1)	—	(22)	—	—	340	10
Other assets ^(6,7)	1,775	15	(6)	1	1	51	(95)	2	—	1,744	49
Trading account liabilities – Corporate securities and other											
	(17)	6	—	—	—	—	—	—	—	(11)	(1)
Long-term debt ⁽⁵⁾	(1,060)	(65)	2	—	—	(9)	30	(25)	1	(1,126)	(65)

⁽¹⁾ Assets (liabilities). For assets, increase (decrease) to Level 3 and for liabilities, (increase) decrease to Level 3.

⁽²⁾ Includes gains (losses) reported in earnings in the following income statement line items: Trading account assets/liabilities - predominantly market making and similar activities; Net derivative assets (liabilities) - market making and similar activities and other income; AFS debt securities - other income; Other debt securities carried at fair value - other income; Loans and leases - other income; Loans held-for-sale - other income; Other assets - market making and similar activities and other income related to MSRs; Short-term borrowings - market making and similar activities; Accrued expenses and other liabilities - other income; Long-term debt - market making and similar activities.

⁽³⁾ Includes unrealized gains (losses) in OCI on AFS debt securities, foreign currency translation adjustments and the impact of changes in the Corporation's credit spreads on long-term debt accounted for under the fair value option. Amounts include net unrealized losses of \$60 million and \$38 million related to financial instruments still held at September 30, 2022 and 2021.

⁽⁴⁾ Net derivative assets (liabilities) include derivative assets of \$3.3 billion and \$3.8 billion and derivative liabilities of \$5.5 billion and \$6.2 billion at September 30, 2022 and 2021.

⁽⁵⁾ Amounts represent instruments that are accounted for under the fair value option.

⁽⁶⁾ Issuances represent MSRs recognized following securitizations or whole-loan sales.

⁽⁷⁾ Settlements primarily represent the net change in fair value of the MSR asset due to the recognition of modeled cash flows and the passage of time.

Level 3 – Fair Value Measurements ⁽¹⁾

	Balance January 1	Total Realized/ Unrealized Gains (Losses) in Net Income ⁽²⁾	Gains (Losses) in OCI ⁽³⁾	Gross				Gross Transfers into Level 3	Gross Transfers out of Level 3	Balance September 30	Change in Unrealized Gains (Losses) in Net Income Related to Financial Instruments Still Held ⁽²⁾
				Purchases	Sales	Issuances	Settlements				
(Dollars in millions)											
Nine Months Ended September 30, 2022											
Trading account assets:											
Corporate securities, trading loans and other	\$ 2,110	\$ (97)	\$ (2)	\$ 943	\$ (342)	\$ —	\$ (417)	\$ 849	\$ (695)	\$ 2,349	\$ (141)
Equity securities	190	2	—	41	(22)	—	(4)	29	(65)	171	(20)
Non-U.S. sovereign debt	396	58	8	18	(4)	—	(33)	52	(10)	485	55
Mortgage trading loans, MBS and ABS	1,527	(235)	—	373	(389)	—	(100)	429	(142)	1,463	(124)
Total trading account assets	4,223	(272)	6	1,375	(757)	—	(554)	1,359	(912)	4,468	(230)
Net derivative assets (liabilities) ⁽⁴⁾	(2,662)	1,076	—	222	(589)	—	393	(241)	(416)	(2,217)	701
AFS debt securities:											
Non-agency residential MBS	316	1	(33)	—	(8)	—	(71)	74	(13)	266	1
Non-U.S. and other taxable securities	71	5	(12)	126	—	—	(14)	311	(70)	417	1
Tax-exempt securities	52	—	—	—	—	—	—	—	—	52	(1)
Total AFS debt securities	439	6	(45)	126	(8)	—	(85)	385	(83)	735	1
Other debt securities carried at fair value – Non-											
agency residential MBS	242	(42)	—	—	—	—	(77)	—	(23)	100	(7)
Loans and leases ⁽⁵⁾	748	(42)	—	—	(154)	—	(106)	—	(249)	197	(20)
Loans held-for-sale ⁽⁵⁾	317	(3)	3	170	(6)	—	(217)	8	—	272	(11)
Other assets ^(6,7)	1,572	296	(25)	—	(1)	163	(201)	4	(3)	1,805	152
Trading account liabilities – Corporate securities											
and other	(11)	—	—	—	—	—	(2)	—	—	(13)	—
Short-term borrowings ⁽⁵⁾	—	1	—	—	(4)	—	—	(3)	—	(6)	1
Accrued expenses and other liabilities ⁽⁵⁾	—	(56)	—	(7)	—	—	—	—	—	(63)	(33)
Long-term debt ⁽⁵⁾	(1,075)	(96)	67	—	14	(1)	35	(19)	282	(793)	(102)

Nine Months Ended September 30, 2021

Trading account assets:											
Corporate securities, trading loans and other	\$ 1,359	\$ 23	\$ —	\$ 515	\$ (300)	\$ —	\$ (251)	\$ 697	\$ (409)	\$ 1,634	\$ (42)
Equity securities	227	20	—	71	(60)	—	—	98	(147)	209	(17)
Non-U.S. sovereign debt	354	24	(14)	18	—	—	(9)	26	—	399	27
Mortgage trading loans, MBS and ABS	1,440	(4)	—	344	(584)	1	(125)	624	(122)	1,574	(65)
Total trading account assets	3,380	63	(14)	948	(944)	1	(385)	1,445	(678)	3,816	(97)
Net derivative assets (liabilities) ⁽⁴⁾	(3,468)	855	—	473	(517)	—	206	(18)	144	(2,325)	579
AFS debt securities:											
Non-agency residential MBS	378	(16)	(96)	—	—	—	(37)	244	(75)	398	(7)
Non-U.S. and other taxable securities	89	(4)	(6)	8	—	—	(4)	—	—	83	—
Tax-exempt securities	176	19	—	—	—	—	—	—	(142)	53	18
Total AFS debt securities	643	(1)	(102)	8	—	—	(41)	244	(217)	534	11
Other debt securities carried at fair value – Non-											
agency residential MBS	267	—	—	—	—	—	(29)	58	—	296	—
Loans and leases ⁽⁵⁾	717	45	—	—	—	70	(147)	46	(13)	718	52
Loans held-for-sale ⁽⁵⁾	236	17	(4)	132	(1)	—	(62)	26	(4)	340	40
Other assets ^(6,7)	1,970	36	2	56	(144)	115	(300)	9	—	1,744	92
Trading account liabilities – Corporate securities											
and other	(16)	6	—	—	—	(1)	—	—	—	(11)	—
Long-term debt ⁽⁵⁾	(1,164)	(83)	4	2	—	(11)	67	(57)	116	(1,126)	(54)

⁽¹⁾ Assets (liabilities). For assets, increase (decrease) to Level 3 and for liabilities, (increase) decrease to Level 3.

⁽²⁾ Includes gains (losses) reported in earnings in the following income statement line items: Trading account assets/liabilities - predominantly market making and similar activities; Net derivative assets (liabilities) - market making and similar activities and other income; AFS debt securities - other income; Other debt securities carried at fair value - other income; Loans and leases - other income; Loans held-for-sale - other income; Other assets - market making and similar activities and other income related to MSRs; Short-term borrowings - market making and similar activities; Accrued expenses and other liabilities - market making and similar activities and other income; Long-term debt - market making and similar activities.

⁽³⁾ Includes unrealized gains (losses) in OCI on AFS debt securities, foreign currency translation adjustments and the impact of changes in the Corporation's credit spreads on long-term debt accounted for under the fair value option. Amounts include net unrealized gains (losses) of \$2 million and \$(45) million related to financial instruments still held at September 30, 2022 and 2021.

⁽⁴⁾ Net derivative assets (liabilities) include derivative assets of \$3.3 billion and \$3.8 billion and derivative liabilities of \$5.5 billion and \$6.2 billion at September 30, 2022 and 2021.

⁽⁵⁾ Amounts represent instruments that are accounted for under the fair value option.

⁽⁶⁾ Issuances represent MSRs recognized following securitizations or whole-loan sales.

⁽⁷⁾ Settlements primarily represent the net change in fair value of the MSR asset due to the recognition of modeled cash flows and the passage of time.

The following tables present information about significant unobservable inputs related to the Corporation's material categories of Level 3 financial assets and liabilities at September 30, 2022 and December 31, 2021.

Quantitative Information about Level 3 Fair Value Measurements at September 30, 2022

(Dollars in millions)

(Dollars in millions)			Inputs		
Financial Instrument	Fair Value	Valuation Technique	Significant Unobservable Inputs	Ranges of Inputs	Weighted Average ⁽¹⁾
Loans and Securities ⁽²⁾					
Instruments backed by residential real estate assets	\$ 787	Discounted cash flow, Market comparables	Yield	0% to 25%	9%
Trading account assets – Mortgage trading loans, MBS and ABS	276		Prepayment speed	0% to 34% CPR	13% CPR
Loans and leases	145		Default rate	0% to 3% CDR	1% CDR
AFS debt securities – Non-agency residential	266		Price	\$0 to \$113	\$28
Other debt securities carried at fair value – Non-agency residential	100		Loss severity	0% to 100%	23%
Instruments backed by commercial real estate assets	\$ 346	Discounted cash flow	Yield	0% to 25%	12%
Trading account assets – Corporate securities, trading loans and other	282		Price	\$0 to \$101	\$75
Trading account assets – Mortgage trading loans, MBS and ABS	64				
Commercial loans, debt securities and other	\$ 4,468	Discounted cash flow, Market comparables	Yield	5% to 69%	16%
Trading account assets – Corporate securities, trading loans and other	2,067		Prepayment speed	10% to 20%	17%
Trading account assets – Non-U.S. sovereign debt	485		Default rate	3% to 4%	4%
Trading account assets – Mortgage trading loans, MBS and ABS	1,123		Loss severity	35% to 40%	37%
AFS debt securities – Tax-exempt securities	52		Price	\$0 to \$158	\$76
AFS debt securities – Non-U.S. and other taxable securities	417				
Loans and leases	52				
Loans held-for-sale	272				
Other assets, primarily auction rate securities	\$ 780	Discounted cash flow, Market comparables	Price	\$10 to \$98	\$95
			Discount rate	11%	n/a
MSRs	\$ 1,025	Discounted cash flow	Weighted-average life, fixed rate ⁽⁵⁾	0 to 14 years	6 years
			Weighted-average life, variable rate ⁽⁵⁾	0 to 11 years	3 years
			Option-adjusted spread, fixed rate	7% to 14%	9%
			Option-adjusted spread, variable rate	9% to 15%	12%
Structured liabilities					
Long-term debt	\$ (793)	Discounted cash flow, Market comparables, Industry standard derivative pricing ⁽³⁾	Yield	20% to 69%	22%
			Equity correlation	0% to 92%	59%
			Price	\$0 to \$127	\$91
			Natural gas forward price	\$3/MMBtu to \$9/MMBtu	\$5 /MMBtu
Net derivative assets (liabilities)					
Credit derivatives	\$ (33)	Discounted cash flow, Stochastic recovery correlation model	Credit spreads	2 to 94 bps	28 bps
			Upfront points	0 to 100 points	78 points
			Prepayment speed	15% CPR	n/a
			Default rate	2% CDR	n/a
			Credit correlation	20% to 55%	38%
			Price	\$0 to \$151	\$61
Equity derivatives	\$ (1,151)	Industry standard derivative pricing ⁽³⁾	Equity correlation	0% to 99%	71%
			Long-dated equity volatilities	5% to 90%	46%
Commodity derivatives	\$ (380)	Discounted cash flow, Industry standard derivative pricing ⁽³⁾	Natural gas forward price	\$3/MMBtu to \$9/MMBtu	\$5 /MMBtu
			Power forward price	\$17 to \$197	\$50
Interest rate derivatives	\$ (653)	Industry standard derivative pricing ⁽⁴⁾	Correlation (IR/IR)	(35)% to 92%	67%
			Correlation (FX/IR)	11% to 58%	42%
			Long-dated inflation rates	(12)% to 51%	1%
			Long-dated inflation volatilities	3% to 7%	5%
			Interest rate volatilities	0% to 2%	1%
Total net derivative assets (liabilities)	\$ (2,217)				

⁽¹⁾ For loans and securities, structured liabilities and net derivative assets (liabilities), the weighted average is calculated based upon the absolute fair value of the instruments.

⁽²⁾ The categories are aggregated based upon product type which differs from financial statement classification. The following is a reconciliation to the line items in the table on page 87: Trading account assets – Corporate securities, trading loans and other of \$2.3 billion, Trading account assets – Non-U.S. sovereign debt of \$485 million, Trading account assets – Mortgage trading loans, MBS and ABS of \$1.5 billion, AFS debt securities of \$735 million, Other debt securities carried at fair value - Non-agency residential of \$100 million, Other assets, including MSRs, of \$1.8 billion, Loans and leases of \$197 million and LHFS of \$272 million.

⁽³⁾ Includes models such as Monte Carlo simulation and Black-Scholes.

⁽⁴⁾ Includes models such as Monte Carlo simulation, Black-Scholes and other methods that model the joint dynamics of interest, inflation and foreign exchange rates.

⁽⁵⁾ The weighted-average life is a product of changes in market rates of interest, prepayment rates and other model and cash flow assumptions.

CPR = Constant Prepayment Rate

CDR = Constant Default Rate

MMBtu = Million British thermal units

IR = Interest Rate

FX = Foreign Exchange

n/a = not applicable

Quantitative Information about Level 3 Fair Value Measurements at December 31, 2021

(Dollars in millions)

(Dollars in millions)			Inputs		
Financial Instrument	Fair Value	Valuation Technique	Significant Unobservable Inputs	Ranges of Inputs	Weighted Average ⁽¹⁾
Loans and Securities ⁽²⁾					
Instruments backed by residential real estate assets	\$ 1,269	Discounted cash flow, Market comparables	Yield	0% to 25%	6%
Trading account assets – Mortgage trading loans, MBS and ABS	338		Prepayment speed	1% to 40% CPR	19% CPR
Loans and leases	373		Default rate	0% to 3% CDR	1% CDR
AFS debt securities - Non-agency residential	316		Price	\$0 to \$168	\$92
Other debt securities carried at fair value - Non-agency residential	242		Loss severity	0% to 43%	13%
Instruments backed by commercial real estate assets	\$ 298	Discounted cash flow	Yield	0% to 25%	4%
Trading account assets – Corporate securities, trading loans and other	138		Price	\$0 to \$101	\$57
Trading account assets – Mortgage trading loans, MBS and ABS	77				
AFS debt securities – Non-U.S. and other taxable securities	71				
Loans held-for-sale	12				
Commercial loans, debt securities and other	\$ 4,212	Discounted cash flow, Market comparables	Yield	0% to 19%	10%
Trading account assets – Corporate securities, trading loans and other	1,972		Prepayment speed	10% to 20%	16%
Trading account assets – Non-U.S. sovereign debt	396		Default rate	3% to 4%	4%
Trading account assets – Mortgage trading loans, MBS and ABS	1,112		Loss severity	35% to 40%	37%
AFS debt securities – Tax-exempt securities	52		Price	\$0 to \$189	\$73
Loans and leases	375		Long-dated equity volatilities	45%	n/a
Loans held-for-sale	305				
Other assets, primarily auction rate securities	\$ 754	Discounted cash flow, Market comparables	Price	\$10 to \$96	\$91
			Discount rate	9%	n/a
MSRs	\$ 818	Discounted cash flow	Weighted-average life, fixed rate ⁽⁵⁾	0 to 14 years	4 years
			Weighted-average life, variable rate ⁽⁵⁾	0 to 10 years	3 years
			Option-adjusted spread, fixed rate	7% to 14%	9%
			Option-adjusted spread, variable rate	9% to 15%	12%
Structured liabilities					
Long-term debt	\$ (1,075)	Discounted cash flow, Market comparables, Industry standard derivative pricing ⁽³⁾	Yield	0% to 19%	18%
			Equity correlation	3% to 100%	80%
			Long-dated equity volatilities	5% to 78%	36%
			Price	\$0 to \$125	\$82
			Natural gas forward price	\$2/MMBtu to \$8/MMBtu	\$4/MMBtu
Net derivative assets (liabilities)					
Credit derivatives	\$ (104)	Discounted cash flow, Stochastic recovery correlation model	Credit spreads	7 to 155 bps	61 bps
			Upfront points	16 to 100 points	68 points
			Prepayment speed	15% CPR	n/a
			Default rate	2% CDR	n/a
			Credit correlation	20% to 60%	55%
			Price	\$0 to \$120	\$53
Equity derivatives	\$ (1,710)	Industry standard derivative pricing ⁽³⁾	Equity correlation	3% to 100%	80%
			Long-dated equity volatilities	5% to 78%	36%
Commodity derivatives	\$ (976)	Discounted cash flow, Industry standard derivative pricing ⁽³⁾	Natural gas forward price	\$2/MMBtu to \$8/MMBtu	\$4/MMBtu
			Correlation	65% to 85%	76%
			Power forward price	\$11 to \$103	\$32
			Volatilities	41% to 69%	63%
Interest rate derivatives	\$ 128	Industry standard derivative pricing ⁽⁴⁾	Correlation (IR/IR)	(1)% to 90%	54%
			Correlation (FX/IR)	(1)% to 58%	44%
			Long-dated inflation rates	(10)% to 11%	3%
			Long-dated inflation volatilities	0% to 2%	2%
			Interest rates volatilities	0% to 2%	1%
Total net derivative assets (liabilities)	\$ (2,662)				

⁽¹⁾ For loans and securities, structured liabilities and net derivative assets (liabilities), the weighted average is calculated based upon the absolute fair value of the instruments.

⁽²⁾ The categories are aggregated based upon product type which differs from financial statement classification. The following is a reconciliation to the line items in the table on page 88: Trading account assets – Corporate securities, trading loans and other of \$2.1 billion, Trading account assets – Non-U.S. sovereign debt of \$396 million, Trading account assets – Mortgage trading loans, MBS and ABS of \$1.5 billion, AFS debt securities of \$439 million, Other debt securities carried at fair value - Non-agency residential of \$242 million, Other assets, including MSRs, of \$1.6 billion, Loans and leases of \$748 million and LHFS of \$317 million.

⁽³⁾ Includes models such as Monte Carlo simulation and Black-Scholes.

⁽⁴⁾ Includes models such as Monte Carlo simulation, Black-Scholes and other methods that model the joint dynamics of interest, inflation and foreign exchange rates.

⁽⁵⁾ The weighted-average life is a product of changes in market rates of interest, prepayment rates and other model and cash flow assumptions.

CPR = Constant Prepayment Rate

CDR = Constant Default Rate

MMBtu = Million British thermal units

IR = Interest Rate

FX = Foreign Exchange

n/a = not applicable

Uncertainty of Fair Value Measurements from Unobservable Inputs

For information on the types of instruments, valuation approaches and the impact of changes in unobservable inputs used in Level 3 measurements, see Note 20 – Fair Value Measurements to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

Nonrecurring Fair Value

The Corporation holds certain assets that are measured at fair value only in certain situations (e.g., the impairment of an asset), and these measurements are referred to herein as nonrecurring. The amounts below represent assets still held as of the reporting date for which a nonrecurring fair value adjustment was recorded during the three and nine months ended September 30, 2022 and 2021.

Assets Measured at Fair Value on a Nonrecurring Basis

	September 30, 2022		Three Months Ended September 30, 2022		Nine Months Ended September 30, 2022	
(Dollars in millions)	Level 2	Level 3	Gains (Losses)			
Assets						
Loans held-for-sale	\$ 1,752	\$ 398	\$ 119	\$ 87		
Loans and leases ⁽¹⁾	—	152	(13)	(44)		
Foreclosed properties ^(2, 3)	—	6	(2)	(3)		
Other assets	80	48	—	(40)		

⁽¹⁾ Includes \$6 million and \$17 million of losses on loans that were written down to a collateral value of zero during the three and nine months ended September 30, 2022 compared to losses of \$7 million and \$18 million for the same periods in 2021.

⁽²⁾ Amounts are included in other assets on the Consolidated Balance Sheet and represent the carrying value of foreclosed properties that were written down subsequent to their initial classification as foreclosed properties. Losses on foreclosed properties include losses recorded during the first 90 days after transfer of a loan to foreclosed properties.

⁽³⁾ Excludes \$75 million and \$55 million of properties acquired upon foreclosure of certain government-guaranteed loans (principally FHA-insured loans) at September 30, 2022 and 2021.

The table below presents information about significant unobservable inputs utilized in the Corporation's nonrecurring Level 3 fair value measurements during the nine months ended September 30, 2022 and the year ended December 31, 2021.

Quantitative Information about Nonrecurring Level 3 Fair Value Measurements

Financial Instrument	Fair Value	Valuation Technique	Inputs		
			Significant Unobservable Inputs	Ranges of Inputs	Weighted Average ⁽¹⁾
(Dollars in millions)	Nine Months Ended September 30, 2022				
Loans held-for-sale	\$ 398	Market comparables	Price	\$88 to \$100	\$91
Loans and leases ⁽²⁾	152	Market comparables	OREO discount	10% to 66%	26%
			Costs to sell	8% to 24%	9%
Other assets ⁽³⁾	48	Discounted cash flow	Discount rate	7%	n/a
	Year Ended December 31, 2021				
Loans and leases ⁽²⁾	\$ 213	Market comparables	OREO discount	13% to 59%	24%
			Costs to sell	8% to 26%	9%
Other assets ⁽⁴⁾	1,875	Discounted cash flow	Discount rate	7%	n/a
	166	Market comparables	Estimated appraisal value	n/a	n/a

⁽¹⁾ The weighted average is calculated based upon the fair value of the loans.

⁽²⁾ Represents residential mortgages where the loan has been written down to the fair value of the underlying collateral.

⁽³⁾ Represents the fair value of certain impaired renewable energy investments.

⁽⁴⁾ Represents the fair value of certain impaired renewable energy investments and impaired assets related to the Corporation's real estate rationalization.

n/a = not applicable

NOTE 15 Fair Value Option

The Corporation elects to account for certain financial instruments under the fair value option. For more information on the primary financial instruments for which the fair value option elections have been made, see *Note 21 – Fair Value Option* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K. The following tables provide information about the fair value carrying amount and the

contractual principal outstanding of assets and liabilities accounted for under the fair value option at September 30, 2022 and December 31, 2021, and information about where changes in the fair value of assets and liabilities accounted for under the fair value option are included in the Consolidated Statement of Income for the three and nine months ended September 30, 2022 and 2021.

Fair Value Option Elections

	September 30, 2022			December 31, 2021		
	Fair Value Carrying Amount	Contractual Principal Outstanding	Fair Value Carrying Amount Less Unpaid Principal	Fair Value Carrying Amount	Contractual Principal Outstanding	Fair Value Carrying Amount Less Unpaid Principal
(Dollars in millions)						
Federal funds sold and securities borrowed or purchased under agreements to resell	\$ 165,521	\$ 165,673	\$ (152)	\$ 150,665	\$ 150,677	\$ (12)
Loans reported as trading account assets ⁽¹⁾	10,100	17,358	(7,258)	10,864	18,895	(8,031)
Trading inventory – other	16,910	n/a	n/a	21,986	n/a	n/a
Consumer and commercial loans	4,851	4,988	(137)	7,819	7,888	(69)
Loans held-for-sale ⁽¹⁾	2,395	3,100	(705)	4,455	5,343	(888)
Other assets	560	n/a	n/a	544	n/a	n/a
Long-term deposits	453	509	(56)	408	401	7
Federal funds purchased and securities loaned or sold under agreements to repurchase	165,390	165,228	162	139,641	139,682	(41)
Short-term borrowings	1,993	1,797	196	4,279	4,127	152
Unfunded loan commitments	200	n/a	n/a	97	n/a	n/a
Long-term debt	27,531	33,867	(6,336)	29,708	30,903	(1,195)

⁽¹⁾ A significant portion of the loans reported as trading account assets and LHFS are distressed loans that were purchased at a deep discount to par, and the remainder are loans with a fair value near contractual principal outstanding.
n/a = not applicable

Gains (Losses) Related to Assets and Liabilities Accounted for Under the Fair Value Option

	Three Months Ended September 30					
	2022			2021		
	Market making and similar activities	Other Income	Total	Market making and similar activities	Other Income	Total
(Dollars in millions)						
Loans reported as trading account assets	\$ (62)	\$ —	\$ (62)	\$ 5	\$ —	\$ 5
Trading inventory – other ⁽¹⁾	(2,141)	—	(2,141)	(1,155)	—	(1,155)
Consumer and commercial loans	(16)	25	9	(56)	(11)	(67)
Loans held-for-sale ⁽²⁾	—	(86)	(86)	—	53	53
Short-term borrowings	81	—	81	548	—	548
Unfunded loan commitments	—	27	27	—	8	8
Long-term debt ⁽³⁾	1,562	(16)	1,546	225	(9)	216
Other ⁽⁴⁾	12	(1)	11	7	—	7
Total	\$ (564)	\$ (51)	\$ (615)	\$ (426)	\$ 41	\$ (385)

	Nine Months Ended September 30					
	2022			2021		
Loans reported as trading account assets	\$ (211)	\$ —	\$ (211)	\$ 288	\$ —	\$ 288
Trading inventory – other ⁽¹⁾	(4,269)	—	(4,269)	419	—	419
Consumer and commercial loans	(86)	(53)	(139)	58	34	92
Loans held-for-sale ⁽²⁾	—	(308)	(308)	—	64	64
Short-term borrowings	643	—	643	1,022	—	1,022
Unfunded loan commitments	—	(61)	(61)	—	2	2
Long-term debt ⁽³⁾	5,049	(36)	5,013	(436)	(33)	(469)
Other ⁽⁴⁾	6	23	29	18	(24)	(6)
Total	\$ 1,132	\$ (435)	\$ 697	\$ 1,369	\$ 43	\$ 1,412

⁽¹⁾ The gains (losses) in market making and similar activities are primarily offset by (losses) gains on trading liabilities that hedge these assets.

⁽²⁾ Includes the value of IRLCs on funded loans, including those sold during the period.

⁽³⁾ The net gains (losses) in market making and similar activities relate to the embedded derivatives in structured liabilities and are typically offset by (losses) gains on derivatives and securities that hedge these liabilities. For the cumulative impact of changes in the Corporation's own credit spreads and the amount recognized in accumulated OCI, see Note 12 – Accumulated Other Comprehensive Income (Loss). For more information on how the Corporation's own credit spread is determined, see Note 20 – Fair Value Measurements to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

⁽⁴⁾ Includes gains (losses) on federal funds sold and securities borrowed or purchased under agreements to resell, other assets, long-term deposits and federal funds purchased and securities loaned or sold under agreements to repurchase.

Gains (Losses) Related to Borrower-specific Credit Risk for Assets and Liabilities Accounted for Under the Fair Value Option

	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
(Dollars in millions)				
Loans reported as trading account assets	\$ (123)	\$ (21)	\$ (434)	\$ 166
Consumer and commercial loans	19	(22)	(72)	10
Loans held-for-sale	(3)	37	(14)	35
Unfunded loan commitments	27	8	(61)	2

NOTE 16 Fair Value of Financial Instruments

The following disclosures include financial instruments that are not carried at fair value or only a portion of the ending balance is carried at fair value on the Consolidated Balance Sheet. Certain loans, deposits, long-term debt, unfunded lending commitments and other financial instruments are accounted for under the fair value option. For more information, see *Note 21 – Fair Value Option* to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

Fair Value of Financial Instruments

The carrying values and fair values by fair value hierarchy of certain financial instruments where only a portion of the ending balance was carried at fair value at September 30, 2022 and December 31, 2021 are presented in the following table.

Fair Value of Financial Instruments

		Fair Value		
	Carrying Value	Level 2	Level 3	Total
(Dollars in millions)	September 30, 2022			
Financial assets				
Loans	\$ 1,002,181	\$ 49,561	\$ 930,927	\$ 980,488
Loans held-for-sale	7,629	5,158	2,587	7,745
Financial liabilities				
Deposits ⁽¹⁾	1,938,097	1,937,724	—	1,937,724
Long-term debt	269,122	261,060	1,044	262,104
Commercial unfunded lending commitments ⁽²⁾	1,716	137	7,796	7,933
		December 31, 2021		
Financial assets				
Loans	\$ 946,142	\$ 53,544	\$ 919,980	\$ 973,524
Loans held-for-sale	15,635	15,016	627	15,643
Financial liabilities				
Deposits ⁽¹⁾	2,064,446	2,064,438	—	2,064,438
Long-term debt	280,117	286,802	1,288	288,090
Commercial unfunded lending commitments ⁽²⁾	1,554	97	6,384	6,481

⁽¹⁾ Includes demand deposits of \$930.3 billion and \$1.0 trillion with no stated maturities at September 30, 2022 and December 31, 2021.

⁽²⁾ The carrying value of commercial unfunded lending commitments is included in accrued expenses and other liabilities on the Consolidated Balance Sheet. The Corporation does not estimate the fair value of consumer unfunded lending commitments because, in many instances, the Corporation can reduce or cancel these commitments by providing notice to the borrower. For more information on commitments, see *Note 10 – Commitments and Contingencies*.

NOTE 17 Business Segment Information

The Corporation reports its results of operations through the following four business segments: *Consumer Banking*, *Global Wealth & Investment Management*, *Global Banking* and *Global Markets*, with the remaining operations recorded in *All Other*. For more information, see *Note 23 – Business Segment Information* to the Consolidated Financial Statements of the Corporation's

2021 Annual Report on Form 10-K. The following tables present net income and the components thereto (with net interest income on an FTE basis for the business segments, *All Other* and the total Corporation) for the three and nine months ended September 30, 2022 and 2021, and total assets at September 30, 2022 and 2021 for each business segment, as well as *All Other*.

Results of Business Segments and All Other

At and for the three months ended September 30	Total Corporation ⁽¹⁾		Consumer Banking		Global Wealth & Investment Management	
	(Dollars in millions)					
	2022	2021	2022	2021	2022	2021
Net interest income	\$ 13,871	\$ 11,195	\$ 7,784	\$ 6,493	\$ 1,981	\$ 1,452
Noninterest income	10,737	11,672	2,120	2,345	3,448	3,858
Total revenue, net of interest expense	24,608	22,867	9,904	8,838	5,429	5,310
Provision for credit losses	898	(624)	738	247	37	(58)
Noninterest expense	15,303	14,440	5,097	4,558	3,816	3,744
Income before income taxes	8,407	9,051	4,069	4,033	1,576	1,624
Income tax expense	1,325	1,360	997	988	386	398
Net income	\$ 7,082	\$ 7,691	\$ 3,072	\$ 3,045	\$ 1,190	\$ 1,226
Period-end total assets	\$ 3,072,953	\$ 3,085,446	\$ 1,149,918	\$ 1,091,431	\$ 370,790	\$ 393,708

	Global Banking		Global Markets		All Other	
	(Dollars in millions)					
	2022	2021	2022	2021	2022	2021
Net interest income	\$ 3,326	\$ 2,185	\$ 743	\$ 1,000	\$ 37	\$ 65
Noninterest income	2,265	3,060	3,740	3,519	(836)	(1,110)
Total revenue, net of interest expense	5,591	5,245	4,483	4,519	(799)	(1,045)
Provision for credit losses	170	(781)	11	16	(58)	(48)
Noninterest expense	2,651	2,534	3,023	3,252	716	352
Income before income taxes	2,770	3,492	1,449	1,251	(1,457)	(1,349)
Income tax expense	734	943	384	325	(1,176)	(1,294)
Net income	\$ 2,036	\$ 2,549	\$ 1,065	\$ 926	\$ (281)	\$ (55)
Period-end total assets	\$ 575,442	\$ 623,640	\$ 848,752	\$ 776,929	\$ 128,051	\$ 199,738

⁽¹⁾ There were no material intersegment revenues.

Results of Business Segments and All Other

At and for the nine months ended September 30	Total Corporation ⁽¹⁾		Consumer Banking		Global Wealth & Investment Management	
	(Dollars in millions)					
	2022	2021	2022	2021	2022	2021
Net interest income	\$ 38,096	\$ 31,846	\$ 21,551	\$ 18,386	\$ 5,451	\$ 4,137
Noninterest income	32,637	35,529	6,302	6,707	10,887	11,209
Total revenue, net of interest expense	70,733	67,375	27,853	25,093	16,338	15,346
Provision for credit losses	1,451	(4,105)	1,036	(1,067)	29	(185)
Noninterest expense	45,895	45,000	14,977	14,548	11,706	11,425
Income before income taxes	23,387	26,480	11,840	11,612	4,603	4,106
Income tax expense	2,991	1,515	2,901	2,845	1,128	1,006
Net income	\$ 20,396	\$ 24,965	\$ 8,939	\$ 8,767	\$ 3,475	\$ 3,100
Period-end total assets	\$ 3,072,953	\$ 3,085,446	\$ 1,149,918	\$ 1,091,431	\$ 370,790	\$ 393,708

	Global Banking		Global Markets		All Other	
	(Dollars in millions)					
	2022	2021	2022	2021	2022	2021
Net interest income	\$ 8,304	\$ 6,150	\$ 2,717	\$ 2,980	\$ 73	\$ 193
Noninterest income	7,487	8,817	11,560	12,457	(3,599)	(3,661)
Total revenue, net of interest expense	15,791	14,967	14,277	15,437	(3,526)	(3,468)
Provision for credit losses	492	(2,738)	24	33	(130)	(148)
Noninterest expense	8,133	7,915	9,249	10,150	1,830	962
Income before income taxes	7,166	9,790	5,004	5,254	(5,226)	(4,282)
Income tax expense	1,899	2,643	1,326	1,366	(4,263)	(6,345)
Net income	\$ 5,267	\$ 7,147	\$ 3,678	\$ 3,888	\$ (963)	\$ 2,063
Period-end total assets	\$ 575,442	\$ 623,640	\$ 848,752	\$ 776,929	\$ 128,051	\$ 199,738

⁽¹⁾ There were no material intersegment revenues.

The tables below present noninterest income and the associated components for the three and nine months ended September 30, 2022 and 2021 for each business segment, *All Other* and the total Corporation. For more information, see Note 2 – *Net Interest Income and Noninterest Income*.

Noninterest Income by Business Segment and All Other

(Dollars in millions)	Total Corporation		Consumer Banking		Global Wealth & Investment Management	
	Three Months Ended September 30					
	2022	2021	2022	2021	2022	2021
Fees and commissions:						
Card income						
Interchange fees	\$ 1,060	\$ 1,154	\$ 834	\$ 905	\$ 4	\$ 11
Other card income	513	429	497	412	12	12
Total card income	1,573	1,583	1,331	1,317	16	23
Service charges						
Deposit-related fees	1,162	1,619	597	935	18	18
Lending-related fees	304	309	—	—	—	—
Total service charges	1,466	1,928	597	935	18	18
Investment and brokerage services						
Asset management fees	2,920	3,276	47	49	2,874	3,228
Brokerage fees	875	960	26	32	381	454
Total investment and brokerage services	3,795	4,236	73	81	3,255	3,682
Investment banking fees						
Underwriting income	452	1,168	—	—	47	83
Syndication fees	283	346	—	—	—	—
Financial advisory services	432	654	—	—	—	—
Total investment banking fees	1,167	2,168	—	—	47	83
Total fees and commissions	8,001	9,915	2,001	2,333	3,336	3,806
Market making and similar activities	3,068	2,005	3	—	30	9
Other income (loss)	(332)	(248)	116	12	82	43
Total noninterest income	\$ 10,737	\$ 11,672	\$ 2,120	\$ 2,345	\$ 3,448	\$ 3,858
	Global Banking		Global Markets		All Other ⁽¹⁾	
	Three Months Ended September 30					
	2022	2021	2022	2021	2022	2021
Fees and commissions:						
Card income						
Interchange fees	\$ 204	\$ 180	\$ 18	\$ 59	\$ —	\$ (1)
Other card income	2	5	—	—	2	—
Total card income	206	185	18	59	2	(1)
Service charges						
Deposit-related fees	524	633	24	30	(1)	3
Lending-related fees	247	256	57	53	—	—
Total service charges	771	889	81	83	(1)	3
Investment and brokerage services						
Asset management fees	—	—	—	—	(1)	(1)
Brokerage fees	11	9	457	471	—	(6)
Total investment and brokerage services	11	9	457	471	(1)	(7)
Investment banking fees						
Underwriting income	181	512	260	629	(36)	(56)
Syndication fees	148	177	135	170	—	(1)
Financial advisory services	397	608	35	45	—	1
Total investment banking fees	726	1,297	430	844	(36)	(56)
Total fees and commissions	1,714	2,380	986	1,457	(36)	(61)
Market making and similar activities	52	40	2,874	2,014	109	(58)
Other income (loss)	499	640	(120)	48	(909)	(991)
Total noninterest income	\$ 2,265	\$ 3,060	\$ 3,740	\$ 3,519	\$ (836)	\$ (1,110)

⁽¹⁾ All Other includes eliminations of intercompany transactions.

Noninterest Income by Business Segment and All Other

	Total Corporation		Consumer Banking		Global Wealth & Investment Management	
	Nine Months Ended September 30					
(Dollars in millions)	2022	2021	2022	2021	2022	2021
Fees and commissions:						
Card income						
Interchange fees	\$ 3,067	\$ 3,431	\$ 2,430	\$ 2,687	\$ 15	\$ 33
Other card income	1,464	1,173	1,406	1,131	36	29
Total card income	4,531	4,604	3,836	3,818	51	62
Service charges						
Deposit-related fees	4,109	4,671	2,120	2,617	56	54
Lending-related fees	907	923	—	—	—	—
Total service charges	5,016	5,594	2,120	2,617	56	54
Investment and brokerage services						
Asset management fees	9,308	9,434	149	136	9,164	9,298
Brokerage fees	2,870	2,988	83	100	1,231	1,312
Total investment and brokerage services	12,178	12,422	232	236	10,395	10,610
Investment banking fees						
Underwriting income	1,559	4,028	—	—	154	305
Syndication fees	896	1,047	—	—	—	—
Financial advisory services	1,297	1,461	—	—	—	—
Total investment banking fees	3,752	6,536	—	—	154	305
Total fees and commissions	25,477	29,156	6,188	6,671	10,656	11,031
Market making and similar activities	9,023	7,360	5	1	66	31
Other income (loss)	(1,863)	(987)	109	35	165	147
Total noninterest income	\$ 32,637	\$ 35,529	\$ 6,302	\$ 6,707	\$ 10,887	\$ 11,209
	Global Banking		Global Markets		All Other ⁽¹⁾	
	Nine Months Ended September 30					
	2022	2021	2022	2021	2022	2021
Fees and commissions:						
Card income						
Interchange fees	\$ 573	\$ 503	\$ 49	\$ 208	\$ —	\$ —
Other card income	5	12	—	—	17	1
Total card income	578	515	49	208	17	1
Service charges						
Deposit-related fees	1,849	1,877	80	117	4	6
Lending-related fees	741	760	166	163	—	—
Total service charges	2,590	2,637	246	280	4	6
Investment and brokerage services						
Asset management fees	—	—	—	—	(5)	—
Brokerage fees	36	90	1,520	1,504	—	(18)
Total investment and brokerage services	36	90	1,520	1,504	(5)	(18)
Investment banking fees						
Underwriting income	635	1,754	944	2,165	(174)	(196)
Syndication fees	466	547	430	500	—	—
Financial advisory services	1,197	1,341	99	119	1	1
Total investment banking fees	2,298	3,642	1,473	2,784	(173)	(195)
Total fees and commissions	5,502	6,884	3,288	4,776	(157)	(206)
Market making and similar activities	181	99	8,721	7,448	50	(219)
Other income (loss)	1,804	1,834	(449)	233	(3,492)	(3,236)
Total noninterest income	\$ 7,487	\$ 8,817	\$ 11,560	\$ 12,457	\$ (3,599)	\$ (3,661)

⁽¹⁾ All Other includes eliminations of intercompany transactions.

Business Segment Reconciliations

	Three Months Ended September 30		Nine Months Ended September 30	
	2022	2021	2022	2021
(Dollars in millions)				
Segments' total revenue, net of interest expense	\$ 25,407	\$ 23,912	\$ 74,259	\$ 70,843
Adjustments ⁽¹⁾ :				
Asset and liability management activities	(13)	3	(146)	(41)
Liquidating businesses, eliminations and other	(786)	(1,048)	(3,380)	(3,427)
FTE basis adjustment	(106)	(101)	(315)	(322)
Consolidated revenue, net of interest expense	\$ 24,502	\$ 22,766	\$ 70,418	\$ 67,053
Segments' total net income	7,363	7,746	21,359	22,902
Adjustments, net-of-tax ⁽¹⁾ :				
Asset and liability management activities	(24)	10	(106)	(20)
Liquidating businesses, eliminations and other	(257)	(65)	(857)	2,083
Consolidated net income	\$ 7,082	\$ 7,691	\$ 20,396	\$ 24,965

	September 30	
	2022	2021
Segments' total assets	\$ 2,944,902	\$ 2,885,708
Adjustments ⁽¹⁾ :		
Asset and liability management activities, including securities portfolio	1,129,824	1,296,026
Elimination of segment asset allocations to match liabilities	(1,065,057)	(1,162,175)
Other	63,284	65,887
Consolidated total assets	\$ 3,072,953	\$ 3,085,446

⁽¹⁾ Adjustments include consolidated income, expense and asset amounts not specifically allocated to individual business segments.

Glossary

Alt-A Mortgage – A type of U.S. mortgage that is considered riskier than A-paper, or “prime,” and less risky than “subprime,” the riskiest category. Typically, Alt-A mortgages are characterized by borrowers with less than full documentation, lower credit scores and higher LTVs.

Assets Under Management (AUM) – The total market value of assets under the investment advisory and/or discretion of GWIM which generate asset management fees based on a percentage of the assets’ market values. AUM reflects assets that are generally managed for institutional, high net worth and retail clients, and are distributed through various investment products including mutual funds, other commingled vehicles and separate accounts.

Banking Book – All on- and off-balance sheet financial instruments of the Corporation except for those positions that are held for trading purposes.

Brokerage and Other Assets – Non-discretionary client assets which are held in brokerage accounts or held for safekeeping.

Committed Credit Exposure – Any funded portion of a facility plus the unfunded portion of a facility on which the lender is legally bound to advance funds during a specified period under prescribed conditions.

Credit Derivatives – Contractual agreements that provide protection against a specified credit event on one or more referenced obligations.

Credit Valuation Adjustment (CVA) – A portfolio adjustment required to properly reflect the counterparty credit risk exposure as part of the fair value of derivative instruments.

Debit Valuation Adjustment (DVA) – A portfolio adjustment required to properly reflect the Corporation’s own credit risk exposure as part of the fair value of derivative instruments and/or structured liabilities.

Funding Valuation Adjustment (FVA) – A portfolio adjustment required to include funding costs on uncollateralized derivatives and derivatives where the Corporation is not permitted to use the collateral it receives.

Interest Rate Lock Commitment (IRLC) – Commitment with a loan applicant in which the loan terms are guaranteed for a designated period of time subject to credit approval.

Letter of Credit – A document issued on behalf of a customer to a third party promising to pay the third party upon presentation of specified documents. A letter of credit effectively substitutes the issuer’s credit for that of the customer.

Loan-to-value (LTV) – A commonly used credit quality metric. LTV is calculated as the outstanding carrying value of the loan divided by the estimated value of the property securing the loan.

Macro Products – Include currencies, interest rates and commodities products.

Margin Receivable – An extension of credit secured by eligible securities in certain brokerage accounts.

Matched Book – Repurchase and resale agreements or securities borrowed and loaned transactions where the overall asset and liability position is similar in size and/or maturity. Generally, these are entered into to accommodate customers where the Corporation earns the interest rate spread.

Mortgage Servicing Rights (MSR) – The right to service a mortgage loan when the underlying loan is sold or securitized. Servicing includes collections for principal, interest and escrow payments from borrowers and accounting for and remitting principal and interest payments to investors.

Nonperforming Loans and Leases – Includes loans and leases that have been placed on nonaccrual status, including nonaccruing loans whose contractual terms have been restructured in a manner that grants a concession to a borrower experiencing financial difficulties.

Prompt Corrective Action (PCA) – A framework established by the U.S. banking regulators requiring banks to maintain certain levels of regulatory capital ratios, comprised of five categories of capitalization: “well capitalized,” “adequately capitalized,” “undercapitalized,” “significantly undercapitalized” and “critically undercapitalized.” Insured depository institutions that fail to meet certain of these capital levels are subject to increasingly strict limits on their activities, including their ability to make capital distributions, pay management compensation, grow assets and take other actions.

Subprime Loans – Although a standard industry definition for subprime loans (including subprime mortgage loans) does not exist, the Corporation defines subprime loans as specific product offerings for higher risk borrowers.

Troubled Debt Restructurings (TDRs) – Loans whose contractual terms have been restructured in a manner that grants a concession to a borrower experiencing financial difficulties. Certain consumer loans for which a binding offer to restructure has been extended are also classified as TDRs.

Value-at-Risk (VaR) – VaR is a model that simulates the value of a portfolio under a range of hypothetical scenarios in order to generate a distribution of potential gains and losses. VaR represents the loss the portfolio is expected to experience with a given confidence level based on historical data. A VaR model is an effective tool in estimating ranges of potential gains and losses on our trading portfolios.

Key Metrics

Active Digital Banking Users – Mobile and/or online active users over the past 90 days.

Active Mobile Banking Users – Mobile active users over the past 90 days.

Book Value – Ending common shareholders' equity divided by ending common shares outstanding.

Common Equity Ratio - Ending common shareholders' equity divided by ending total assets.

Deposit Spread – Annualized net interest income divided by average deposits.

Dividend Payout Ratio – Common dividends declared divided by net income applicable to common shareholders.

Efficiency Ratio – Noninterest expense divided by total revenue, net of interest expense.

Gross Interest Yield – Effective annual percentage rate divided by average loans.

Net Interest Yield – Net interest income divided by average total interest-earning assets.

Operating Margin – Income before income taxes divided by total revenue, net of interest expense.

Return on Average Allocated Capital – Adjusted net income divided by allocated capital.

Return on Average Assets – Net income divided by total average assets.

Return on Average Common Shareholders' Equity – Net income applicable to common shareholders divided by average common shareholders' equity.

Return on Average Shareholders' Equity – Net income divided by average shareholders' equity.

Risk-adjusted Margin – Difference between total revenue, net of interest expense, and net credit losses divided by average loans.

Acronyms

ABS	Asset-backed securities	GWIM	Global Wealth & Investment Management
AFS	Available-for-sale	HELOC	Home equity line of credit
ALM	Asset and liability management	HQLA	High Quality Liquid Assets
ARR	Alternative reference rates	HTM	Held-to-maturity
AUM	Assets under management	IRLC	Interest rate lock commitment
BANA	Bank of America, National Association	ISDA	International Swaps and Derivatives Association, Inc.
BHC	Bank holding company	LCR	Liquidity Coverage Ratio
BofAS	BofA Securities, Inc.	LHFS	Loans held-for-sale
BofASE	BofA Securities Europe SA	LIBOR	London Interbank Offered Rate
bps	Basis points	LTV	Loan-to-value
CCAR	Comprehensive Capital Analysis and Review	MBS	Mortgage-backed securities
CDO	Collateralized debt obligation	MD&A	Management's Discussion and Analysis of Financial Condition and Results of Operations
CDS	Credit default swap	MLI	Merrill Lynch International
CECL	Current expected credit losses	MLPCC	Merrill Lynch Professional Clearing Corp
CET1	Common equity tier 1	MLPF&S	Merrill Lynch, Pierce, Fenner & Smith Incorporated
CFTC	Commodity Futures Trading Commission	MSA	Metropolitan Statistical Area
CLTV	Combined loan-to-value	MSR	Mortgage servicing right
CVA	Credit valuation adjustment	NSFR	Net Stable Funding Ratio
DVA	Debit valuation adjustment	OCC	Office of the Comptroller of the Currency
EPS	Earnings per common share	OCI	Other comprehensive income
ESG	Environmental, social and governance	OREO	Other real estate owned
FCA	Financial Conduct Authority	PCA	Prompt Corrective Action
FDIC	Federal Deposit Insurance Corporation	PPP	Paycheck Protection Program
FHA	Federal Housing Administration	RWA	Risk-weighted assets
FHLB	Federal Home Loan Bank	SBA	Small Business Administration
FHLMC	Freddie Mac	SBLC	Standby letter of credit
FICC	Fixed income, currencies and commodities	SCB	Stress capital buffer
FICO	Fair Isaac Corporation (credit score)	SEC	Securities and Exchange Commission
FNMA	Fannie Mae	SLR	Supplementary leverage ratio
FTE	Fully taxable-equivalent	TDR	Troubled debt restructurings
FVA	Funding valuation adjustment	TLAC	Total loss-absorbing capacity
GAAP	Accounting principles generally accepted in the United States of America	VaR	Value-at-Risk
GLS	Global Liquidity Sources	VIE	Variable interest entity
GNMA	Government National Mortgage Association		

Part II. Other Information

Bank of America Corporation and Subsidiaries

Item 1. Legal Proceedings

See Litigation and Regulatory Matters in Note 10 – Commitments and Contingencies to the Consolidated Financial Statements, which is incorporated by reference in this Item 1, for litigation and regulatory disclosure that supplements the disclosure in Note 12 – Commitments and Contingencies to the Consolidated Financial Statements of the Corporation's 2021 Annual Report on Form 10-K.

Item 1A. Risk Factors

There are no material changes from the risk factors set forth under Part 1, Item 1A. Risk Factors of the Corporation's 2021 Annual Report on Form 10-K.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

The table below presents share repurchase activity for the three months ended September 30, 2022. The primary source of funds for cash distributions by the Corporation to its shareholders is dividends received from its banking subsidiaries. Each of the banking subsidiaries is subject to various regulatory policies and requirements relating to the payment of dividends, including requirements to maintain capital above regulatory minimums. All of the Corporation's preferred stock outstanding has preference over the Corporation's common stock with respect to payment of dividends.

	Total Common Shares Repurchased ^(1,2)	Weighted- Average Per Share Price	Total Shares Purchased as Part of Publicly Announced Programs ⁽²⁾	Remaining Buyback Authority Amounts ⁽³⁾
(Dollars in millions, except per share information; shares in thousands)				
July 1 - 31, 2022	6	\$ 32.67	—	\$ 16,412
August 1 - 31, 2022	3,335	35.28	1,415	16,408
September 1 - 30, 2022	11,776	34.14	11,773	16,373
Three months ended September 30, 2022	15,117	34.39	13,188	

⁽¹⁾ Includes 2 million shares of the Corporation's common stock acquired by the Corporation in connection with satisfaction of tax withholding obligations on vested restricted stock or restricted stock units and certain forfeitures and terminations of employment-related awards and for potential re-issuance to certain employees under equity incentive plans.

⁽²⁾ On October 20, 2021, the Corporation announced its Board of Directors (Board) authorized the repurchase of up to \$25 billion of common stock over time (October 2021 Authorization). The Board also authorized repurchases to offset shares awarded under equity-based compensation plans. This October 2021 Authorization replaced the April 15, 2021 authorization for repurchases of up to \$25 billion of common stock. During the three months ended September 30, 2022, pursuant to the Board's authorization, the Corporation repurchased 13 million shares, or \$450 million, of its common stock, predominantly offsetting shares awarded under equity-based compensation plans. For more information, see Capital Management - CCAR and Capital Planning in the MD&A on page 23 and Note 11 – Shareholders' Equity to the Consolidated Financial Statements.

⁽³⁾ Remaining Buyback Authority Amounts represents the remaining buyback authority of the October 2021 Authorization. Excludes repurchases to offset shares awarded under equity-based compensation plans.

The Corporation did not have any unregistered sales of equity securities during the three months ended September 30, 2022.

Item 5. Other Information

Pursuant to Section 13(r) of the Securities Exchange Act of 1934, as amended (Exchange Act), an issuer is required to disclose in its annual or quarterly reports, as applicable, whether it or any of its affiliates knowingly engaged in certain activities, transactions or dealings relating to Iran or with individuals or entities designated pursuant to certain Executive Orders. Disclosure may be required even where the activities, transactions or dealings were conducted in compliance with applicable law. Except as set forth below, as of the date of this Quarterly Report on Form 10-Q, the Corporation is not aware of any other activity, transaction or dealing by any of its affiliates during the quarter ended September 30, 2022 that requires disclosure under Section 13(r) of the Exchange Act.

During the third quarter of 2022, Bank of America, National Association (BANA), a U.S. subsidiary of Bank of America Corporation, processed transactions pursuant to a specific license and a general license issued by the U.S. Department of

the Treasury's Office of Foreign Assets Control (OFAC). First, pursuant to a specific license issued on April 21, 2022, BANA processed four authorized wire deposits totaling \$883,806 on behalf of a U.S. client into its account at BANA. The wire deposits settled invoices owed to the U.S. client and were unblocked funds belonging to Jammal Trust Bank, which at the time of the deposits was designated pursuant to Executive Order 13224. Second, BANA processed one authorized payment pursuant to a general license issued by OFAC regarding the provision of legal services for or on behalf of persons designated pursuant to Executive Order 13324. BANA processed the payment, which totaled \$178,901, for a U.S. client.

There was no measurable gross revenue or net profit to the Corporation relating to these transactions. The Corporation may in the future engage in similar transactions for its clients to the extent permitted by U.S. law.

Item 6. Exhibits

Exhibit No.	Description	Notes	Incorporated by Reference			
			Form	Exhibit	Filing Date	File No.
3.1	Restated Certificate of Incorporation, as amended and in effect on the date hereof		10-Q	3.1	4/29/22	1-6523
3.2	Amended and Restated Bylaws of the Corporation as in effect on the date hereof		10-Q	3.2	4/29/22	1-6523
10.1	Amended Exhibit B to the Form of Aircraft Time Sharing Agreement (Multiple Aircraft) between Bank of America, N.A. and certain executive officers of the Corporation, including certain Named Executive Officers	1,2				
22	Subsidiary Issuers of Guaranteed Securities		10-Q	22	10/29/21	1-6523
31.1	Certification of the Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	1				
31.2	Certification of the Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002	1				
32.1	Certification of the Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	3				
32.2	Certification of the Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	3				
101.INS	Inline XBRL Instance Document	4				
101.SCH	Inline XBRL Taxonomy Extension Schema Document	1				
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document	1				
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document	1				
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document	1				
101.DEF	Inline XBRL Taxonomy Extension Definitions Linkbase Document	1				
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)					

⁽¹⁾ Filed herewith.

⁽²⁾ Exhibit is a management contract or compensatory plan or arrangement.

⁽³⁾ Furnished herewith. This exhibit shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that Section. Such exhibit shall not be deemed incorporated into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.

⁽⁴⁾ The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document.

Signature

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Bank of America Corporation
Registrant

Date: October 28, 2022

/s/ Rudolf A. Bless

Rudolf A. Bless
Chief Accounting Officer

**CERTIFICATION PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002
FOR THE CHIEF EXECUTIVE OFFICER**

I, Brian T. Moynihan, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Bank of America Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: October 28, 2022

/s/ Brian T. Moynihan
Brian T. Moynihan
Chief Executive Officer

**CERTIFICATION PURSUANT TO SECTION 302
OF THE SARBANES-OXLEY ACT OF 2002
FOR THE CHIEF FINANCIAL OFFICER**

I, Alastair M. Borthwick, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Bank of America Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: October 28, 2022

/s/ Alastair M. Borthwick
Alastair M. Borthwick
Chief Financial Officer

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002**

I, Brian T. Moynihan, state and attest that:

1. I am the Chief Executive Officer of Bank of America Corporation (the registrant).
2. I hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:
 - the Quarterly Report on Form 10-Q of the registrant for the quarter ended September 30, 2022 (the periodic report) containing financial statements fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and
 - the information contained in the periodic report fairly presents, in all material respects, the financial condition and results of operations of the registrant.

Date: October 28, 2022

/s/ Brian T. Moynihan
Brian T. Moynihan
Chief Executive Officer

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO SECTION 906
OF THE SARBANES-OXLEY ACT OF 2002**

I, Alastair M. Borthwick, state and attest that:

1. I am the Chief Financial Officer of Bank of America Corporation (the registrant).
2. I hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:
 - the Quarterly Report on Form 10-Q of the registrant for the quarter ended September 30, 2022 (the periodic report) containing financial statements fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and
 - the information contained in the periodic report fairly presents, in all material respects, the financial condition and results of operations of the registrant.

Date: October 28, 2022

/s/ Alastair M. Borthwick
Alastair M. Borthwick
Chief Financial Officer